



# ASSESSMENT OF THE AGGRESSION AMONG SCHOOL STUDENTS IN THE ONSET OF ONLINE EDUCATION DURING THE PANDEMIC IN DEHRADUN, UTTARAKHAND

**Dr. Amandeep Kaur Saini<sup>1</sup> and Dr. Chidanand B. Patil<sup>2</sup>**

<sup>1</sup> Project Coordinator, <sup>2</sup> Child and Adolescent Psychologist

<sup>1</sup> Rural Development Institute, Swami Rama Himalayan University, Dehradun, Uttarakhand, India

<sup>2</sup> Akal Charitable Hospital, Eternal University, Baru Sahib, Himachal Pradesh, India

## ABSTRACT

During the COVID-19 pandemic, there were many negative effects of online education on students such as lack of knowledge of digital media, lack of electronic gadgets in low-income families as well as secondary school students have higher usage of the internet, social media, online games, movies, series, and unauthorized items as compared to online education. **Aim:** Assessment of the aggression among school students at the onset of online education during the pandemic in Dehradun, Uttarakhand. **Methods:** Data were collected from 170 participants of age between 14-18 years through Google Forms. It was a cross-sectional study using a quantitative approach covering the private school in the rural area of district Dehradun, Uttarakhand by using simple random sampling techniques. Descriptive analysis of the collected data was done by using SPSS (version 28) and Microsoft Excel. **Result:** It was observed that the school students who participated in the study had been categorized into gender and class (board and non-board classes). Among board classes, the mean value of aggression in boys was 87.5, and in girls was 90.83. Among non-board classes, the mean value of aggression in boys was 84.5, and in girls was 86.95. **Conclusion:** The study has shown that the level of aggression was higher in girls as compared to boys. Mental health can be improved through psychiatric counseling sessions or discussions in Academics.

**Keywords:** Aggression, COVID-19, Online Education, Secondary school students.

## INTRODUCTION

Online Education is also known as e-learning. Online education started in India in July and August 2020. About 1.5 million schools in India closed due to lockdown in 2020 and 247 million children were enrolled in elementary and secondary schools (UNICEF, 2020). The lockdown has given hope to teachers and students to continue their educational activities through online mode (Jena, 2020). School and college management started the education through online mode on various apps such as Google Meet, Zoom, Swayam, BYJUS, Unacademy, e-pathshala, and Whatsapp audio/video calls but there was a lack of resources (electronic gadgets like mobile phones, tablets, laptops, or computers) in low income and middle-income families for online classes of their childrens in the urban and rural area (Jena, 2020).

### Effect of online education on mental health

Effect of online education on the mental health of school students- “**Online Aggression**” can be inhabited by internal deterrents of face-saving and moral beliefs, which may be enhanced through the implementation of consequences from the effective community policy and peer pressure among community members. (Xu et al, 2015). “**Internet Addiction**” has become the main

part of our lives. Internet Addiction causes many negative effects on our lives, academic performance, family environment, and social interaction. Internet addicts spend most of their lives in front of mobile phones or computers passing time by chatting, online games, movies, vlogs, emails, or discussion forums (Cash et al, 2012).

### Aggression

Aggression is a common psychological and physical harm to themselves and the nearby objects in the environment. In this psychological condition affected individual injured another individual either physically or mentally (Cherry, 2021). "Aggression can be expressed through both constructive and destructive behaviors. Constructive, it is used for individual and collective, if used for individual and collective distortion" (Tesser, 1995). Global burden of mental health disorder experiences, 1 in 7<sup>th</sup> children of 10-19 years old age group. The most common causes of disorder and disability among adolescents aged 10-19 years are depression, anxiety, and behavioral disorders whereas the 4<sup>th</sup> leading cause of death is suicide among adolescents 15-19 years old (WHO, 2021).

During COVID-19, prolonged restrictions of physical or personal movement and disruption in the daily life schedule of school students during online education may also be hindering the goals that follow the aggression that increases in school students as well as the working generation. The various symptoms of aggression are Poor judgment, Agitation, argumentativeness, Delusions, Impaired coping skills, Hypervigilance, and dramatic mood swings. Change in the behavior of the individual is a common sign of the particular specifications of psychological problems. Adolescents with several mental health conditions are especially vulnerable to social exclusion, differentiation, stigma, learning disorders, risk-taking or daring behavior, physical health issues, and human rights violations (WHO, 2021).

Various sources of aggression among students were teacher-student relations, discerning judgment from teachers, peer problems such as pressure, administration, and family problems, etc (Uludag, 2013). Students who have higher individual internet usage scores have a high level of aggression and a low level of psychological well-being common in the period of digitalization (Prabakaran & Venkatachalam, 2020).

### OBJECTIVE OF THE STUDY

The main objective of this research was "to assess the aggression among secondary school students at the onset of online education during the pandemic". The specific objective of the study was:-

- ✓ To assess the effect of gender on aggression and anxiety among secondary school students.
- ✓ To study the effect of class level on aggression and anxiety among secondary school students

### MATERIALS AND METHODS

**Research Design:-** The research design of the survey/research was a cross-sectional study.

**Research setting:-** The research area for the study was Himalayan Public School which was a private school of district Dehradun, Uttarakhand.

**Study population:-** The study participants for this study were secondary school students aged 14-18 years from Himalayan Public School in District Dehradun, Uttarakhand. This School has been selected because of the maximum number of students in school due to lower school fees and other school requirements. School the located in the rural area of the Dehradun district. 297 students were selected between the age of 14- 18 years from classes 9<sup>th</sup> -12<sup>th</sup> in that private school.

**Criteria for sample selection:-** The Inclusion Criteria of the study were Students present on the day of the data collection, Students aged between 14 - 18 years, and Students of only class 9<sup>th</sup> to class 12<sup>th</sup>. The Exclusion Criteria of the study was Consent was not signed by the participant's parents to participate in the study.

**Sample size and sampling technique:-** The sample size was based on the inclusion and exclusion criteria. In an exploratory study, the sample size has been divided into two groups based on classes.

1. Board exam classes – 10<sup>th</sup> and 12<sup>th</sup>
2. Non-Board exam class – 9<sup>th</sup> and 11<sup>th</sup>

The Yamane formula was used to calculate the sample size, approximately 297 students in the school.

This formula is most simplified and used to calculate sample size when the population is known

$$n = \frac{N}{1 + N(e)^2}$$

Whereas,

N = Population size (297)

e = Level of precision (5% = 0.05) Therefore,

$$n = 170.444 = 170$$

Using the Yamane formula, the calculation of the sample size was 170.

**Sampling Technique:-** The simple random sampling technique was opted for this study. In this study, the use of computer-aided random selection through a random number generator app.

**Ethical considerations:-** Ethical consideration was taken from the Ethical Review Committee of Eternal University, Baru Sahib. Permission taken from the Principal of the Himalayan Public School of District Dehradun, Uttarakhand. Informed consent was given

to study participants for signing their parents. Secondary school students were approached to participate in the study with the assurance that their personal information would remain confidential and were guaranteed anonymity. The Google form link was provided to participants through WhatsApp having the first question regarding their consent.

### Description of data collection tool and technique

**Validity of Tool:-** The standard questionnaire used for this study was to assess the level of aggression and anxiety among the school students during online classes. Buss and Perry's (1992) questionnaire was used for Aggression.

**Reliability of Tool:-** The test-retest reliability of the Buss and Perry (1992) questionnaire was 0.78. The reliability of the Buss and Perry (1992) questionnaire in the Indian Tamil version by using Cronbach's Alpha on standard items was 0.76. The tools are highly reliable.

### Tools of Data Collection

**Section- A** consists of items that aimed to elicit information regarding socio-demographic characteristics which include the following parameters: name, age (14-18 years), gender (male and female), class (9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup>), class based on exams (board and non-board class students).

**Section- B** consisted of items to assess the Aggression (mental health) among school students at the onset of online education during the pandemic which was measured using a standard questionnaire: Aggression Questionnaire. This questionnaire was given by Buss and Perry in 1992, they were professors from the University of Texas at Austin. The Aggression Questionnaire (AGQ) scale consists of four major components (physical aggression, verbal aggression, anger, and hostility) that are used to measure the aggression of an individual. It is a self-reported scale consisting of 29 questions with a Likert scale and five-category responses that strongly disagree (1), disagree (2), Neutral (3), Agree (4), and Strongly agree (5). The final score ranges from 29 to 145. Aggression questionnaire scores were categorized as low aggression level (29-87), moderate aggression level (88-116), and severe aggression level (117-145) (Buss and Perry, 1992). The higher the score, the higher the level of aggression in school students.

**Table 1: Description of Aggression questionnaire with their items**

Items coding	Description
1-9	Physical Aggression scale
10-14	Verbal Aggression scale
15-21	Anger scale
22-29	Hostility scale

### Process of Data Collection

For the final study, data was collected through a Google form having the standard questionnaires involving 170 participants aged 14-18 years, who were students of Board class (10<sup>th</sup> and 12<sup>th</sup>) and Non-Board class (9<sup>th</sup> and 11<sup>th</sup>) respectively. Students' information was collected from the administrative authority of the school and then made into a WhatsApp group for every class separately. 100% response rate achieved by continuous reinforcement to teachers, parents, and students for filling out the Google form. Students have assured confidentiality by telling them about the purpose of the study.

Dependent variable- Aggression

Independent Variable- Gender (Male and Female), Board class (10<sup>th</sup> and 12<sup>th</sup>), and Non-board class (9<sup>th</sup> and 11<sup>th</sup>).

### Data analysis

Quantitative findings have been analyzed following the distribution of data in MS Excel and SPSS version 28. Descriptive statistics were used in this study such as frequency distribution, mean, and standard deviation. Inferential statistics such as t-tests are used to make the comparison of Socio-demographic variables and the effects of gender and class level (independent variables) on aggression (dependent variables) among school students. The results of quantitative data have been presented in the result section with appropriate tables, bar graphs, and pie charts.

## RESULTS

### Section 1: Socio-demographic Profile

**Table 2:- Socio-demographic Characteristics**

Category		Frequency	Percentage
Gender	Male	68	40
	Female	102	60
Class	9 <sup>th</sup>	42	24.7
	10 <sup>th</sup>	44	25.9
	11 <sup>th</sup>	48	28.2
	12 <sup>th</sup>	36	21.2
Class based on Board Type	Board Exam Class	80	47

	Non-Board Exam Class	90	53
Age of the students	14 years	13	7.7
	15 years	31	18.2
	16 years	50	29.4
	17 years	48	28.2
	18 years	28	16.5

Table 2 depicts the sociodemographic details of the students.

### Section 2: Finding related to the effect of gender and class level on aggression among school students

This section deals with the analysis of the effect of gender and class level on aggression among school students in frequency, percentage, mean, and standard deviation, and the grading of the standard tool given in Tabular form as well as the graphical presentation.

**Figure 1: Type of Aggression in Boys with their normal range**

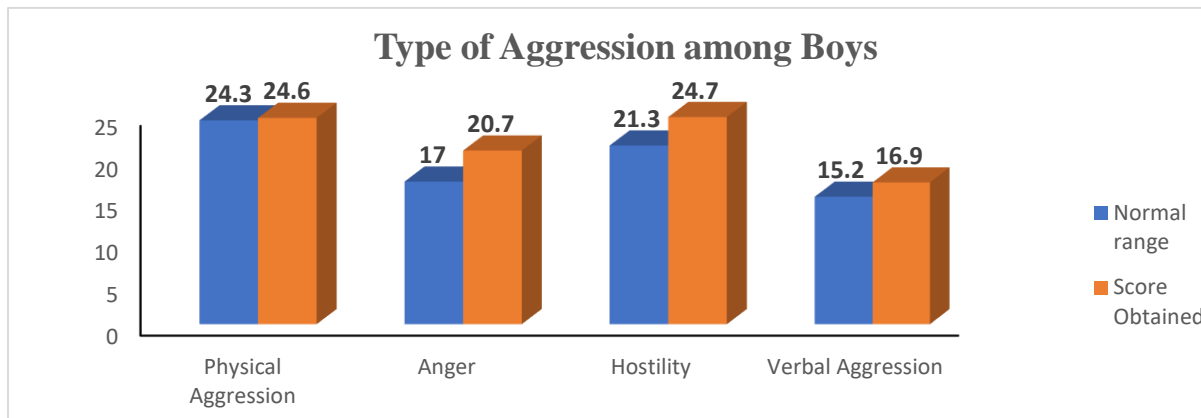


Figure 1 depicts the different levels of aggression among boys, anger and hostility sub-types were higher in boys as compared to physical and verbal aggression.

**Figure 2: Type of Aggression in Girls With their normal range**

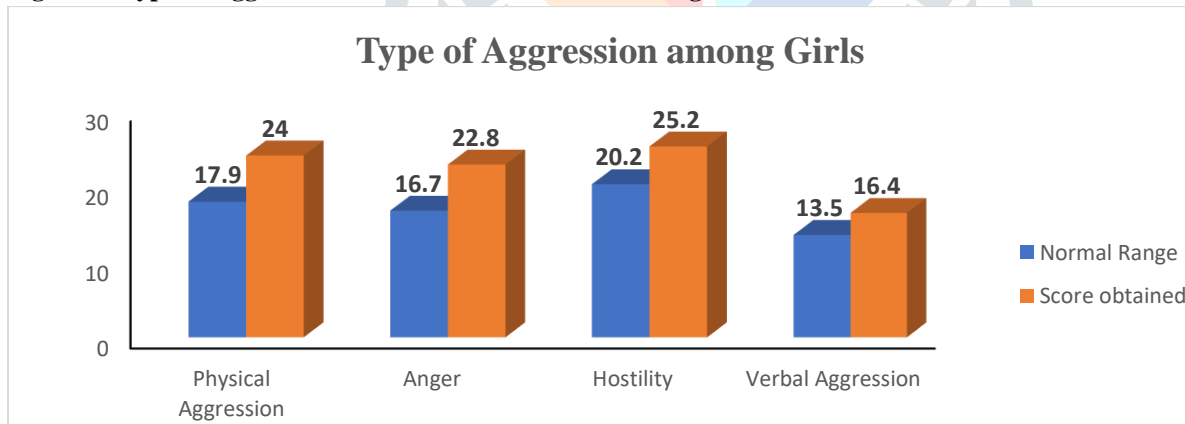


Figure 2 depicts the different levels of aggression among girls, physical aggression and anger were higher in girls followed by hostility sub-type as compared to verbal aggression.

**Table 3: Grading level of Aggression among school students**

Level of Aggression	Normal Range	Board Class (80)		Non-Board Class (90)	
		Frequency	Percentage	Frequency	Percentage
Low level	29-87	36	45	46	51
Moderate level	88-116	41	51	43	48
High level	>116	3	4	1	1

Table 3 shows a different level of aggression among school students. Out of 170 participants, Non-Board Class participants reported a low level of aggression, Board Class participants reported moderate and high levels of aggression. Moderate levels of aggression were higher among school students at the onset of online education. The t-test values among Board and Non-board class students were 0.29 and 0.39 respectively.



Figure 3: Comparison between the effect of gender and class level on Aggression among school student

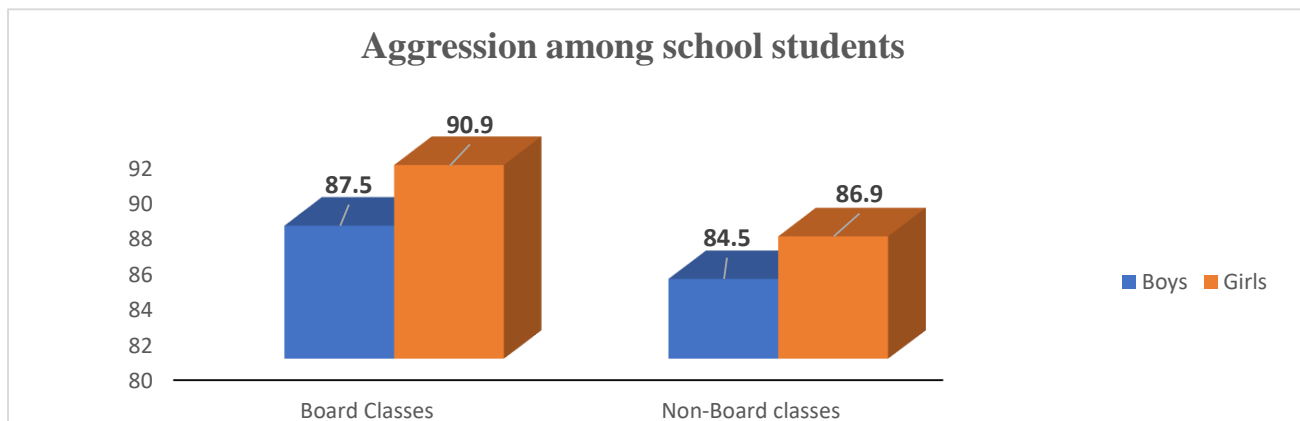


Figure 3 depicts the aggression based on gender (boys and girls) and classes (board and non-board classes). In both board and non-board classes, the level of aggression was higher in girls as compared to boys

## DISCUSSION

### Section 1: Socio-demographic profile

In the present study, a total number of 170 participants were engaged. Out of these, 68 (40%) were male and 102 (60%) females. Another similar study was conducted in Haryana, which investigated the association of psychosocial factors with aggression among school-going rural adolescents with a total population of 480. Out of these, 259 (54%) were male and 221 (46%) were females (Verma et al., 2021). This was similar to the study that out of 420 respondents, 283 (67.4%) were females and 137 (32.6%) were male (Radwan et al., 2021).

In the present study, the maximum number of participants was from class 11<sup>th</sup> (28.24%) followed by class 10<sup>th</sup> (25.88%), class 9<sup>th</sup> (24.7%), and class 12<sup>th</sup> (21.18%). This shows the maximum number of participants in non-board classes (9<sup>th</sup> and 11<sup>th</sup>) which was 90 (52.9%) and inboard classes (10<sup>th</sup> and 12<sup>th</sup>), participants were 80 (47.1%) participated in the study. A similar study revealed that the maximum number of 323 (67.3%) participants from the 12- 14 years of age group followed by 142 (29.6%) participants from the 14-16 years of age group and 15 (3.1%) participants from 16-19 years of age group (Verma et al., 2021). The present study had a maximum number of participants of 16 years 50 (29.41%) followed by 17 years that was 48 (28.24%), 15 years that was 31 (18.23%), 18 years that was 28 (16.47%), and the minimum participants in the age group of 14 years that was 13 (7.65%). Similar studies also had the two age groups of the respondents, the first group was 10-14 years 315 (75%) and the other group was 15-18 years 105 (25%) (Radwan et al., 2021).

### Section 2: Findings related to the effect of gender and class level on aggression among school students.

Regarding the gender difference in aggression, both boys and girls seemed to suffer equally. It shows the girls had a moderate level (53.92%) of aggression, while the males had a low level (54.41%) of anxiety. This may be because school girls had more conscious, neutral networks, lack of resources, and were more concerned about online education or electronic gadgets as compared to school boys. Girl students often experience more stress and depression than boys due to a fear of losing their educational achievements during the COVID-19 pandemic.

This was similar to the study, individuals who were restricted had a highly aggressive score as compared to the individual in the unrestricted area during the pandemic period (Killgore et al., 2021). In another similar study, the researcher conducted a cross-sectional study on aggression and its predictors among elementary students with 900 respondents (49.4% girls and 50.56% boys) revealed the higher score of aggression (physical aggression, anger, hostility, and verbal aggression) in boys as compared to girls (Salimi et al., 2019).

The present study includes the BPAQ for scoring the level of aggression among school students. 84 (49.41%) participants had a moderate level of aggression followed by 82 (48.24%) participants who had a low level of aggression and only 3 (2.75%) participants had a high level of aggression. Another study revealed that 79.5% of participants had a moderate level of aggression (Dharshini et al., 2021). Another study concluded that higher scores on internet users have a higher level of aggression and a lower level of well-being (Prabakaran and Venkatachalam, 2020).

Physical aggression and anger were higher in girls followed by hostility and verbal aggression whereas anger and hostility were higher in boys with little difference in physical and verbal aggression. A study found that among 480 respondents, verbal aggression, anger, and hostility were higher as compared to physical aggression (Verma et al., 2021). The main consequences of lockdown were Hostility and Anger aggression followed by physical aggression as compared to verbal aggression among adults and students (Killgore et al., 2021).

Different grading of the level of aggression based on class category (board classes and non-board classes). Out of 80 board class students, 45% of participants have a low level of aggression, 51.25% of participants have a moderate level of aggression, and 3.75% of participants have a high level of aggression. Out of 90 non-board class students, 51% of participants have a low level of aggression, 48% of participants have a moderate level of aggression, and 1% of participants have a high level of aggression. Board classes students have a high range of moderate levels of aggression whereas non-board classes students have a high range

of low levels of aggression. Board classes have a higher range of high levels of aggression as compared with non-board classes. A similar study on the Aggressive behavior of secondary school students concerning the school environment was conducted on secondary school students of district Ferozepur. This study reveals that the average level of aggression was found among secondary school students (Kaur & Niwas, 2017).

## CONCLUSION

The study concluded that the effect of gender and class on aggression among secondary school students plays a significant role in online education during the pandemic. The findings of the present study indicated that among both board and non-board classes, school girls were more aggressive as compared to boys. The subscale of BPAQ, hostility, and anger were higher in both boys and girls followed by physical and verbal aggression. This may be because school girls were more conscious regarding their education, neural networks, and lack of resources (electronic gadgets like mobile phones, laptops, and computers), and more concerned about academic performance as compared to school boys.

## LIMITATIONS OF THE STUDY

The sample size of the study was quite low and study participants of a particular school only. No control group for comparison. Students faced problems in Online Google forms who do not have mobile phones or have limited internet access.

## RECOMMENDATIONS

Designing and implementing educational interventions for those students who are aggressive. Aggression among the students can be reduced through psychiatric counseling sessions or discussions in Academics. A similar study can be conducted with a large sample size of different (government and private) schools.

## ACKNOWLEDGMENT

The author would like to express their heartfelt gratitude to Dr. Davinder Singh Honourable Vice Chancellor, Eternal University Dr. A.S. Ahluwalia Pro Vice-Chancellor, Eternal University and Dr. Neelam Kaur Dean, Akal College of Health and Allied Sciences, Eternal University, Baru Sahib for providing necessary facilities and constant support to accomplish this work. I am thankful to Dr. Shaveta Menon, Head of Department, Centre for Public Health and Healthcare Administration for her invaluable guidance and for allowing us to conduct the research study. I would like to thanks for the cooperation of the study participants.

## Acronyms

COVID-19	Corona Virus Disease
SPSS	Statistical Package for Social Sciences
BPAQ	Buss and Perry Aggression Questionnaire
UNICEF	United Nations Children's Fund
CDC	Centers for Disease Control and Prevention
WHO	World Health Organization

**Funding Declaration:-** No funding was received.

**Conflicts of interest:-** There was no conflict of interest.

## Reference

- Buss, A.H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, 63 (3), 452-459. <https://doi.org/10.1037/0022-3514.63.3.452>
- Cash, H., Rae, C.D., & Winkler, A. (2012). Internet Addiction: A Brief summary of Research and Practice. *Current Psychiatry Reviews* 8(4): 292-298.
- Cherry, K. (2021). What is Aggression? <https://www.verywellmind.com/what-is-aggression-2794818> Retrieved on 25/03/2022
- Dharshini, M. P., Kumar, N., Gnanaprakash, A., Lakshmi, S.V., Cherian, C.M. & Savarimuthu, R.J.S. (2021). Assessment of Aggressiveness among young adults during COVID-19 Lockdown, Tamil Nadu, India. *Indian Journal of Continuing Nursing Education*. Vol.21 IP 10.232.74.26 <https://doi.org/10.4103/IJCN.IJCN.88.20>
- Jena, P.K. (2020). Impact of pandemic COVID-19 on Education in India. *International Journal Of Current Research*. Vol.12, Issue, 07, pp.12582-12586. <https://www.researchgate.net/publication/342123463>
- Kaur, D., & Niwas R. (2017). Aggressive behaviour of secondary school students in relation to school environment. *International Journal of Advanced Research*. 5 (5), 801-809, ISSN: 2320-5407. <https://dx.doi.org/10.21474/IJAR01/4182>
- Killgore, W.d.S., Cloonan, S.A., Taylor, E.C., Anlap, I., & Dailey, N.S. (2021). Increasing aggression during the COVID-19 lockdowns. *Journal of Affective Disorders Reports*. <https://www.sciencedirect.com/journal-of-affective-disorders-reports>
- Prabakaran, S.A. & Venkatachalam, J. (2020). A study on Internet Usage of Adolescents in relation to Aggression and Psychological Well-Being. *Aegaeum Journal*. Vol. 8, pp. 362-371. ISSN NO: 0776-3808.
- Radwan, E., Radwan, A., Radwan, W., & Pandey, D. (2021). Prevalence of depression, anxiety and stress during COVID-19

pandemic: a cross-sectional study among Palestinian students (10-18 years). *BMC Psychology* (2021) 9:187. <https://doi.org/10.1186/s40359-021-00688-2>

Salimi, N., Karimi-Shahanjari, A., Rezapur-Shahkolai, F., Hamzeh, B., Roshanaei, G., & Babamiri, M. (2019). Aggression and its predictors among elementary students. *Journal of Injuries and Violence Research*; 11(2): pp. 159-170. <https://doi.org/10.52249/jivr.v11i2.1102>

Tesser, (1995). Causes of students Aggressive behaviour at secondary school level. *Journal of Literature, Languages and Linguistics and an International Peer-reviewed Journal*, 11 (49A). Retrieved from: [www.iiste.org](http://www.iiste.org)

UNICEF, (2020). COVID-19- induced school closures affected 25 crore Indians Children: UNICEF Study.

Uludag, O. (2013). The Influence of Aggression on Students Achievement: Evidence from Higher Education. *Procedia – Social and Behavioral Science* 99 (2013) pp. 954-958.

Verma, R., Kumar, G., Yadav, R.K., Chayal, V., Kalhan, M., ... Sagar, V. (2021). Association of psychosocial factors with aggression among school going rural adolescents in Haryana. *Journal of Family Medicine and Primary Care*. Vol. 10; Issue 10, pp. 3720-3724 <https://doi.org/10.4103/jfmpe.jfmpe.447.21>

World Health Organization, (2021). Adolescent mental health. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>

Xu, B., Xu, Z., & Li, D. (2015). Internet aggression in online communities: a contemporary Deterrence Perspective. *Wiley Online Library*. <https://doi.org/10.1111/isj.12077>

