

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

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ABSTRACT

This study explores the relationship between psychological distress and achievement motivation among high school students during the COVID-19 outbreak. Additionally, the study examines the role of gender, academic success (through the last exam), socio-economic status, and family type in achievement motivation for the selected group. The study adopted a self-administered online questionnaire using Google forms for data collection (N=103) because of the COVID-19 lockdown. For the study, socio-demographic details of the participants were obtained, followed by administering of Kessler Psychological Distress and Achievement Motivation scales. The study found that the COVID-19 affected the academic performance of 97.2% of the total participants and a positive relationship between psychological distress and achievement motivation. Factors such as family type, family background, and socio-economic status have affected the motivation level in high school students. The more the students are motivated to achieve in academics, the more they are likely to experience psychological distress.

Keywords: COVID-19, High School Students, Psychological Distress, Achievement Motivation

Numerous efforts taken by various agencies prevented the spread of the COVID-19 virus, which was very different from the normal, paving the 'new normal' path. Different sectors adapted to this new normal, and one of them was education. The education sector has seen a drastic shift in the mode of knowledge dissemination by entirely relying on online mode. The challenge was that the infrastructural resources and the human resources (teachers, students, parents, etc.) had to change how they function in a very short period. These measures taken to curtail the pandemic have affected students' well-being, lifestyle, and functioning, especially those engaged in higher education. While many studies reveal the positive impact of e-learning, literature also indicates the psychological distress created by this pandemic. E-learning has a positive impact on psychological distress during COVID-19 (Hasan & Bao, 2020). The educational environment plays a crucial role in

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Received: June 24, 2021; Revision Received: September 14, 2021; Accepted: September 30, 2021

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

determining academic stress in students, and it leads to a negative effect on mental health, which affects the students' academic performance. It indicates that academic performance is closely related to achievement motivation. (Zothanzami, 2020).

Academic achievement is the outcome of one's mental and physical health. Therefore, the lower the level of stress, the lower will be the achievement motivation. (Masilamani & Bhuvaneswari, 2019). COVID-19 has increased the risk factor for anxiety, especially for those who live alone or whose family member has suffered from the infection. Students' anxiety and stress also increase with the distance resulting from quarantine. (Cao, et al, 2020)

Mental health issue is one of the impediments to the students' academic ambitions, making way for higher education. In addition, quarantining at home during COVID-19 and educational institutions' closure were considered the chief reasons for students feeling detached from society and their social circles (Killan, 2020). Also, while some students reported that they were enjoying the online classes, but others reported a lack of motivation. Researches show that mental health and academic achievement are linked. Academic stress significantly explained variance in achievement motivation (Karaman & Watson, 2017 & Wheeler, 2020).

Motivations can be of various types, including intrinsic, extrinsic, physiological, and achievement motivation. To fulfill one's need, we use both extrinsic and intrinsic motivation. Studies cite that achievement behaviour is an interaction between situational and individual subject's motivation to achieve goals. (Rendall et al., 2009) Achievement motivation reflects a student's desire in reference to academics when judged in terms of a set parameter. It is the drive to achieve one's goal in the educational setting. This type of motivation falls under reflectance motivation, which needs to be successful or effective in dealing with one's environment. This is considered an important predictor of cognitive performance. As Busato, et al (2020) concludes, positive correlational analyses of achievement motivation and intellectual ability are associated with positive academic success. Another correlational studies 322 undergraduate students depicted a relationship between the student's self-directed learning readiness and academic self-efficacy and academic motivation. The independence in study skills and learning styles motivates academic motivation prediction (Saeid & Eslaminejad, 2017).

Any study is incomplete if evaluation of the education setting is done in terms of unidimensional constructs. The present study aims to explore the relationship between psychological distress and achievement motivation among high school students during COVID-19 outbreak.

METHODS AND MATERIALS

Sample

103 high school students belonging to various schools affiliated to the CBSE curriculum in the Delhi-NCR region, India participated in this study. A 9-point scale gauged the academic performance of the participants ranging from just passed to excellent.

Inclusion criteria

- Students studying in classes 11th and 12th.

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

- The students who were willing to share their details and consenting to be a part of the study.

Exclusion criteria

- Students with serious mental and physical illness.
- Students not well versed with usage of online platforms for data entry and submission.

Tools Used

- ***Socio-demographic datasheet:*** The study adopted a specially designed semi-structured Proforma. It contained information about the socio-demographic variables like age, gender, grade, academic success (based on the last exam taken), type of family, socioeconomic status, domicile, and other associated information related to the COVID-19 outbreak like family member(s)/relative (s)/neighbor(s) infected with COVID-19, and impact of the COVID-19 on the academics.
- ***Kessler Psychological Distress Scale (K10):*** Professor Ronald C. Kessler developed the Kessler psychological distress scale as part of the mental health component of the US National Health Interview Survey (Yiengprugsawan, et al, 2014). It consists of 10 questions related to anxiety and depression answered using a five-point scale (where 5 = all of the time, and 1 = none of the time). Scores are then calculated, with the maximum score of 50 indicating severe distress and the minimum score of 10 indicating no distress. (Kessler R. Professor of Health Care Policy, Harvard Medical School, Boston, USA.) Cronbach's alpha for K10 is 0.88. (Easton, et al, 2017)
- ***Achievement Motivation (n-Ach) scale:*** Professor Pratibha Deo & Dr. Asha Mohan developed the Achievement Motivation Scale in 1985 (Deo-Mohan, 1985). The scale comprises 50 items, representing the distribution as academic motivation and challenges, need for achievement anxiety, importance of grades, meaningfulness of the tasks, attitude towards education and teachers, future goals and work methods, general interests, interpersonal relations, sports, etc. Out of the 50 items, 37 items are positive and weightage of 4,3,2,1,0 is assigned for the categories- always, frequently, sometimes, rarely and never. While, 13 items are negative and are scored in reverse as 0,1,2,3,4 for the same categories. Test-retest reliability of the scale is 0.69.

Procedure

The participants of this study were high school students. They were informed about the voluntary nature of participation and were free to withdraw at any time during the study. The consenting participants received detailed explanation about the questionnaire. The study collected data using a self-administered online questionnaire using Google forms because of the COVID-19 lockdown from 8th June to 30th June 2020, maintaining appropriate confidentiality of the data. Approximately 20-25 minutes were required to complete the online assessment. In total, 103 participants took part in this study.

Statistical analysis

SPSS 26 helped in carrying out the statistical analysis of the data. The psychological distress and achievement motivation were measured using descriptive statistics, and Spearman's correlation evaluated the relationship between the variables.

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

RESULTS

Table 1a: Demographic characteristics of participants (N=103)

Variables	Category	Frequency	Percentage
Age (Years)	17	46	44.7
	18	57	55.3
Gender	Male	62	60.2
	Female	41	39.8
Grade	Grade 11	45	43.7
	Grade 12	58	56.3
Academic success (Last exam)	Just Pass	18	17.5
	Good	16	15.5
	Very good	58	56.3
	Excellent	11	10.7
Type of family	Joint	24	23.3
	Nuclear	79	76.7
Socio-economic Status	Lower class	1	1.0
	Middle class	97	94.2
	Upper class	5	4.9
Domicile	Rural	39	37.9
	Urban	64	62.1

From the socio-demographic data for this study, 44.7% of the higher secondary school students were 17 years of age, whereas 55.3% were 18 years old. The majority of the participants (60.2%) were male. From the grade perspective, 56.3 % comprising a total number of 58 students, were in grade 12. It was observed from Table 1a that the percentage of the participants who were very good in academics is highest, comprising 56.3%, followed by 15.5% and 17.5% of the total student participants who were good in academics and just passed respectively. Only 10.7% of the total participants excelled in academics. Further, Table 1a indicates that most students (76.7%) were from a nuclear family belonging to the middle class (94.2%) socio-economic status. Only 1% of the participants belonged to the lower class. Most of the study participants (62%) belonged to urban domiciles.

Table 1b: Information related to COVID-19 Outbreak

Variable	Response	Frequency	Percentage
Any family member(s)/relative (s)/neighbour(s) was infected COVID-19?	No	14	13.6
	Yes	89	86.4
Was there any impact of the COVID-19 pandemic on the academics?	No	3	2.9
	Yes	100	97.1

Table 1b, shows that most of participants' (86.4%) family member/relative/neighbour were infected with COVID-19.

97.1% of the total participants thought COVID-19 impacted their academics and only 2.9% of participants felt no effect of COVID-19 on their academics.

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

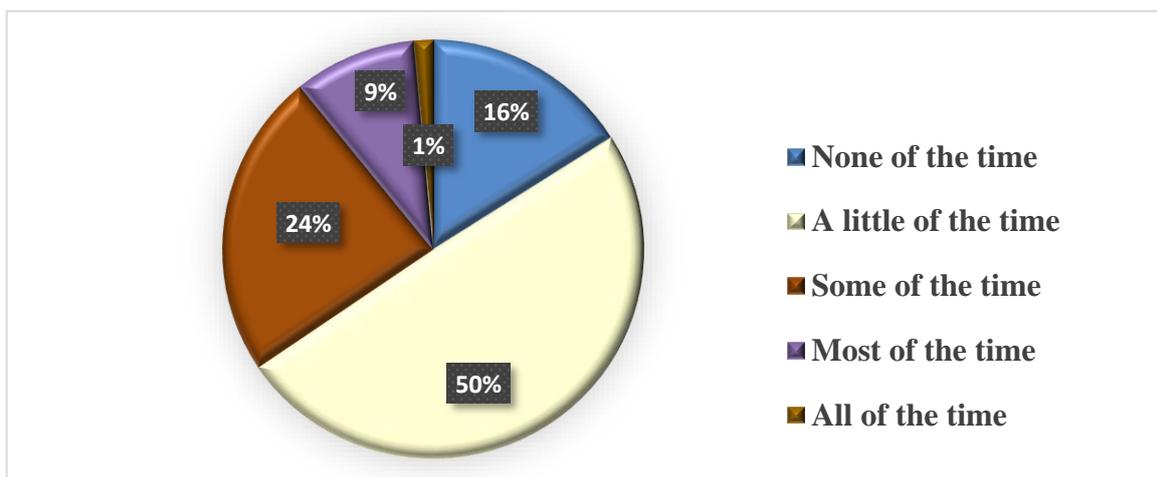


Figure 1: Graphical representation of Psychological distress in Participants'

Table 2 Profile of High School Students' Achievement Motivation

Variable		Low (N)	%	High (N)	%	Total (N)	%
Gender	Male	1	2	61	98	62	100
	Female	1	2	40	98	41	100
Total		2	2	101	98	103	100
Grade	Grade 11	1	2	44	98	45	100
	Grade 12	1	2	57	98	58	100
Total		2	2	101	98	103	100
Type of family	Joint	0	0	24	100	24	100
	Nuclear	2	3	77	97	79	100
Total		2	2	101	98	103	100
Socio-economic status	Lower class	0	0	1	100	1	100
	Middle class	2	2	95	98	97	100
	Upper class	0	0	5	100	5	100
Total		2	2	101	98	103	100
Domicile	Rural	0	0	39	100	39	100
	Urban	2	3	62	97	64	100
Total		2	2	101	98	103	100

Table 2 shows the level of motivation in high school students. The data shows that most students (98%), both male and female from 11th and 12th grades are highly motivated to excel in their studies. The results reveal that the students living in a joint family are slightly more motivated as compared to the students from a nuclear family (97%). The table also shows that the level of motivation is marginally less (98%) in the students from the middle-class socio-economic status than the upper and the lower classes. Further, it can be seen that the students from the rural background were more motivated to do well than their counterparts from the urban setting (97%).

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

Table 3: Correlations between Psychological Distress and Achievement Motivation among the Students

		n	Spearman's rho	p
Psychological distress	- Achievement motivation	103	0.520	*** < .001

3s* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 reveals that there is a positive relationship between psychological distress and achievement motivation among high school students as $p < 0.001$ with spearman's rho value 0.520.

DISCUSSION

The purpose of the study was to understand the confluence and dynamics of psychological distress and achievement motivation among high school students during challenging and unprecedented times of COVID-19.

The current study shows, 50% of the students experience little psychological distress. Whereas 16% of participants do not feel any distress, and only 1% of the participants experience distress all the time (Figure 1). The study found, 97.1% of the total participants thought COVID-19 impacted their academics, and only 2.9% of participants felt no effect of COVID-19 on their academics. The representation is in congruence with the previous study, where 14.3% of the students had mild psychological distress, 10.9% of the students had moderate psychological distress, and 9.7% of the students had severe psychological distress. (Gebremedhin, et al, 2020). Roy, et al, (2014) also found that around 22% of the students had some psychological problem, among which 15.75% were having evidence of some stress and 6.25% had severe problem.

Achievement motivation is equally high for both girls and boys. In some studies, there is a gender difference in achievement motivation (Shekhar & Devi, 2012). However, these findings may vary from society to society and also depends on parents and family (Devakumar, 2018). The current study found that students living in the joint family were highly motivated compared to those living in the nuclear family. This finding indicates that family structure is a contributing factor in academic performance and motivation. (Rosen, 1961).

Further, most students are highly motivated to excel in their studies. The more students believe they can achieve more in academics, the more they are likely to achieve that. (Turner, et al, 2009). Therefore, parents and teachers can help students better understand their strengths and weaknesses to encourage them to believe in their abilities for doing well in their academic tasks. (Duraka & Hoxha, 2018). The family background, socio-economic status, etc., shape the student's attitude to learning and achievement motivation. (Deinde, et al, 2020).

Spearman's correlation measured the relationship between psychological distress and achievement motivation among high school students. It means that as achievement motivation increases, the psychological distress among high school students also increases. The more the student is motivated to achieve in academics, the more he/she is likely to have

Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

psychological distress when there is a threat to or uncertainty of fulfillment of that aspiration. Despite being psychologically distressed, students still aspire to achieve more in their academics. Though the current pandemic situation instills feelings of distress among students, they can still be motivated enough to achieve high goals through their active thinking and incorporating inner power. Active thinking combined with inner resources acts as an influential factor in goal integration and wellbeing. (Dierendonck, et al, 2014).

The finding is quite contrary to some previous studies, which states that a lower level of psychological stress leads to high achievement motivation. (Ramaprabou & Dash, 2018, Ghafoor, 2020). The present study does not provide any additional support to such findings and results. The results from the present study are in sync with the study that states that stress has a significant and positive association with motivation. (Park, et al, 2012). Highly stressed students perform better than less stressed students, and stress has a positive relationship with academic performance. (Kumari & Gartia, 2012).

CONCLUSION

The study shows a significant positive relationship between psychological distress and achievement motivation among high school students. Contrary to popular perception, the more the student is motivated to achieve in academics, the more he/she is likely to have psychological distress when there is a threat to or uncertainty of fulfillment of that aspiration. Though the current situation of pandemics instills feelings of distress among students, they can still be motivated enough to achieve high goals through their active thinking and incorporating inner power. These findings will help educational institutions, teachers, and parents understand their roles in improving the students' academic performance.

Limitations

The use of a small sample size reduces the generalizability of the result findings. As the present study considers only one curriculum, findings may not be considered generic for all the students. Moreover, since the data collection was through a self-administered online questionnaire, reporting bias may exist. The bias may be due to variability in understanding and interpretation of the questionnaires by the participants. Further, the reported psychological distress might not be because of only COVID-19. There could be other reasons as well, which would require further studies.

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Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

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Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students

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Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Chakraborty U., Chowdhury S. & Kaim B. (2021). Impact of COVID-19 Outbreak on the Psychological Distress and Achievement Motivation of High School Students. *International Journal of Indian Psychology*, 9(3), 2002-2010. DIP:18.01.188.20210903, DOI:10.25215/0903.188