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### PSYCHOLOGICAL DISTRESS, RESILIENCE AND ACADEMIC ACHIEVEMENT AMONG SCHOOL STUDENT AFTER THE SECOND YEAR OF COVID-19

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#### Abstract

The aim of the current study was to explore the relationship between psychological distress, resilience and academic achievement in higher secondary school students after the 2nd year of COVID-19. This cross-sectional research was conducted on the sample of 145 (n=85 girls, n=65 boys). Data was collected using demographics sheet, DASS-21 (Naz & Batool, 2019) and Resilience Scale (Anwar *et al.*, 2017). Findings of the studies reported significant negative relationship of psychological distress with resilience and academic achievement. Significant positive relationship was found between resilience and academic achievement. The results of independent sample t-test indicated the significant gender differences between Psychological distress and resilience, however, results reported no significant difference in academic achievement across gender. Findings of the study will provide an insight about psychological distress, resilience and academic achievement of school students. Moreover, it will also be helpful to develop management plans for students, and update the curriculum to include some activities that can promote the resilience as a skill development. This research will also be helpful for parents to understand the psychological problem and well-being of the children. This research will be helpful in developing policies in educational institutes to manage and provide support to students to improve and enhance their mental well-being. From the findings of the research government can also start initiative for students in the time of pandemic.

#### Keywords

Psychological distress, resilience, academic achievement, COVID-19



## 1. Introduction

The outburst of COVID-19 pandemic brought many profound and marked changes in academic activities that reshaped the landscape of education. The challenges faced by the higher secondary students impose unprecedented effects on the mental health of students (Ruiz-Hernández *et al.*, 2022). In the 2<sup>nd</sup> year of COVID-19 pandemic, closer of schools and colleges had a great impact on student's resilience regarding their academic achievement and caused psychological distress in students. As students entered in the aftermath of second year of pandemic, it is imperative to understand the intricate interplay between resilience, academic achievement and psychological distress among students of secondary and higher secondary level (Schmits, *et al.*, 2021). According to Arvidsdotter *et al.*, (2016), psychological distress can be defined as a state of emotional suffering related to daily stressors that are difficult for a person to cope with. Psychological distress termed as non-specific symptoms of depression, anxiety and stress that may impair the mental health and effect the different psychological disorders (Viertio, 2021). In the stress-distress model, Horwitz (2007) and Ridner (2004) explained that psychological distress occurs when the exposure of any stressor intimidate the mental and physical health and also create the emotional disturbance in result of ineffective coping strategies. Students reported psychological distress because of low income resulted in unable to buy digital gadgets for online learning, restrictions in daily routine and lack of social contact because of the pandemic. Moreover, lack of exposure with Learning

Management System (LMS) and connectivity issues exacerbated the psychological distress. Students reported that task overload, change in type of assignments, lack of physical interaction with teachers heightened the psychological distress. In addition to that dropout rate and school refusal was also seen remarkably in schools (Schmits *et al.*, 2021). Dwiastuti *et al.*, (2022) defined the resilience as an important psychological construct that help the individual to develop and enhance their self-competence to bounce back in difficult situations of life. In one of the research evidence, Kalaitzaki *et al.* (2020) demonstrated that resilience provided support to the people against distress and give psychological support to the people that how to cope with their life-threatening challenges. Moreover, most of the researcher suggested that resilience directly and indirectly improve the positive growth of those individuals who are faced many unfavorable problematic situations (Ogińska-Bulik & Zadworna-Cieślak, 2018). In the abundant review of the concept of resilience, Kumpfer (1993) explained the seven important factors of resilience in the youngsters such as determination or perseverance, direction or mission, empathy, self-esteem, intellectual competence, optimism and insight. According to researchers, there are some important coping skills associated with these factors of resilience for promoting resilience of youngsters in different social interaction situations. These coping skills can be divided into different categories; emotional intelligence skills, interpersonal and intrapersonal social skills, problem-solving skills, decision making, planning etc. In order to face the COVID-19 pandemic,

resilience can help the people how to reduce the negative psychological issues (Sunet *al.*, 2022). The COVID-19 pandemic had a potential impact on the student's academic achievement and school closure greatly affected their academic performance (Kuhfeldet *al.*, 2020). Academic achievement is considered as multifaceted construct that contains different aspects of academic learning. According to Steinmayr, *et al.*, (2022), academic achievement serves as the performance outcomes that reveals the degree in which a student has achieved certain academic goals in different subjects, particularly in school, college and university level. Moreover, Nisar *et al.*, (2017) described the determinants of academic achievement that based on the three main factors of learning of secondary school students. These factors are as personal factors (study habits, interests, intelligence, motivation, and aptitude), family factors (socio-economic status, parents, occupation and education, social class, family income) and institutional factors (student-teacher relationship, academic curriculum, school environment, extra- curricular activities). In tandem with the paradigm shift in academics and confluence of uncertainties and distance learning, give rise to the psychological distress and effect on resilience. Therefore, understanding the psychological distress, resilience and academic achievement is essential. Studies reported that psychological distress can be managed disappears when a person effectively copes with the daily stressors (Horwitz, 2007). COVID-19 pandemic brings negative outcomes in individuals such as depression, post-traumatic stress disorder and anxiety (Liu *et al.*, 2020; Xiong *et al.*, 2020).

While on the other hand, COVID-19 not only bring the psychological distress but may also facilitate the development of resilience in people (Yu & Hu, 2021). Few researches are available that explained the effect of COVID-19 on the psychological distress, resilience and academic achievement in secondary and higher secondary students. Suniya *et al.* (2021) examined the effect of COVID-19 and resilience in school children. The results showed that students of high school were less depressed and more resilient as compared to the middle school children. Girls showed more symptoms of depression and anxiety as compared to boys. Another important finding revealed that social and moral support of caregivers and peers provided help in decreasing the intensity of mental health issues in middle and high school children. Fujihara and Tabuchi (2022) explored the effect of COVID-19 pandemic on the psychological distress of youth in the Japan. A latent growth curve model used to assess the changes in the psychological distress of youth and factors that were affecting the change in psychological distress from December 2019 to July 2020. The results indicated that females experienced more psychological distress from December 2019 to July 2020 and then decrease in intensity in December 2020. There was not found a gender difference related to changes in psychological distress due to COVID-19. Moreover, health-related status, personality traits factors did not explain the changes in psychological distress in youth during COVID-19 pandemic. Schmits, *et al.*, (2021) examined the psychological distress in students after one year of COVID-19 in higher education. The finding

indicated that students in higher education were more anxious and depressed especially women and non-binary gender, after one year of the COVID-19 pandemic. They can reduce their psychological distress through social contact with their family and peers and also doing physical activities in daily routines. Zhu, *et al.*, (2022) studied the longitudinal changes in psychological distress of college students by using two wave national panel survey in China. The results showed that 13.5 % students reported high rates of psychological distress during the first year of COVID-19. Furthermore, results indicated that academic performance of students was also negatively associated with psychological distress in students. Students who were studied in vocational training colleges experienced more psychological distress and showed poorer academic achievement by keeping them away from the practical training due to the COVID-19 pandemic lockdown. Brites *et al.*, (2023) in their research also reported resilience and emotional regulation as protective factor against psychological distress. Dessy *et al.*, (2021) conducted a research that explain the impact of COVID-19 on the resilience of school children N=4006 (5-18 year of age), after the school opening system. The results indicated that Covid-19 lockdown reduced the probability of students' attendance in boys as compared to the girls, after the schools reopened. Sun, *et al.*, (2022) investigated the relationship between resilience, psychological distress and COVID-19 burnout in Chinese college students and also studied the pandemic-related isolation and its psychological effect on students. The results revealed that resilience had a mediating role in explaining the

relationship between psychological distress and COVID-19 burnout. Moreover, pandemic isolated group students had high level of psychological distress and low level of resilience than non-isolated group students. Borgonovi and Ferrara (2022) studied the effect of COVID-19 on the student's resilience in their reading and mathematics academic achievement in secondary school children. The results of longitudinal perspective indicated that COVID-19 had a negative impact on students' academic achievement in reading and mathematics subjects, who were belonged to the COVID-19 cohort areas as compared to those who were belonged to the non- COVID cohort areas. They were less resilient about how to maintain and upgrade their academic performance during this crisis because lower achievers also faced too much difficulties due to their low socio-economic status than higher achievers. Whitley *et al.*, (2021) conducted a research to see the effect of COVID-19 on the learning and academic achievement of vulnerable children and youth living in Canada. They explained that COVID-19 brought many major changes in children and youth educational system as they faced physical distancing, school attendance issues, school closure, decline in academic achievement, disengagement from the extra-curricular activities and group studies. Through this research, they suggested guidance about COVID-19 post-pandemic planning for improving the learning and academic achievement of vulnerable children and youth by providing effective inclusive learning, high speed of internet, financial funds and also coordinated the necessary social services. In the light of literature review in

COVID-19, a lot of students had a greater risk of experiencing psychological distress during COVID-19 pandemic, high degree of psychological distress also reported students faced tough challenges and were less resilient for improving their academic performance (Schmits, 2021). The studies also demonstrated how lockdowns and other pandemic-related circumstances troubled academic advancement, particularly for vulnerable populations such as students in certain school environments, leading to variations in academic performance, attendance, and distress levels. It can also be concluded from then literature review that psychological distress lead to the lower level of resilience and academic achievement in students. The present research was aimed to study the psychological distress, resilience, academic achievement among secondary level students after the second year of COVID-19 pandemic.

### *1.1 Objectives of the study*

- To find out the relationship between psychological distress, resilience and academic achievement among school students.
- To find out the predictive relationship between psychological distress, resilience and academic achievement among school students.
- To explore the gender differences with reference to psychological distress, resilience, academic achievement and among school students.

## **2. Hypotheses**

H1. There would be a significant relationship between psychological distress, resilience and academic achievement of school students.

H2. Psychological distress and resilience will be predictors of academic achievement among school students

H3. There will be gender difference in resilience, academic achievement and psychological distress among school students.

## **3. Methodology**

### *3.1 Research Design*

The cross sectional correlational research design was used for this research.

### *3.2 Sample*

The sample of the research was consisted of 145 students who were studied in 9th, 10th, 11th and 12th grades. The data was collected online by using Google form from different government and private Higher Secondary Schools of Lahore, Pakistan.

### *3.3 Inclusion Criteria*

Data was collected from the different government and private schools of Lahore, Pakistan. Students who were studied in 9th grade, 10th grade, O-level, 11th grade, 12th grades and A-level were included in the study. Both boys and girls were participated in the research. Age range from 14-18 years old were included.

### *3.4 Exclusion Criteria*

Those students who belongs to special needs or having any psychological or physical problems were not included in the study. Same as those who did not give the consent were not included in the study.

### *3.5 Research Instruments*

The following research instruments were used in the present study for the data collection.

### 3.5.1 Demographic Sheet

Self-made demographic used in the research: gender, age, types of school, class, mode of medium, marks obtained in the previous year, are you satisfied with your marks?, family system, monthly family income, number of siblings and home environment.

### 3.5.2 Resilience Scale (Anwar et al., 2017)

Resilience scale for adolescents is an indigenous scale, used to determine the level of resilience in adolescent. It contained the total 19 items, rating 1 (completely disagree) to 5 (completely agree) with four important factors named as factor 1 = emotional regulation (items: 4, 19, 17, 9, 3, 14), factor 2 = adventurousness (items: 13, 18, 16, 10, 6), factor 3 = determination (items: 2, 1, 8, 15) and factor 4 = self-reliance (items: 5, 12, 11, 7). The overall Cronbach's alpha value of resilience scale was .84 that indicated that it was a reliable assessment tool.

### 3.5.3 Academic Achievement

The academic achievement of the students was determined by their obtained marks in the previous academic year ranges as 1 = below 50%, 2 = below 75% and 3 = 80% and above.

### 3.5.4 Depression, Anxiety and Stress Scale (DASS-21; Naz & Batool, 2019)

Urdu version of Depression, Anxiety and Stress Scale (DASS-21) translated by Naz & Batool (2019) was used in the research. The purpose of this scale was to assess the depression, anxiety and stress in adolescents. DASS is a 21 items rating scale ranges from 0 = *did not apply to me at all* to the 3 = *applied to me very much or most of the*

*time*. Cronbach's alpha reliability of the scale was  $\alpha = .74$  respectively.

### 3.5.5 Procedure

Permission was taken from the department of Clinical Psychology, GCU. Data was collected online by using Google form. Permission were taken from the parents and heads of the schools. Required scales were used by taking permission from the authors. The questionnaires were filled by both boys' and girls' students who were studied in the 9th, 10th, 11th and 12th grades of different government and private schools and colleges of Lahore, Pakistan.

## 4. Ethical Considerations

Following ethical considerations were ensured while conducting the research.

- Formal permission was taken from the in-charge of Clinical Psychology Unit and supervisor of the research. Permission to use scales in the research was also take form the concerned author.
- Permission of data collection was taken from the institutes and the parents prior to send the online forms.
- Informed consent forms were signed by participants by using Google form for the online data collection.
- Confidentiality of the data was maintained.

## 5. Results

The data was evaluated in five key stages. At first step descriptive statistics was used for the analysis of participants' demographic characteristics. At 2<sup>nd</sup> step Pearson Product moment correlation was calculated to find out the association among psychological distress, resilience and academic achievement. Moreover, simple linear regression

analysis was used to explore the predictors of psychological distress and resilience. In third step Independent sample t-test was used to find out gender difference of psychological distress,

resilience and an academic achievement in secondary school students during the 2<sup>nd</sup> year of COVID-19.

**Table1:** Demographics Characteristics of the Study Variables

Variables	f (%)	M(SD)
Age		16.68(1.58)
Gender		
Boys	60(41.4)	
Girls	85(58.6)	
Education		
9 <sup>th</sup> Grade	23(15.9)	
10 <sup>th</sup> Grade	19(13.1)	
11 <sup>th</sup> Grade	58(40.0)	
12 <sup>th</sup> Grade	45(31.0)	
School type		
Private	47(32.4)	
Government	98(67.6)	

Note; (N=145) M = Mean, SD= Standard Deviation, f = frequency, % = percentage.

The table indicates descriptive result of the sample. Participant were of the age 13(1.4%), 14(6.2%), 15(11%), 16(28.3%), 17(24.1%), 18(22.8%) and 19(6%). Moreover, 7% were age range 19-21 year. Boys (41.6%) and girls (58.4%)

respectively. Education divided into four categories as 9th, 10th, 11th and 12th. 15.9% of the students were from 9th grade, 13.1 % were from 10th grade. 40% of the students were from 11th grade and 31% from 12th grade.

**Table 2:** Descriptive Statistics and Psychometric Properties of Assessment Measures

Measures	M	SD	Ranges	Cronbach's $\alpha$
DASS	38.22	10.48	20-69	.92
Resilience Scale	70.58	14.83	25-95	.91

Note: (N=145) M=Mean, SD= Standard Deviation, DASS= Depression, Anxiety and Stress Scale

Table 2 showed the results for reliability analysis for the assessment measures used in the research.

The Cronbach alpha reliability of resilience scale was found  $\alpha=.91$  and for  $\alpha=.92$  for DASS.

**Table 3:** Correlation, Mean and SD of Resilience, DASS and Academic Achievement

Variable	K	M	SD	1	2	3
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1. Psychological Distress	21	38.22	10.48	-.59	-.52
2. Resilience	19	70.58	14.83	-	.45
3. Academic Achievement		1.31	.46		-

Note: (N=145) M=Mean, SD= Standard Deviation

Descriptive analysis showed mean and standard deviation for psychological distress (Mean=38.22, standard deviation=10.48), resilience (Mean=70.58, standard deviation=14.83), and academic achievement (Mean=1.31, standard deviation=.46) Pearson product moment analysis

was used which indicates that psychological distress had significant negative relationship with resilience  $r = -.59$  and academic achievement  $r = -.52$ . Resilience had significant positive relationship with academic achievement  $r = .45$ .

**Table 4:** Regression analysis for Academic Achievement

Model 1			
Variable	B	$\beta$	SE
Constant	1.10		.30
Psychological Distress	-.01	.40	.00
Resilience	.00	.21	.00
R <sup>2</sup>	.30		
$\Delta R^2$	.29		

Note: N=145, B= Beta,  $\beta$ =Standardized beta value, SE= Standard error, R<sup>2</sup>= R square,  $\Delta R^2$ = Adjusted R Square,  $p > .01$

Simple linear regression was used to assess the predictive level of academic achievement. Preliminary analysis was carried out to confirm no interruption of the assumption of the regression analysis. In the first modal on statistically

significant with beta value for resilience  $b = -.21$ ,  $p < .001$  and psychological distress,  $b = .40$ ,  $p < .001$  was found. The R squared change in the second modal was  $R = .29$ , F change (2,141) = 31.39  $p < .001$ .

**Table 5:** Comparison Resilience, DASS and Academic Achievement Scores between Females and Males

Variables	Female		Male		t(145)	p	Cohen's d
	M	SD	M	SD			
Psychological distress	36.75	9.59	40.30	11.30	2.02	.04	.33
Resilience	72.91	13.39	67.28	16.21	-2.28	.02	.03



Academic	1.25	.44	1.38	.49	1.59	.11	.27
Achievement							

Note: M= Mean, SD= Standard Deviation, DASS= Depression, Anxiety and Stress Scale,  $p > .01$

Results indicates that there is significant gender difference between psychological distress and resilience that indicates higher level of psychological distress in females with  $M=36.75$  and standard deviation  $SD= 9.45$  and high level of resilience in females ( $M= 72.91$  and  $SD=13.39$ ). Moreover results of independent sample t-test also indicates no-significant difference in the academic achievement score.

## 6. Discussion

The aim of the current study was to explore the relationship between psychological distress, resilience and academic achievement among students at secondary level after the 2<sup>nd</sup> year of COVID-19. According to the 1st hypothesis of the research there would be a relationship between psychological distress, resilience and academic achievement of secondary school students. Findings of the current research revealed significant negative relationship between psychological distress with resilience and academic achievement. The findings were supported by previous research by Bacchi and Licinio (2017) that was related to the resilience and distress of the students. The findings of the research indicates negative relationship between the psychological distress and resilience with academic achievement that explains that high level of psychological distress is related to the low level of academic achievement. The results of the correlation analysis indicates significant positive

relationship between resilience and academic achievement. The findings of the current research are in lined with the research that was conducted by Cassidy (2016) on academic resilience and academic achievement. The results of the study indicates significant relationship between resilience and academic achievement of Adolescents. According to Garcia-Martinez *et al.*, (2022) students with high level of resilience can manage difficult situation and have better self-concept and achievement in academics. Findings of the research also indicates the significant mediation relationship between self-concept, academic achievement and resilience on the students. Hatun & Kurtça (2023) in research on fear of COVID-19, psychological distress and resilience also reported significant positive correlation between psychological distress and resilience in students. According to the 2nd hypothesis, there will be a predictive relationship between psychological distress, resilience and academic achievement of the students. The findings of the current study also indicates significant predictive relationship between psychological distress and resilience of the students. The results of the study stated that resilience is the significant predictor of the academic achievement. A study was conducted by Nota *et al.* (2004) on self-regulation, academic achievement and resilience. The results of the study indicates significant relationship between

resilience and achievement and also states that resilience is the significant predictor of the academic achievement. Rothon *et al.*, (2009) in a research was conducted on the impact of psychological distress on the academic achievement of the students. The results of the study indicates negative relationship between psychological distress and resilience of the Adolescents. Third hypothesis of was, there might be gender difference in psychological distress, resilience and academic achievement of the school students. The findings of the research indicated gender difference in psychological distress and resilience of the students. These findings are in line with the research conducted by the Matud *et al.*, (2015) on Spain students to explore the gender differences in psychological distress among the students. The results of the study indicates significant gender differences between resilience and psychological distress of the students, that means there is difference in handling the psychological distress in males and female students. In a research Jeamjitvibool *et al.*, (2022) and Sardella *et al.*, (2022) also find out the significant relationship between resilience and psychological distress, Furthermore the research also indicated the significant difference in resilience of males and females that indicates that women are more vulnerable to psychological distress as compared to the men. In conclusion, among secondary students in the second year of COVID-19, the study examined psychological distress, resilience and academic achievement. Psychological distress and academic achievement were found to be significantly negatively correlated that indicate that higher the level of

psychological distress leads to the low academic achievement. On the other hand, resilience and academic achievement were positively correlated. Academic achievement has been found to be predicted by resilience. Both psychological distress and resilience showed clear gender differences, these findings highlight gender-specific vulnerabilities and the influence of psychological distress and resilience on academic achievement.

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