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ACADEMIC ACHIEVEMENT UNDER PSYCHOLOGICAL STRAIN: A COMPARATIVE STUDY OF ADOLESCENTS IN THE POST-COVID CONTEXT

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Abstract: The second decade of the twenty-first century was marked by the outbreak of an unprecedented global pandemic that disrupted societies within months. The novel coronavirus (COVID-19), highly contagious and capable of causing severe respiratory illness, quickly overwhelmed public health systems and governments worldwide. Beyond its medical consequences, one of the most pressing challenges posed by the pandemic was its impact on mental health. The education sector was also profoundly affected, compelling learners, educators, and policymakers to adapt service delivery to sustain quality education. Against this backdrop, the present study examined the influence of COVID-19-related psychological factors on the academic performance of secondary school students. A randomly selected sample of 200 adolescents was drawn from government and private schools, with equal representation from each. The Depression, Anxiety, and Stress Scales (DASS-21), developed by Lovibond and Lovibond (1995), were employed to assess levels of psychological distress. Data analysis revealed that COVID-19-induced stress, anxiety, and depression significantly and adversely affected the academic achievement of adolescents.

Keywords: Adolescent, Stress, Anxiety, Depression, Academic achievement, Covid-19.

I.INTRODUCTION

The outbreak of the novel coronavirus (SARS-CoV-2) has posed one of the most significant mental health challenges of the twenty-first century. First detected in Wuhan, China, the virus was identified as the cause of severe acute respiratory syndrome and later termed COVID-19 (Coronavirus Disease 2019). In March 2020, the World Health Organization officially declared COVID-19 a global pandemic due to the rapid escalation in cases, high transmission rates, and rising mortality (World Health Organization, 2020). This unprecedented social crisis created conditions conducive to psychological distress, thereby affecting individuals' quality of life and overall well-being.

II. Review of Literature

A growing body of research highlights that adolescents experience the full spectrum of mood disorders, with significant morbidity and mortality particularly evident in the post-COVID period.

Adolescence

Adolescence is a transitional stage of growth and development that bridges childhood and adulthood. According to the World Health Organization (WHO), adolescents are individuals between the ages of 10 and

19, a group that also falls within the broader category of "young people," defined as those aged 10 to 24. G. Stanley Hall, often regarded as the founder of adolescence research, described this stage as a distinct developmental period shaped by social change. His comprehensive studies introduced new perspectives on adolescence, emphasizing its unique challenges. Hall characterized this phase as one of "storm and stress," highlighting the frequent mood fluctuations that accompany it. More recent scholarship affirms that adolescence is marked by significant transformations across physical, psychological, emotional, social, academic, and cognitive domains (Cunningham, Werner, & Firth, 2004; Gherasim, Butnaru, & Mairean, 2013; Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007).

Stress

Stress can be understood as a negative emotional, cognitive, behavioural, and physiological response that arises when individuals attempt to adapt to or manage stressors (Bernstein et al., 2008). It is an inevitable aspect of daily life and, paradoxically, also essential, as the absence of stress would leave individuals unmotivated and indifferent. In academic contexts, students often encounter stress stemming from both their personal aspirations to succeed and the expectations imposed by parents and teachers (Ang & Huan, 2006). Such academic stress can be burdensome not only for students but also for their families, as the competitive nature of modern education intensifies pressure at every stage of learning. Academic stress typically results when academic demands surpass the coping resources available to the student (Wilks, 2008). Contributing factors may include financial difficulties, family issues, peer relationships, emotional challenges, and procrastination. Commonly reported stressors are time constraints and the pressure to perform well in examinations (Erkutlu & Chafra, 2006), with the pre-examination period often perceived as particularly stressful (Nandamuri & Ch, 2011).

Anxiety

Anxiety is commonly described as an unpleasant emotional state involving worry, fear, and apprehension, often accompanied by physical sensations in anticipation of a potential problem. It is a multifaceted concept with varied interpretations across everyday language, psychology, psychiatry, and psychoanalysis. At its core, anxiety refers to a deeply personal experience of distress and unease. It is both a psychological and physiological condition, encompassing somatic, emotional, cognitive, and behavioural components (Öhman, 2000). Etymologically, the term conveys the idea of being "troubled" or "vexed," reflecting its association with feelings of dread, uneasiness, and fear, whether or not psychological stress is present. While often distressing, anxiety is also considered a normal response to stressors, serving an adaptive function by motivating individuals to confront and manage challenging situations.

Depression

Depression is an emotional state in which individuals experience feelings of discouragement, hopelessness, lack of motivation, and disinterest in daily life. When such symptoms persist for more than two weeks and begin to interfere with everyday functioning, the condition is classified as a psychological disorder requiring clinical intervention (APA, 2013). Over the past two decades, the prevalence of depression among adolescents particularly those preparing for competitive examinations has risen significantly. Adolescent depression can disrupt social interactions, family relationships, and academic performance, often leading to serious long-term consequences. Many affected students struggle academically due to diminished confidence, feelings of inadequacy, and persistent disappointment, which foster negative self-perceptions and a sense of failure. These experiences frequently result in poor academic outcomes (Sadock, 2007; Modabber-Nia et al., 2007). Even prior to the COVID-19 pandemic, mental health disorders were already recognized as a major concern among youth worldwide (Polanczyk et al., 2015). Pre-pandemic studies estimated the prevalence of depression and anxiety in children and adolescents at 5.4% and 9%, respectively (Vicente et al., 2012). During the pandemic, however, rates of depression rose sharply, with some studies reporting prevalence as high as 36% (Moya-Vergara et al., 2023), alongside notable increases in anxiety between 2018 and 2021 (Caqueo-Urízar et al., 2023). Like stress and anxiety, depression negatively impacts the quality of life of young people and can hinder their cognitive, emotional, and social development, with lasting consequences (Martínez-Líbano et al., 2023b; Martínez-Líbano & Yeomans, 2023; Yeomans et al., 2021; Martínez-Líbano & Yeomans-Cabrera, 2023; Alkhathami, 2014; Yeomans-Cabrera & Martínez-Líbano, 2023).

HYPOTHESES: The present study will be conducted to examine the following hypotheses:

1. There will be a significant effect of Covid-19 induced stress on the academic achievement of the secondary school students.
2. There will be a significant effect of Covid-19 induced anxiety on the academic achievement of the secondary school students.
3. There will be a significant effect of Covid-19 induced depression on the academic achievement of the secondary school students.

III.METHODOLOGY:

a) SAMPLE: The study will be conducted on a sample of 200 adolescents from Siwan district, Bihar. In which 100 were selected from high stress, anxiety and depression group and 100 were selected from low stress, anxiety and depression group comprising subjects of both sexes.

b) MEASURING INSTRUMENTS: The following measuring tools and instruments were applied to obtain data:

1. *DASS-21*: The *Depression Anxiety Stress Scale* (Lovibond and Lovibond, 1995)-is employed to evaluate the extent of depression, anxiety, and stress experienced by individuals. The DASS-21 scale comprises three self-report subscales that have been specifically developed to assess the severity and occurrence of Anxiety (7 items), Depression (7 items), and Stress (7 items). The grading system spans from 0 to 3. The depression scale assesses emotions such as melancholy, emptiness, self-criticism, loss of interest, and inability to get pleasure. The Anxiety scale evaluates the psychological and physical manifestations of fear, autonomic nervous system activation, anxiety in certain circumstances, and the individual's subjective perception of feeling anxious (Huerta-Ojeda et al., 2021). The scale score is determined by summing the scores.
2. *Academic Achievement* – to assess academic achievement of the participants marks obtained by their 10th class board annual examination was taken as a secondary data.

IV.RESULT AND DISCUSSION

COVID-19 has created a severe impact on every sphere of life. Even adolescents could not escape its devastating impact. The following tables would make it adequately clear:

Table 1
Mean Academic Achievement Scores of High and Low Stress Adolescents.

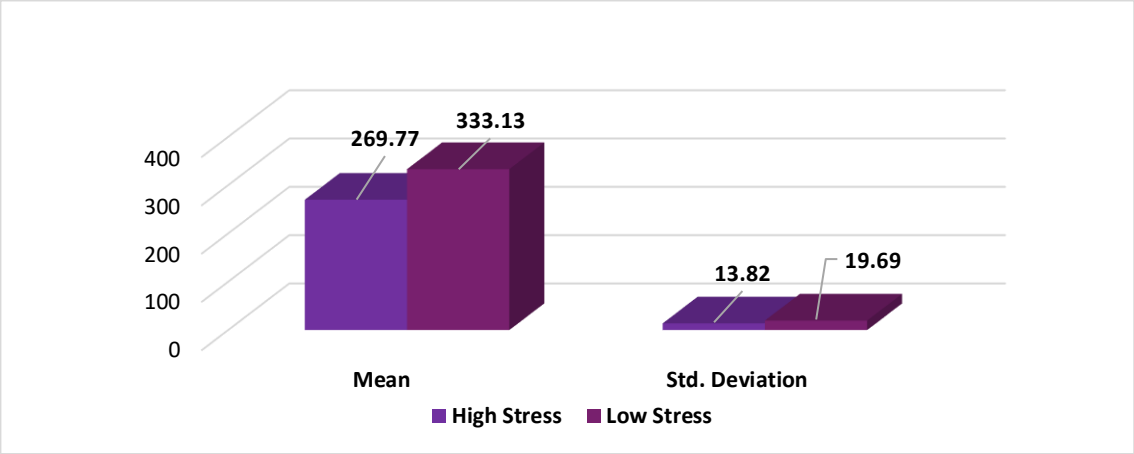
Variable	N	Mean	Std. Deviation	t-value	df	Significance
High Stress	100	269.77	13.82	26.34	198	$p < 0.01$
Low Stress	100	333.13	19.69			

*Significant 0.01**

Adolescents experiencing high stress (M = 269.77, SD = 13.82) demonstrated significantly lower academic achievement compared to those with low stress (M = 333.13, SD = 19.69). The independent samples *t*-test yielded a highly significant difference, $t(198) = 26.34$, $p < .01$, confirming that stress levels exert a substantial impact on academic performance.

Figure 1

Mean Academic Achievement Scores of High and Low Stress Adolescents.



The figure displays the mean academic achievement scores for adolescents categorized by stress level. Adolescents with high stress (M = 269.77, SD = 13.82) scored significantly lower than those with low stress (M = 333.13, SD = 19.69). Error bars represent one standard deviation. The difference was statistically significant, $t(198) = 26.34$, $p < .01$.

Table 2

Mean Academic Achievement Scores of High and Low Anxiety Adolescents.

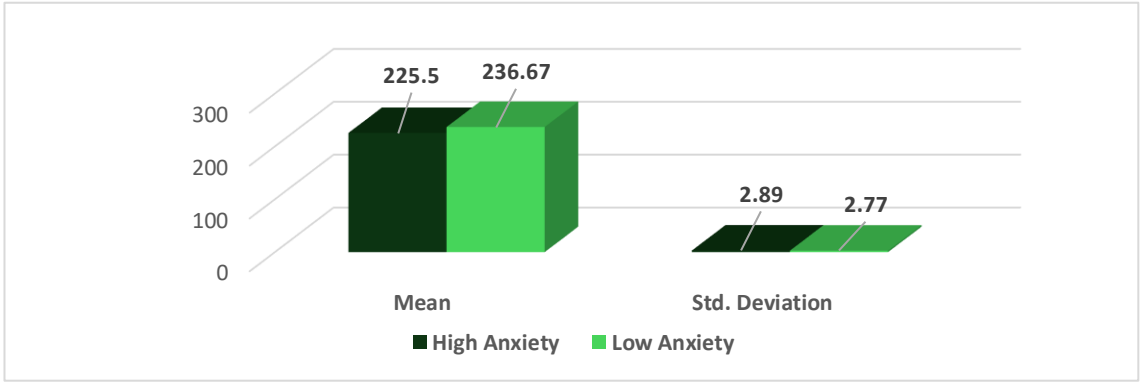
Variable	N	Mean	S.D.	t-value	df	Significance
High Anxiety	100	225.5	2.89	27.92	198	p < 0.01
Low Anxiety	100	236.67	2.77			

*Significant 0.01**

Adolescents with high anxiety (M = 225.50, SD = 2.89) demonstrated significantly lower academic achievement compared to those with low anxiety (M = 236.67, SD = 2.77). The independent samples *t*-test revealed a robust difference, $t(198) = 27.92$, $p < .01$, indicating that anxiety levels exert a meaningful influence on academic performance.

Figure 2

Mean Academic Achievement Scores of High and Low Anxiety Adolescents



The figure depicts the mean academic achievement scores for adolescents categorized by anxiety level. Students with high anxiety scored significantly lower than those with low anxiety. Error bars represent one standard deviation. The difference was statistically significant, $t(198) = 27.92$, $p < .01$.

Table 3

Mean Academic Achievement Scores of High and Low Anxiety Adolescents

Variable	N	Mean	SD	t-value	df	Significance
High Depression	100	205.32	3.06	24.75	198	p < 0.01
Low Depression	100	215.86	2.96			

*Significant 0.01**

The independent samples *t*-test revealed a significant difference in academic achievement between adolescents with high and low levels of depression. Students with low depression (M = 215.86, SD = 2.96) scored substantially higher than those with high depression (M = 205.32, SD = 3.06). The obtained *t*-value ($t(198) = 24.75$, $p < .01$) indicates that this difference is statistically significant and unlikely to have occurred by chance. This finding suggests that elevated depression is associated with lower academic performance, consistent with prior research linking depressive symptoms to impaired concentration, reduced motivation, and diminished cognitive efficiency. Conversely, adolescents with lower depression levels appear to benefit from greater emotional stability, which may facilitate improved focus, resilience, and academic achievement.

Figure 3

Academic Achievement Scores of High and Low Depression Adolescents

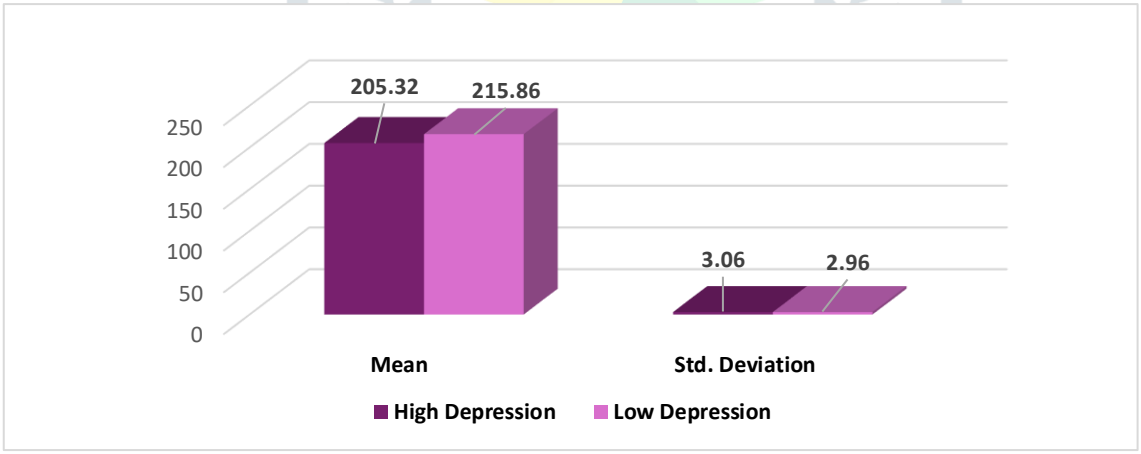


Figure 3 illustrates the mean academic achievement scores of adolescents categorized by high and low levels of depression. The bar chart shows that students with low depression reported higher mean scores (M = 215.86, SD = 2.96) compared to those with high depression (M = 205.32, SD = 3.06). Error bars representing ±1 standard deviation indicate relatively similar variability across groups.

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