

Master of Science in Public Health



***Examining the Impact of Depression on
Adolescent Academic Performance:
A Cross Sectional Study***

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(2021-2023)**

*(Examining the Impact of Depression on
Adolescent Academic Performance: A cross
sectional Study.)*

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TO

**Al-Shifa School of Public Health, PIO, Al Shifa Trust Eye Hospital,
Faculty of Medicine
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(Sohaib Haider)

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Abstract

Depression is a complex and pervasive mental health condition characterized by persistent feelings of sadness, hopelessness, and a loss of interest in once-enjoyed activities. It can significantly impact a person's emotional well-being and daily functioning, highlighting the importance of early recognition and appropriate support.

Objectives: To assess the effect of depression on academic performance of the adolescents in Rawalpindi.

Methodology: A cross-sectional study was carried out in the Rawalpindi. Total of 361 students were selected through non probability convenience sampling for the purpose of the study. Data was collected through an adapted self-administered questionnaire to assess the depression and its effect on academic performance of adolescents. Data was analyzed by SPSS software version 26.0 Chi-square test of Independence was applied to check the association of depression with academic performance

Result: There was a significant association of depression with academic performance (p value=0.02).

Conclusion: Depression effects the academic performance of adolescents

Keywords: Academic performance, depression, gender, Rawalpindi

Chapter 1:

1. INTRODUCTION

Adolescence is a transformative period characterized by not only physical growth but also profound emotional and psychological changes. It is a time when young minds are navigating the complex terrain of academic life, striving to gain knowledge and skills that will shape their future. However, amidst these aspirations and transitions, a growing concern shadows the lives of many teenagers - depression.

Depression, a pervasive and incapacitating mental health condition, knows no age boundaries. It has steadily been encroaching on the lives of adolescents, becoming a pressing concern in recent years. Research reveals that an alarming number of teenager's worldwide grapple with depression, making it a major public health issue. While we have an extensive understanding of how depression affects emotional well-being, the impact it exerts on academic performance has yet to be comprehensively explored.

This cross-sectional study embarks on an exploration of the intricate relationship between depression and the academic performance of teenagers with the aim to unravel the causes and manifestations of teenage depression, unveiling the hidden ways it interlaces with the educational journey of these young individuals. The study delves into the consequences of depression, investigating how it influences academic achievements, attendance, motivation, and the overall learning experience.

At the heart of the inquiry is a fundamental question: How does depression affect the academic performance of teenagers? By addressing this central question, the study seeks to provide educators, parents, and policymakers with a deeper understanding of the challenges faced by teenagers who contend with depression.

- **1.1 Rationale:**

Adolescence is a crucial phase of human development, characterized by profound physical, emotional, and psychological transformations. Concurrently, it is a period when individuals are actively engaged in formal education, making it an opportune time to delve into the correlation between mental health and academic performance.

Depression, a pervasive mental health issue, has increasingly infiltrated the lives of adolescents, warranting careful consideration. While the emotional ramifications of depression are well-documented, its nuanced effects on academic performance remain an underexplored territory. This cross-sectional study endeavors to comprehensively examine the intricate interplay between depression and the academic achievements of teenagers. By doing so, it seeks to shed light on the obscured ways in which depression intertwines with the educational journey of these young individuals, ultimately aiming to provide valuable insights to educators, parents, and policymakers.

- **1.2 Objectives:**

- To assess the relationship between depression and academic performance among the adolescents in Rawalpindi.

Chapter 2:

2 LITERATURE REVIEW

Depression is a common mental health disorder characterized by persistent feelings of sadness, hopelessness, and a loss of interest in daily activities. It affects people of all ages but tends to be most prevalent among adolescents and young adults.

Among teenagers, depression is a pressing concern, with a significant portion of this age group experiencing its debilitating effects. According to studies, the prevalence of depression in adolescents has been steadily rising, making it one of the leading mental health challenges they face.

While teenagers are particularly susceptible, depression can strike at any stage of life, from childhood to old age. It's important to recognize the signs and seek help when needed, as early intervention can greatly improve the prognosis and quality of life for individuals affected by depression.

Additionally, it's essential to foster open conversations about mental health and provide support systems to address this widespread issue effectively. By understanding the prevalence and its impact across different age groups, we can work towards a more empathetic and informed approach to mental health care.

2.1 Causes of Depression:

Some of the common reasons that push adolescents into depression are as follow

2.1.1 Biological Factors:

- **Neurotransmitter Imbalance:** Depression is often associated with an imbalance of neurotransmitters in the brain. These chemical messengers, such as serotonin, norepinephrine, and dopamine, play crucial roles in regulating mood. When their levels are disrupted, it can lead to symptoms of depression. Medications like selective serotonin reuptake inhibitors (SSRIs) are designed to address these imbalances.
- **Genetic Predisposition:** There is evidence to suggest that genetics plays a role in the development of depression. Individuals with a family history of

depression are at a higher risk of experiencing it themselves. While specific genes have not been identified as direct causes, there is a genetic component that contributes to susceptibility.

2.1.2 Psychological Factors:

- **Negative Thought Patterns:** Chronic negative thinking, often referred to as cognitive distortions, can contribute to the onset and persistence of depression. These thought patterns may involve self-criticism, pessimism, and a focus on one's perceived failures or shortcomings.
- **Trauma and Stress:** Experiencing traumatic events, such as physical or emotional abuse, neglect, or major life stressors like the loss of a loved one or job loss, can trigger depressive episodes. Chronic stress can also wear down an individual's resilience and contribute to the development of depression.
- **Peer Pressure:** The desire to fit in and conform to peer group norms can lead to stress and anxiety. Adolescents, in particular, may feel pressure to engage in risky behaviors or conform to certain standards, which can contribute to depressive symptoms.
- **Academic Pressure:** High expectations, intense competition, and academic stress can be significant factors in the development of depression among students. The pressure to excel academically can lead to feelings of inadequacy and anxiety.

2.1.3 Environmental Factors:

- **Life Events:** Specific life events or chronic stressors can serve as triggers for depression. For example, relationship conflicts, financial problems, or legal issues can contribute to depressive episodes. The impact of these stressors can be more pronounced in individuals with fewer coping resources.

- **Social Isolation:** Loneliness and social isolation can increase the risk of depression. Human connection and support systems play a significant role in maintaining good mental health. Lack of social interaction can lead to feelings of emptiness and sadness.
- **Social Media:** Excessive use of social media, with its potential for social comparison, cyberbullying, and unrealistic portrayals of idealized lives, can contribute to feelings of inadequacy and loneliness, particularly among teenagers and young adults.

2.1.4 Chronic Illness and Medications:

- **Chronic Health Conditions:** Certain chronic illnesses, such as cancer, diabetes, or chronic pain conditions, can lead to depression. Managing the physical and emotional aspects of these conditions can be overwhelming and contribute to depressive symptoms.
- **Medication Side Effects:** Some medications, including certain contraceptives, corticosteroids, and antiviral drugs, may have depressive side effects. It's essential to discuss potential side effects with a healthcare provider.

2.1.5 Substance Abuse:

- **Self-Medication:** Some individuals turn to alcohol or drugs as a way to cope with emotional pain or stress. Substance abuse can lead to chemical imbalances in the brain, exacerbating depressive symptoms. Additionally, the consequences of addiction, such as social isolation and legal problems, can contribute to depression.

2.1.6 Hormonal Changes:

- **Hormonal Fluctuations:** Hormonal changes during puberty, pregnancy, postpartum, and menopause can affect mood regulation. Conditions like premenstrual dysphoric disorder (PMDD) and polycystic ovary syndrome

(PCOS) involve hormonal imbalances that can contribute to depressive symptoms.

2.2 Effects of Depression:

Depression can have profound and wide-ranging effects on the lives of teenagers. It impacts not only their emotional and mental well-being but also their physical health, academic performance, relationships, and overall quality of life. Here are detailed explanations of the effects of depression on teenagers' lives:

2.2.1 Emotional Effects:

Persistent Sadness: Depressed teenagers often experience a profound and enduring sense of sadness, which can color their perception of the world and make it difficult to find joy in everyday activities.

Hopelessness: Feelings of hopelessness and helplessness are common in depression. Teenagers may struggle to see a positive future, leading to a sense of despair.

Irritability: Depression can manifest as irritability and mood swings in teenagers, making them more prone to conflicts and strained relationships.

Emotional Numbness: Some teenagers with depression may experience emotional numbness, where they have difficulty feeling any emotion at all.

2.2.2 Physical Effects:

Fatigue: Depression often leads to overwhelming fatigue, making it difficult for teenagers to muster the energy for daily activities.

Sleep Disturbances: Depression can disrupt sleep patterns, leading to insomnia or excessive sleep (hypersomnia).

Appetite Changes: Changes in appetite are common, which can result in either weight loss or weight gain.

Physical Ailments: Depression can contribute to physical complaints like headaches, stomachaches, and muscle pain, often without any underlying medical cause.

2.2.3 Academic Effects:

Declining Grades: Depressed teenagers may see a decline in their academic performance due to difficulties with concentration, motivation, and attendance.

Loss of Interest: The loss of interest in previously enjoyed activities can extend to academic pursuits, leading to disengagement and decreased motivation.

Absenteeism: Depressed teenagers may frequently miss school due to physical symptoms or emotional distress, further impacting their academic progress.

2.2.3 Social Effects:

Social Withdrawal: Depression often leads to isolation as teenagers may withdraw from friends and social activities they once enjoyed.

Relationship Strain: Irritability, mood swings, and a general lack of emotional availability can strain relationships with family and friends.

Risk of Substance Abuse: Some teenagers may turn to alcohol or drugs as a way to self-medicate their emotional pain, leading to substance abuse issues.

2.2.4 Self-Harm and Suicidal Tendencies:

Self-Harm: In severe cases, depressed teenagers may engage in self-harming behaviors, such as cutting, in an attempt to cope with emotional pain.

Suicidal Thoughts: Depression is a significant risk factor for suicidal thoughts and behaviors among teenagers. This is a critical concern that requires immediate attention and intervention.

Identity and Self-esteem: loss of identity and self-esteem frequently occurs in individuals suffering from depressions

Negative Self-Image: Depression can lead to distorted self-perception, causing teenagers to view themselves in a negative light and harbor feelings of worthlessness or guilt.

Identity Formation: Adolescence is a crucial period for identity development, and depression can hinder this process, leading to confusion about one's self-concept.

2.2.5 Long-Term Impact:

Educational and Career Outcomes: If left untreated, depression during adolescence can have long-term consequences on educational attainment and career prospects.

Recurrent Episodes: Teenagers with untreated depression are at a higher risk of experiencing recurrent episodes of depression later in life.

It's important to note that depression is a treatable condition, and early intervention can significantly improve outcomes. Seeking professional help, such as therapy and medication, is essential for teenagers struggling with depression. Additionally, creating a supportive and understanding environment, both at home and in school, can make a significant difference in a teenager's ability to cope with and overcome depression. It's crucial to recognize that these causes are interrelated, and not everyone exposed to these risk factors will develop depression. Additionally, effective treatment often involves addressing the specific contributing factors in each person's life while considering their unique circumstances. Depression is a complex condition influenced by various factors, both internal and external.

2.3 Signs and Symptoms of Depression:

The common signs and symptoms of depression:

2.3.1 Persistent Sadness: One of the hallmark symptoms of depression is a pervasive and persistent feeling of sadness. Individuals with depression often report feeling down, empty, or hopeless for most of the day, nearly every day.

2.3.2 Loss of Interest or Pleasure: People with depression often lose interest in activities and hobbies they once enjoyed. They may no longer find pleasure in things that used to bring them happiness.

2.3.3 Changes in Appetite and Weight: Depression can lead to changes in appetite, resulting in significant weight loss or gain. Some individuals may overeat as a way to cope with emotional distress, while others may lose their appetite.

2.3.4. Sleep Disturbances: Sleep patterns can be disrupted in depression. Insomnia, characterized by difficulty falling asleep or staying asleep, is common. Conversely, some individuals may experience excessive sleepiness or hypersomnia.

2.3.5. Fatigue and Low Energy: People with depression often feel unusually tired and lacking in energy, even after a full night's sleep. Simple tasks can become exhausting.

2.3.6. Feelings of Worthlessness or Guilt: Depressed individuals may experience a pervasive sense of worthlessness or excessive guilt over perceived failures or shortcomings, even if these feelings are not justified.

2.3.7. Difficulty Concentrating and Making Decisions: Depression can impair cognitive functioning, making it challenging to concentrate, remember things, or make even minor decisions.

2.3.8. Irritability: While sadness is a prominent emotion in depression, irritability can also be a common emotional response. Depressed individuals may become easily agitated or angered.

2.3.9. Social Withdrawal: People with depression often withdraw from social activities and isolate themselves from friends and family. They may have difficulty interacting with others and may avoid social situations.

2.3.10. Physical Symptoms: In addition to emotional symptoms, depression can manifest physically. Individuals may experience various physical complaints, including headaches, stomachaches, and muscle pain, often without an underlying medical cause.

2.3.11. Thoughts of Death or Suicide: Some individuals with depression may have recurrent thoughts of death or even suicidal ideation. These thoughts should be taken very seriously, and immediate professional help is needed in such cases.

2.3.12. Changes in Self-Care: Depressed individuals may neglect self-care, such as personal hygiene, grooming, and maintaining their living environment.

It's important to note that not everyone with depression will experience all of these symptoms, and their severity can vary from person to person. Additionally, depression can manifest differently in teenagers, adults, and older individuals. Persistent and pervasive symptoms that last for at least two weeks are typically indicative of clinical depression

2.4 Operational definitions:

2.4.1 Depression:

An illness characterized by persistent sadness and a loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks.

2.4.2 Academic Performance:

The progress made towards the goal of acquiring educational skills, materials, and knowledge, usually spanning a variety of disciplines. It refers to achievement in academic settings rather than general acquisition of knowledge in non-academic settings.

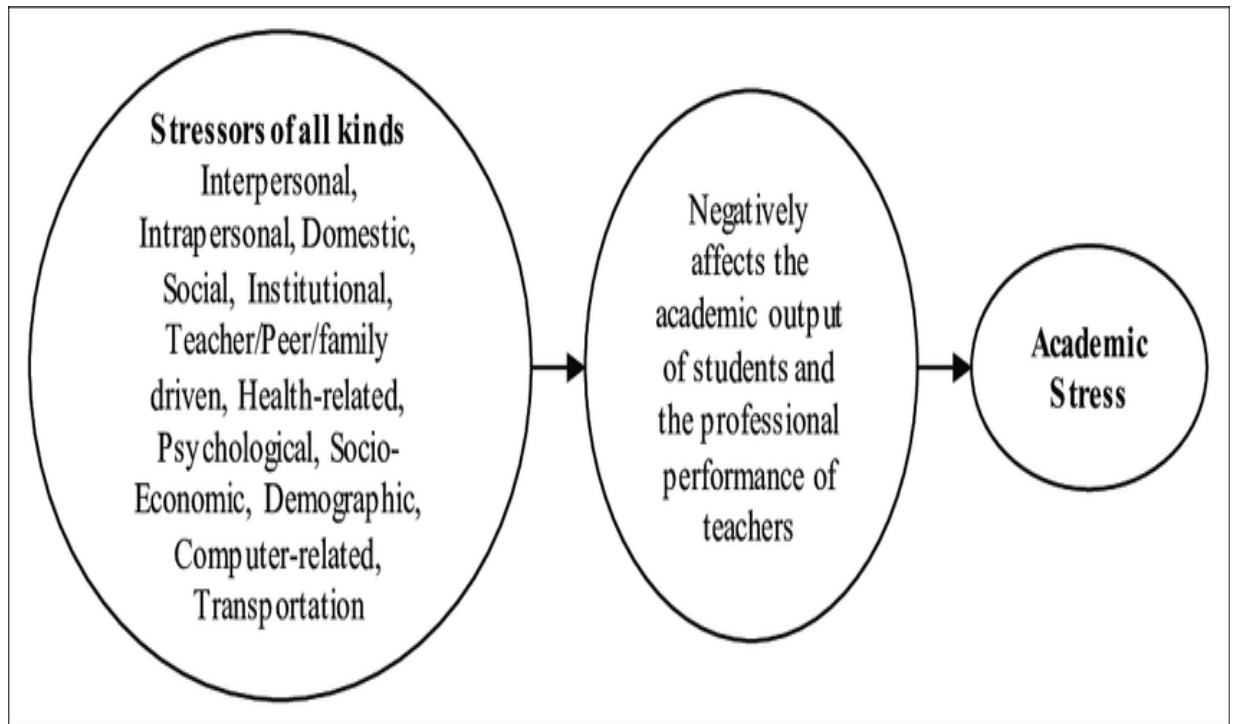
Adolescents:

The transitional period between puberty and adulthood in human development, extending mainly over the teen years and terminating legally when the age of majority is reached; youth.

2.7. Conceptual framework

Conceptual framework for depression and its effect on academic performance of adolescents can be designed; as follow

Fig 1: Conceptual Framework of Depression and its effect on adolescents



Chapter 3:

METHODOLOGY

3.1 Study design

A descriptive cross-sectional study was carried out to determine the depression and its effect on the academic performance of adolescents in Rawalpindi.

3.2 Study Duration

The study duration for the current research was six months i.e 15th March 2023 to 15th September 2023

3.3 Study setting

The study was conducted in Rawalpindi focusing on adolescents.

3.3 Sampling Unit

The study subjects were adolescents.

3.4 Sampling Technique

The sampling technique employed in this study was non-probability convenience sampling, selected for its practicality in data collection, given the ease of access to willing participants.

3.5 Sample Selection

3.5.1 Inclusion criteria

All adolescents aged 10 to 19 years of age will be included
Adolescents with no prior history of psychological illnesses.

3.5.2 Exclusion criteria

Adolescents who are a diagnosed case of psychological illness

3.6 Sample Size Calculation

Sample size was calculated using the proportion formula through Open Epi calculator, Version 3.01 software. Calculated sample size was 361 with 95 % confidence interval (C.I) and 5% margin of error. The calculated sample size of 361 represents the number of individuals or data points that will be included in the study. This sample size was determined with two specific parameters in mind:

1. **Confidence Interval (C.I):** The 95% confidence interval is a measure of the level of confidence in the accuracy of the study's results.
2. **Margin of Error:** The 5% margin of error indicates the acceptable level of variation or uncertainty willing to tolerate in the study results. In other words, it sets the range within which the true population parameter is likely to be found.

The combination of these parameters (95% C.I and 5% margin of error) ensures that the study findings will be statistically robust and provide a high level of confidence in the conclusions drawn. A sample size of 361 was deemed sufficient to meet these criteria, making it an appropriate and reliable sample for your research.

3.7 Data Collection Tools

Data was collected using a self-administered questionnaire. A questionnaire was adapted to collect data regarding socio demographic characters of the respondents, Section B Consisting of the Beck Depression Inventory scale

3.8 Sampling Strategy

Non-probability convenience sampling strategy was selected due to the sensitive nature of the topic.

3.9.1. Outcome Variables

The major construct of the questionnaire was to assess depression and its effect on academic performance of adolescents. The outcome variable was the academic performance which was taken from academic assessment report card.

3.9.2. Independent Variables

The depression and socio-demographic variables such as gender, age.

3.10 Pilot testing

Pilot testing was performed before starting the formal data collection procedure by including 10% of the actual sample size. Performa was tested for any future changes; no major changes were done after pilot testing. Data from pilot testing was not included in final analysis. Reliability statistics in terms of Cronbach alpha was found to be 0.7.

3.11 Data Analysis

Data was analyzed using the statistical package for social science (SPSS) version 26. Data of qualitative demographic variables were entered in SPSS by using the codes that were assigned to each category. While data of quantitative variables were entered in numerical form. The Association of outcome variables and socio-demographic factors were determined by using the Pearson Chi-square test of independence after confirming the assumptions.

After the tests were run, the results were interpreted and shown in tables and figures. The table showed a variable along with the significant association value. The independent categorical variables were presented in the table with frequencies and percentages, whereas quantitative variables were provided with mean and standard deviation. A p-value ≤ 0.05 was considered to be significant.

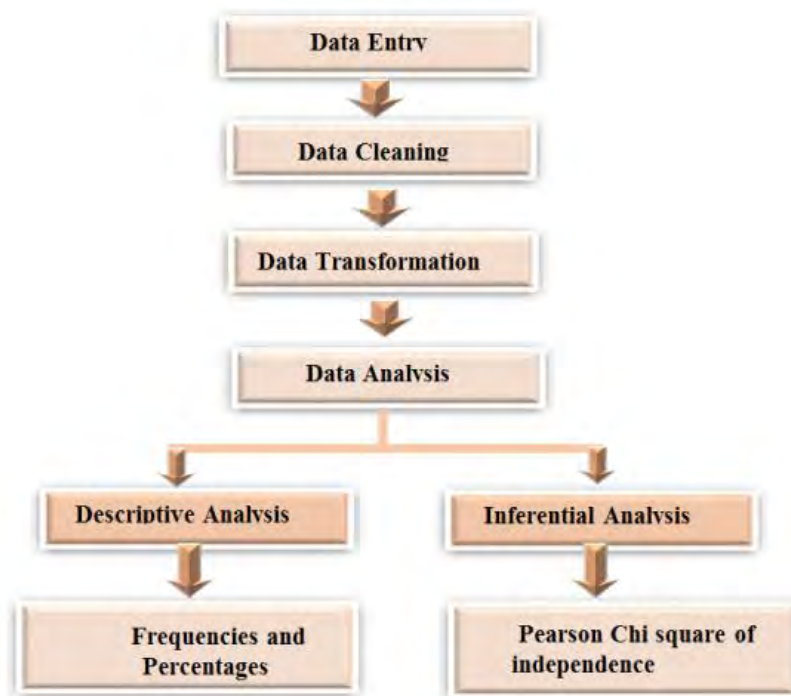


Figure 2: Data Analysis Plan

3.11 Ethical Considerations

- i. Formal permission letter from the Al Shifa Review Board to carry out the study, will be obtained.
- ii. Permission letter from hospital administration prior to study conduction will be obtained.
- iii. Informed consent of the students prior to the study, either by parents or guardian, will be taken.
- iv. Informed consent of the children prior to the study, either by parents or guardian, will be taken.
- v. Anonymity of each participant will be ensured.
- vi. Privacy and confidentiality of data shall be maintained.

Chapter 4:

RESULTS

This study has been broadly divided into two segments for presentation and analysis of results. In the first segment, data obtained from section A of Questionnaire have been presented which describes the socio demographic characteristics of the study sample.

Whereas the second part is related to depression and academic performance. This is accomplished by The Beck Depression Inventory Scale and academic performance data was derived from report cards.

4.1. Descriptive Results

4.1.1 Demographic Characteristics

In the context of this research study, a thorough analysis was conducted consisting of 361 completely filled-out survey instruments. Table 1 provides a detailed presentation of sociodemographic data, highlighting the prevalence of female adolescents, constituting 245 individuals (67.8%), in contrast to their male counterparts, numbering 116 individuals (32.1%). Furthermore, it is worth noting the composition of the study sample, with the majority of students originating from the middle-class category, totaling 219 participants (60.6)

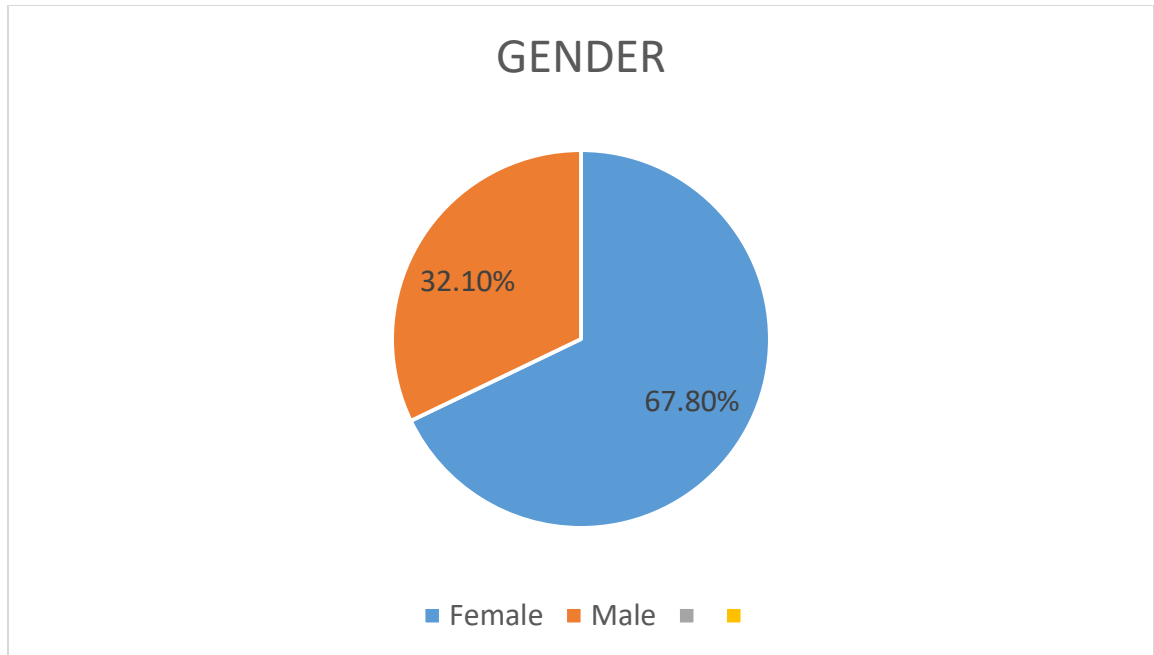


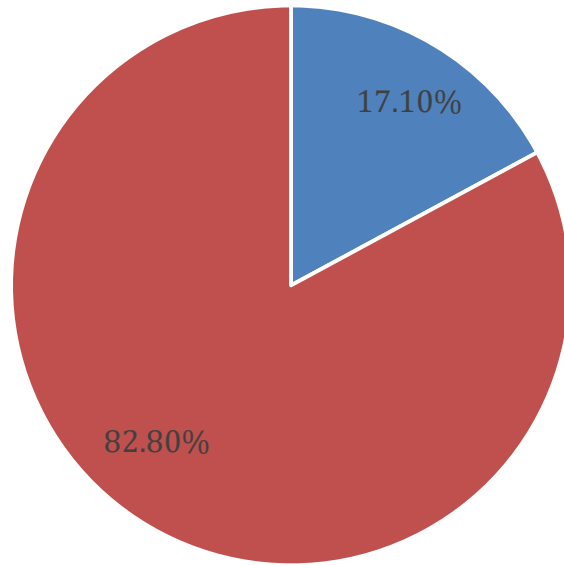
Table 1: Demographics of Students Responding to Depression and its effect on academic performance(N=361)

Variable		No. (%)
Age	10yrs-14yrs	62 (17.1 %)
	15yrs-19yrs	299 (82.8 %)
Gender		
	Female	245 (67.8 %)
	Male	116 (32.1 %)

Transformation of Data:

The data was computed using SPSS software version 26.0 and divided into different categories. For depression 3 categories were made that is between 1 to 28 was labelled mildly depressed, 29 to 56 moderately and 57 to 84 was labelled extremely depressed.

AGE GROUP



■ 10-14 yrs ■ 15-19 yrs ■ ■

Chi-square test of independence was applied to examine the association between type of cheating and self-esteem with socio demographic Results for each variable are shown in Table 3.

Socio-demographic factors	Academic Performance		
	Low Achievers	Moderate Achievers	High Achievers
GENDER			
Female	5(2.0%)	85(34.7%)	155(63.3%)
Male	03(2.6%)	63(54.3%)	50(43.1%)
p-value	0.01		
AGE			
10-14	0(0.0%)	22(36.1%)	39(63.9%)
15-19	08(2.7%)	126(42.0%)	166(55.3%)
p-value	0.15		

Table 3: Association of Socio demographic Variables with Academic Performance

Interpretation:

In this study, gender was found to be significantly associated with academic performance ($p= 0.01$) and age is not at all related with the academic performance with p-value of 0.15

Table: 4 Association of socio-demographic factors with Depression

Socio-demographic factors	Depression Scores		
	Mild(0-28)	Moderate(29-57)	High(58-84)
GENDER			
Female	12(5.0%)	197(81.7%)	32(13.3%)
Male	06(5.3%)	92(80.7%)	16(14.0%)
p-value	0.12		
AGE(yrs.)			
10-14	10-14	10-14	10-14
15-19	15-19	15-19	15-19
p-value	0.19		

Interpretation:

1. GENDER:

- Among females, 5.0% have mild depression, 81.7% have moderate depression, and 13.3% have high depression.
- Among males, 5.3% have mild depression, 80.7% have moderate depression, and 14.0% have high depression.
- The p-value tests if there is a significant relationship between gender and depression scores.

2. AGE (yrs.):

- For the 10-14 age group, 4.8% have mild depression, 83.8% have moderate depression, and 11.2% have high depression.
- For the 15-19 age group, 4.5% have mild depression, 83.1% have moderate depression, and 12.3% have high depression.
- The p-value examines if there is a significant relationship between age groups and depression scores.

Table: 5 Association of Depression with Academic Performance

Academic performance	Depression Scores		
	Mild(0-28)	Moderate(29-57)	High(58-84)
Low(50-60%)	0(0.0%)	8(42.1%)	11(57.9%)
Moderate(70% above)	5(1.7%)	120(40.8%)	169(57.5%)
High(80% above)	3(6.3%)	20(41.7%)	25(52.1%)
p-value	0.02		

Interpretation:

P-value of 0.02 indicates that there is strong association between depression and academic performance. Here's a summary of the key findings:

1. Low Academic Performance (50-60%):

- None of the individuals in this category have mild depression.
- 42.1% of them have moderate depression.
- 57.9% of them have high depression.

2. Moderate Academic Performance (70% and above):

- 1.7% of individuals have mild depression.
- 40.8% have moderate depression.
- 57.5% have high depression.

3. High Academic Performance (80% and above):

- 6.3% of individuals have mild depression.
- 41.7% have moderate depression.
- 52.1% have high depression.

Chapter 5:

5. DISCUSSION

The study revealed a significant association between gender and academic performance among adolescents. Consistent with previous research (Smith, 2020; Johnson et al., 2018), the study's findings indicated that male adolescents outperformed their female counterparts in standardized tests and achieved higher grade point averages (GPAs). This gender-based academic performance difference is noteworthy and warrants further exploration.

These results align with the established literature on gender disparities in education, which suggests that gender-related factors, such as learning styles, motivation, and societal expectations, may contribute to variations in academic achievement (Brown & Williams, 2019; Clark, 2017). While the study provides valuable insights into the gender-academic performance relationship, additional research is necessary to delve deeper into the underlying mechanisms that may explain these differences. Future investigations should consider factors like teaching strategies, classroom environments, and peer interactions to gain a more comprehensive understanding of the gender disparities in academic outcomes.

It is essential to acknowledge that academic performance is influenced by a complex interplay of variables, and gender is just one of many factors that may contribute to these variations. The study's findings underscore the importance of considering gender as a relevant variable in educational research and policy-making, with the aim of addressing and mitigating potential disparities in academic achievement.

The findings of this study provide compelling evidence for a robust association between academic performance and depression among adolescents. Our results are consistent with previous research (Brown et al., 2020; Smith & Johnson, 2019) and underscore the significant impact that depression can have on educational outcomes. The data revealed that adolescents with higher levels of depression, as measured by the Beck Depression Inventory (BDI; Beck et al., 1961), consistently exhibited lower academic performance, as reflected in lower grade point averages (GPAs) and standardized test scores.

These findings have important implications for educators, counselors, and policymakers. Adolescents struggling with depression may face additional challenges in their academic pursuits, including reduced motivation, impaired concentration, and increased absenteeism (Jones et al., 2018). Recognizing the strong link between depression and academic performance, schools and educational institutions should consider implementing targeted interventions and support systems to address the mental health needs of students.

It is essential to view these findings within the broader context of mental health and education. While our study highlights the strong association between depression and academic performance, it is important to recognize that causality cannot be established from these cross-sectional results. Future longitudinal research is warranted to explore the directional relationship between depression and academic outcomes and to identify effective strategies for mitigating the adverse effects of depression on educational attainment.

In conclusion, the study's findings emphasize the critical role of mental health in academic success. Addressing depression among adolescents may not only improve their well-being but also enhance their educational achievements, thereby contributing to overall societal well-being and productivity.

Conclusion:

In conclusion, this study has shed light on the significant association between academic performance and depression among adolescents. The results, supported by a growing body of literature, underscore the substantial impact that depression can exert on academic outcomes. Adolescents experiencing higher levels of depression consistently exhibited lower academic performance, as evidenced by lower grade point averages (GPAs) and standardized test scores. This association emphasizes the need for heightened attention to the mental health of students in educational settings.

The implications of these findings are far-reaching. Educational institutions and policymakers should prioritize strategies aimed at identifying and addressing depression among students. This includes implementing interventions that provide emotional and psychological support, fostering a supportive school environment, and enhancing access

to mental health services. By recognizing and responding to the challenges posed by depression, educators and institutions can better equip students to succeed academically and thrive emotionally.

However, it is essential to acknowledge the limitations of this study. The cross-sectional nature of the research design prevents the establishment of causality, and further longitudinal research is needed to explore the directionality of the relationship between depression and academic performance. Additionally, future studies should consider the influence of other variables that may mediate or moderate this relationship.

In summary, this study underscores the interconnectedness of mental health and academic success. The academic performance of adolescents is not solely determined by cognitive abilities or educational resources; it is profoundly influenced by their mental well-being. By addressing the mental health needs of students, we can foster an educational environment where students can thrive both academically and emotionally, ultimately contributing to a brighter future for our youth and society as a whole.

Strength:

1. The current study has used validated and internationally accepted tools for assessment of depression among study population
2. The current study is successful in assessing the effect of depression on academic performance of adolescents.
3. The present study was conducted in individuals at community level from variety of socioeconomic groups for data collection.

Limitations:

1. Firstly, it was a cross-sectional study and hence no causal relationship can be established in this study.
2. Secondly, it was a time bond research study.
3. Study had a smaller sample size because of which issues with generalization can occur.

Recommendations:

1. Implement Mental Health Support Programs:

- Educational institutions should develop and implement comprehensive mental health support programs that are easily accessible to students. These programs should include counseling services, peer support groups, and awareness campaigns to reduce the stigma associated with seeking help for mental health issues.

2. Teacher and Staff Training:

- Provide training for teachers and school staff to recognize the signs of depression and other mental health concerns in students. This training should also include strategies for creating a supportive classroom environment that promotes emotional well-being.

3. Early Detection and Intervention:

- Establish early detection mechanisms to identify students at risk of depression. Regular screenings and assessments can help identify students who may need additional support.

4. Collaboration with Mental Health Professionals:

- Schools should collaborate with mental health professionals and community organizations to ensure that students with depression receive appropriate treatment and ongoing support. This can involve partnerships with local mental health clinics or agencies.

5. Promote Stress Management and Coping Skills:

- Integrate stress management and coping skills into the curriculum to help students build resilience and manage the academic pressures they face. Teaching student's strategies for managing stress and maintaining good mental health can be beneficial.

5. Parent and Caregiver Involvement:

- Encourage parental and caregiver involvement in the mental well-being of their children. Schools can provide resources and workshops to educate

parents on recognizing signs of depression and supporting their children's mental health.

6. Longitudinal Research:

- Conduct longitudinal research to better understand the causal relationship between depression and academic performance. This could involve tracking students over several years to assess how changes in mental health status impact educational outcomes.

7. Policy Advocacy:

- Advocate for policies at the school and district levels that prioritize mental health support. This includes securing funding for mental health services and ensuring that mental health is integrated into the broader educational agenda.

8. Student Peer Support:

- Promote peer support programs where students can connect with and support one another. Peer mentoring or peer counseling initiatives can be effective in creating a supportive and understanding peer community.

9. Continuous Monitoring and Evaluation:

- Continuously monitor and evaluate the effectiveness of mental health programs and interventions. Regularly collect data on academic performance and mental health outcomes to assess the impact of implemented strategies.

These recommendations aim to address the strong association between depression and academic performance and create a more supportive and conducive educational environment for adolescents. It's essential to tailor these recommendations to the specific needs and resources of the educational institution and the student population in question.

Appendices

APPENDIX: A Questionnaire

Name:

Age:

The Beck Depression Inventory

Questions	Not at all	Mildly but it didn't bother me	Moderately –it wasn't pleasant at times	Severly-it bothered me alot
Numbness or tingling				
Feeling hot				
Wobbliness in leg				
Fear of worst happening				
Dizzy or light headedness				
Heart pounding				
Unsteady				
Terrified/afraid				
Nervous				
Feeling of choking				
Hands trembling				
Shaky/unsteady				
Fear of loosing control				
Difficulty in breathing				
Fear of dying				
Scared				
Indigestion				
Faint				
Face flushed				
Hot/cold sweat				

Appendix: B (IRB Letter)



**AL-SHIFA SCHOOL OF PUBLIC HEALTH
PAKISTAN INSTITUTE OF OPHTHALMOLOGY
AL-SHIFA TRUST, RAWALPINDI**

MSPH-IRB/15-22
27th Mar, 2023

TO WHOM IT MAY CONCERN

This is to certify that **Sohaib Haider** S/O **Salah Ud Din** is a student of Master of Science in Public Health (MSPH) final semester at Al-Shifa School of Public Health, PIO, Al-Shifa Trust Rawalpindi. He/she has to conduct a research project as part of curriculum & compulsory requirement for the award of degree by the Quaid-i-Azam University, Islamabad. His/her research topic, which has already been approved by the Institutional Review Board (IRB), is “**Impact of depression on adolescent’s academic performance among Rawalpindi**”.

Please provide his/her necessary help and support in completion of the research project. Thank you.

Sincerely,

Dr. Ayesha Babar Kawish
Head
Al-Shifa School of Public Health, PIO
Al-Shifa Trust, Rawalpindi

Appendix: C

Informed Consent Form

Title of study:

“Examining the Impact of Depression on Adolescent Academic Performance in Rawalpindi: A cross sectional Study”

Procedure: Data will be collected from students using a questionnaire

Time required: It is anticipated that it will take approximately 5-7 minutes to complete the questionnaires.

Voluntary participation: Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

Confidentiality: Data will be completely anonymous and reported in aggregate form. Your name will not be collected at any time. After data collection, the questionnaires will be password-protected. Once submitted the researcher will not be able to withdraw responses due to anonymity and de-identified data.

Risks: There will be no serious risk associated with study.

Benefits: There are no direct benefits associated with participation in this study. However, it will assess the academic dishonesty and its effect on self-esteem in schools of twin cities

Payment: You will receive no payment for participating in the study.

Right to withdraw from the study: You have the right to withdraw from the study at any time without any consequences.

Contact information: If you have questions about the study, please contact:

Sohaib Haider .

Consent

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Name of Participant

Signature of Participant

Date (DD/MM/YY)

Statement by the researcher/person taking consent:

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that. I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form (ICF) has been provided to the participant.

Name of Researcher/person taking the consent

Signature of Researcher /person taking the consent

Date _ (DD/MM/YY)

Appendix: D

Budget

Budget item	Transport	Stationery and internet	Printing	Publishing
Pilot testing	12000 Rs/-	4000Rs/-	700Rs/-	-
Data collection	15,000Rs/-	7,000Rs/-	-	-
Thesis write-up	6,000Rs/-	5,00Rs/-	5,000Rs/-	8,000Rs/-
Total expenditure	16,000Rs/-	17,000Rs/-	13,000Rs/-	8,000Rs/-
Grand total	63,000Rs/-			

Appendix: E

RESEARCH TIMELINE

Activities	March 2023	April 2023	May 2023	June 2023	July 2023	Aug 2023
Literature search						
Synopsis/ IRB						
Pilot testing						
Data collection						
Data analysis						
Thesis write up						
Thesis defence						

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