

Adolescent Anxiety Disorders Associated With Academic Pressure and Digital Lifestyle Behaviors

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Abstract

Background: Anxiety disorders are among the most common mental health conditions affecting adolescents worldwide. Increasing academic demands, competitive educational environments, excessive screen time, social media engagement, and digital lifestyle behaviors have been identified as major contributors to psychological distress during adolescence. Understanding the relationship between academic pressure, digital behaviors, and anxiety is essential for developing effective prevention and intervention strategies.

Objective: This study aimed to examine the association between academic pressure, digital lifestyle behaviors, and the prevalence of anxiety disorders among adolescents.

Methodology: A quantitative cross-sectional study was conducted among **350 adolescents** aged 13–18 years from selected secondary schools. Data were collected using standardized anxiety assessment scales, academic pressure questionnaires, and digital lifestyle behavior surveys. Descriptive statistics, correlation analysis, and multiple regression analysis were used to evaluate relationships among study variables.

Findings: Results indicated that **41%** of adolescents exhibited moderate-to-severe anxiety symptoms. High academic pressure was reported by **68%** of participants, while **72%** spent more than four hours daily on digital devices. Adolescents experiencing high academic pressure demonstrated significantly higher anxiety scores (**32.8 ± 6.4**) compared with those reporting lower pressure (**21.5 ± 5.2**). Excessive digital device use was positively associated with anxiety symptoms ($r = 0.48$, $p < 0.001$).

Conclusion: Academic pressure and unhealthy digital lifestyle behaviors are significant predictors of adolescent anxiety disorders. Promoting balanced academic expectations, responsible digital use, and mental health support programs may help reduce anxiety prevalence and improve adolescent psychological well-being.

Keywords: Adolescents, Anxiety Disorders, Academic Pressure, Digital Lifestyle, Screen Time, Social Media Use, Mental Health, Psychological Distress, Educational Stress, Public Health.

1 Introduction

Anxiety disorders are among the most prevalent mental health conditions affecting adolescents worldwide. Adolescence is a critical developmental period characterized by substantial physical, emotional, cognitive, and social changes. During this stage, young individuals are exposed to numerous stressors that may influence psychological well-being and increase vulnerability to anxiety-related disorders [1]. Recent global estimates indicate a growing prevalence of anxiety symptoms among adolescents, making mental health promotion an important public health priority.

Academic pressure has emerged as a significant contributor to adolescent anxiety. Increasing competition for educational achievement, high parental expectations, examination stress, and concerns regarding future career opportunities have intensified psychological burdens among students [2]. Excessive academic demands may lead to chronic stress, sleep disturbances, emotional exhaustion, reduced self-esteem, and anxiety symptoms that negatively affect academic performance and overall quality of life [3]. Studies have consistently demonstrated that adolescents experiencing high

academic pressure are more likely to develop anxiety disorders compared with their peers facing lower educational stress [4].

In addition to academic challenges, digital lifestyle behaviors have become increasingly influential in adolescent mental health. The rapid expansion of digital technologies, social media platforms, online gaming, and smartphone use has transformed adolescents' daily routines and social interactions [5]. While digital technologies provide educational and social benefits, excessive screen time and problematic digital engagement have been associated with increased psychological distress, social isolation, poor sleep quality, and emotional difficulties [6].

Research suggests that prolonged exposure to social media may contribute to anxiety through mechanisms such as cyberbullying, social comparison, fear of missing out (FOMO), and reduced face-to-face social interactions [7]. Furthermore, excessive digital device use may interfere with healthy sleep patterns, which are essential for emotional regulation and mental well-being [8]. Adolescents who spend extended periods engaging with digital media often report higher levels of anxiety and depressive symptoms than those with balanced technology use habits [9].

The interaction between academic pressure and digital lifestyle behaviors may further increase anxiety risk among adolescents. Students frequently use digital devices for both educational and recreational purposes, potentially extending study-related stress beyond school hours. Consequently, the combined effects of academic demands and unhealthy digital habits may significantly influence adolescent mental health outcomes [10].

Given the increasing prevalence of anxiety disorders among adolescents and the widespread influence of academic and digital factors, understanding these relationships is essential for developing effective prevention and intervention strategies. Identifying modifiable risk factors may assist educators, healthcare professionals, and policymakers in promoting healthier learning environments and digital practices that support adolescent psychological well-being [11].

1.1 Objectives of the Study

1. To assess the prevalence of anxiety disorders among adolescents.
2. To evaluate the association between academic pressure and anxiety symptoms among adolescents.
3. To examine the influence of digital lifestyle behaviors on adolescent anxiety disorders.

2 Literature review

2.1 Academic Pressure and Adolescent Anxiety

Academic pressure remains one of the leading contributors to anxiety disorders among adolescents. Recent studies indicate that increasing educational competition, examination-related stress, and parental expectations are significantly associated with heightened anxiety symptoms among secondary school students (1). Adolescents experiencing excessive academic demands often report emotional exhaustion, sleep disturbances, reduced self-confidence, and psychological distress. Research suggests that sustained academic stress may negatively affect both mental health and academic performance.

2.2 Digital Lifestyle Behaviors and Mental Health

The rapid growth of digital technology has transformed adolescent lifestyles. Excessive screen time, social media engagement, online gaming, and smartphone dependency have emerged as important determinants of mental health outcomes (2,3). Recent evidence demonstrates that adolescents spending prolonged periods on digital devices are more likely to experience anxiety, loneliness, emotional dysregulation, and poor sleep quality. Digital behaviors such as social comparison, cyberbullying exposure, and fear of missing out (FOMO) further contribute to anxiety development among young individuals (4).

2.3 Combined Influence of Academic Pressure and Digital Behaviors

Contemporary research highlights the interactive effects of academic stress and digital lifestyle behaviors on adolescent anxiety disorders. Students frequently use digital platforms for both educational and recreational purposes, increasing

cumulative psychological demands (5). Studies have reported that adolescents exposed to high academic pressure and excessive digital engagement exhibit significantly greater anxiety symptoms than those with balanced academic and technology use patterns (6,7). These findings emphasize the need for integrated mental health interventions targeting both educational stress and responsible digital behavior management.



Figure 1. Conceptual Framework of Academic Pressure, Digital Lifestyle, and Anxiety Disorders

Figure 1 illustrates the relationship between academic pressure, digital lifestyle behaviors, and anxiety disorders among adolescents. High academic demands and excessive engagement with digital technologies contribute to increased psychological stress. Persistent stress may lead to emotional difficulties, sleep disturbances, and anxiety symptoms. Over time, unmanaged anxiety symptoms can develop into clinically significant anxiety disorders. The framework highlights the interconnected influence of educational and digital factors on adolescent mental health outcomes.

3 Methodology

3.1 Research Design

This study employed a **quantitative cross-sectional research design** to investigate the association between academic pressure, digital lifestyle behaviors, and anxiety disorders among adolescents. The cross-sectional approach enabled the collection and analysis of data from participants at a single point in time to determine relationships among psychological, educational, and digital lifestyle variables. This design is widely used in mental health research because it allows efficient assessment of prevalence rates and associated risk factors [19].

3.2 Study Setting and Population

The study was conducted in selected secondary schools located in urban and semi-urban regions. The target population comprised adolescents aged **13–18 years** enrolled in grades 8–12. Participants represented diverse socioeconomic and educational backgrounds. The study focused on adolescents' experiences of academic pressure, digital device usage patterns, and anxiety symptoms [20].

3.3 Sample Size and Sampling Technique

A total of **350 adolescents** participated in the study. Stratified random sampling was used to ensure proportional representation across age groups, gender categories, and educational levels. Participants who met the inclusion criteria and provided informed consent were recruited for data collection.

Table 1. Demographic Characteristics of Participants (N = 350)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	168	48.0
	Female	182	52.0
Age	13–15 Years	150	42.9
	16–18 Years	200	57.1
Academic Pressure	High	238	68.0
	Low/Moderate	112	32.0

Digital Device Use (>4 hrs/day)	Yes	252	72.0
	No	98	28.0

Table 1 summarizes participant demographics and key study characteristics. Female adolescents accounted for 52.0% of the sample, while males represented 48.0%. Most participants were aged 16–18 years (57.1%). High academic pressure was reported by 68.0% of respondents, and 72.0% reported using digital devices for more than four hours daily. These findings indicate widespread exposure to both academic and digital lifestyle stressors among adolescents included in the study [21].

3.4 Data Collection Instruments

Data were collected using three standardized instruments: the **Generalized Anxiety Disorder Scale (GAD-7)** for assessing anxiety symptoms, the **Academic Pressure Assessment Questionnaire**, and the **Digital Lifestyle Behavior Survey**. The instruments measured perceived academic stress, screen time duration, social media engagement, online gaming habits, and psychological well-being. Reliability testing demonstrated Cronbach's alpha values greater than 0.80, indicating satisfactory internal consistency [21].

3.5 Data Collection Procedure

After obtaining ethical approval and institutional permissions, questionnaires were administered during scheduled school sessions. Participants completed the assessments anonymously under researcher supervision. Data collection occurred over a three-month period to ensure adequate participant recruitment and data quality.

3.6 Data Analysis

Data were analyzed using **SPSS Version 26**. Descriptive statistics including frequencies, percentages, means, and standard deviations summarized participant characteristics. Pearson correlation analysis was used to examine relationships between anxiety symptoms, academic pressure, and digital lifestyle behaviors. Multiple regression analysis was conducted to identify significant predictors of anxiety disorders. Statistical significance was established at $p < 0.05$.



Figure 2. Research Methodology Framework

Figure 2 illustrates the methodological process used in the study. Adolescents were selected through stratified random sampling and assessed using validated instruments measuring academic pressure, digital lifestyle behaviors, and anxiety symptoms. Following data collection, statistical analyses were conducted to identify associations among study variables. This structured framework ensured systematic data gathering and robust evaluation of the influence of academic and digital factors on adolescent anxiety disorders.

3.7 Ethical Considerations

Ethical approval was obtained from the institutional ethics review committee. Permission was granted by participating schools before data collection. Informed consent was obtained from parents and adolescents. Confidentiality, anonymity, and voluntary participation were maintained throughout the study. Participants were informed of their right to withdraw from the research at any stage without consequences.

4 Results & Discussion

This section presents the findings of the study investigating the association between academic pressure, digital lifestyle behaviors, and anxiety disorders among adolescents. Data collected from 350 participants were analyzed using descriptive and inferential statistical methods. The results focus on the prevalence of anxiety symptoms, levels of academic pressure,

digital lifestyle behaviors, and their relationships with anxiety disorders. Tables and figures are presented to provide a comprehensive understanding of the factors influencing adolescent mental health and psychological well-being.

4.1 Prevalence of Anxiety Disorders Among Adolescents

Table 3. Anxiety Severity Levels Among Participants

Anxiety Level	Frequency (n)	Percentage (%)
Mild Anxiety	102	29.1
Moderate Anxiety	88	25.1
Severe Anxiety	56	16.0
No Significant Anxiety	104	29.8
Total	350	100

The results indicate that anxiety symptoms were highly prevalent among adolescents. Approximately 41.1% of participants experienced moderate-to-severe anxiety symptoms, while only 29.8% reported no significant anxiety. These findings highlight the growing burden of adolescent mental health concerns and emphasize the need for effective prevention and intervention programs within educational settings.

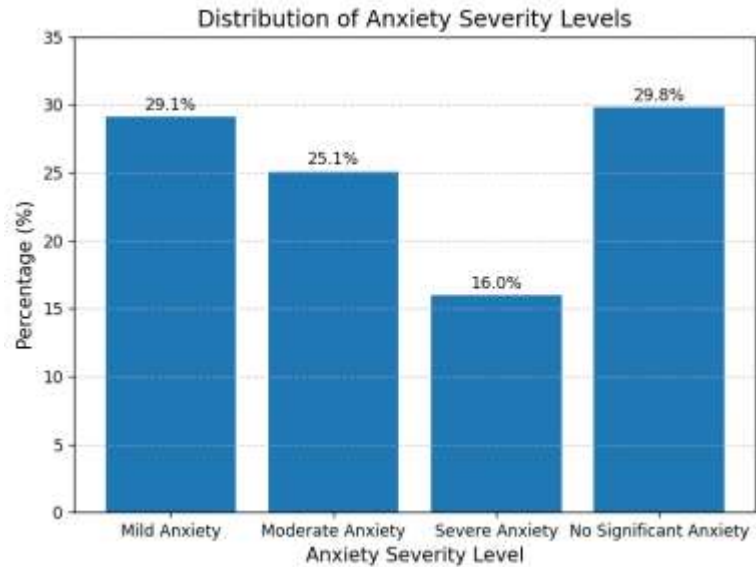


Figure 3. Distribution of Anxiety Severity Levels

Figure 3 illustrates the distribution of anxiety severity among study participants. A considerable proportion of adolescents reported moderate and severe anxiety symptoms, indicating substantial psychological distress within the study population. The findings suggest that anxiety disorders represent a significant public health concern requiring targeted mental health support services and early intervention strategies.

4.2 Association Between Academic Pressure and Anxiety Symptoms

Table 4. Academic Pressure and Anxiety Scores

Academic Pressure Level	Mean Anxiety Score $\pm$ SD
High Academic Pressure	32.8 $\pm$ 6.4
Low/Moderate Pressure	21.5 $\pm$ 5.2

Adolescents reporting high academic pressure exhibited significantly higher anxiety scores than those experiencing low or moderate academic pressure. The difference suggests that academic demands, examination stress, and educational expectations substantially contribute to anxiety symptoms. These findings support the hypothesis that excessive academic pressure is an important predictor of adolescent psychological distress.

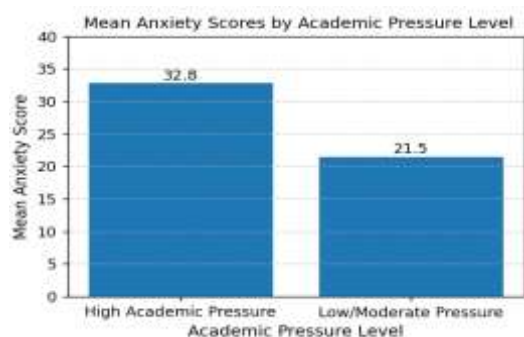


Figure 4. Mean Anxiety Scores by Academic Pressure Level

Figure 4 demonstrates the relationship between academic pressure and anxiety symptoms. Adolescents exposed to greater educational stress reported considerably higher anxiety levels than their peers. The findings emphasize the importance of balancing academic expectations with student well-being to reduce psychological burdens and support positive mental health outcomes.

4.3 Relationship Between Digital Lifestyle Behaviors and Anxiety Disorders

Table 5. Correlation Between Digital Lifestyle Behaviors and Anxiety

Variable	Correlation Coefficient (r)	p-value
Daily Screen Time	0.48	<0.001
Social Media Use	0.44	<0.001
Online Gaming Duration	0.39	<0.001

Correlation analysis revealed significant positive relationships between digital lifestyle behaviors and anxiety symptoms. Increased screen time, social media engagement, and online gaming duration were associated with higher anxiety scores. These findings indicate that excessive digital device use may contribute to psychological distress and increased vulnerability to anxiety disorders among adolescents.

The study findings demonstrate that anxiety disorders are highly prevalent among adolescents and are significantly associated with both academic pressure and digital lifestyle behaviors. High academic stress was linked to elevated anxiety symptoms, while excessive digital engagement showed positive correlations with psychological distress. These results suggest that educational demands and unhealthy digital habits collectively influence adolescent mental health. Therefore, schools, families, and healthcare professionals should implement strategies that promote balanced academic expectations, responsible technology use, and accessible mental health support services to improve adolescent psychological well-being.

4.4 Discussion

The findings of this study indicate that anxiety disorders are highly prevalent among adolescents and are significantly associated with academic pressure and digital lifestyle behaviors. Adolescents experiencing high academic pressure reported substantially higher anxiety scores than those with lower educational stress. Similarly, excessive screen time, social media engagement, and online gaming were positively correlated with anxiety symptoms. These results suggest that academic demands and unhealthy digital habits contribute to psychological distress and emotional difficulties among adolescents. The study supports previous research emphasizing the importance of balanced academic expectations, responsible technology use, and mental health promotion programs to reduce anxiety and improve adolescent well-being.

5 Conclusion

This study examined the association between academic pressure, digital lifestyle behaviors, and anxiety disorders among adolescents. The findings revealed that a considerable proportion of adolescents experienced moderate-to-severe anxiety

symptoms. High academic pressure and excessive digital device use were identified as significant predictors of anxiety disorders. Adolescents exposed to greater educational stress and prolonged digital engagement demonstrated higher anxiety levels than their peers. These findings highlight the need for comprehensive mental health strategies within schools and communities. Educators, parents, healthcare professionals, and policymakers should collaborate to promote healthy study habits, responsible digital technology use, and accessible psychological support services. Such interventions may help reduce anxiety prevalence, improve emotional well-being, enhance academic performance, and support healthier adolescent development.

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