

INFLUENCE OF ACADEMIC STRESS AND SOCIAL MEDIA DEPENDENCE ON ACADEMIC PERFORMANCE AMONG UNDERGRADUATE STUDENTS OF AIRFORCE INSTITUTE OF TECHNOLOGY KADUNA STATE

Loveth Idoko¹ & Joshua Chiroma Gandi¹ (PhD)

Shekwolo David Markus (PhD)

¹*Department of Psychology, Nigerian Defence Academy, Kaduna, Nigeria*

Corresponding author: Loveth Idoko

Email: lovethidoko@gmail.com

Abstract

The study investigated the influence of academic stress and social media dependence on academic performance among undergraduate students of the Airforce Institute of Technology (AFIT), Kaduna, Nigeria. A cross-sectional survey design was adopted, and 376 undergraduate students were sampled from six departments (Mechatronics, Mechanical Engineering, Aerospace Engineering, Cybersecurity, Computer Science, and Statistics) using a convenience sampling technique. Data were collected using the Educational Stress Scale for Adolescents (ESSA; Moustaka et al., 2023), the Social Media Addiction Scale (Aylin & Levent, 2015), and the Academic Performance Scale (Birchmeier et al., 2024; validated by Raza et al., 2024). Simple linear regression and multiple regression analyses were employed to test three hypotheses. Results revealed that academic stress significantly and negatively influenced academic performance ($B = -.268$, $\beta = -.616$, $t = -4.162$, $p < .001$). Social media dependence also significantly and negatively influenced academic performance ($B = -.118$, $\beta = -.573$, $t = -14.072$, $p < .001$). Furthermore, academic stress and social media dependence jointly and significantly predicted academic performance [$R = .872$, $R^2 = .762$, $F(2, 332) = 16.882$, $p < .001$], jointly accounting for 76.2% of the variance in academic performance. These findings underscore the importance of addressing both psychological stress and digital dependency to enhance academic outcomes in Nigerian military-affiliated institutions.

Keywords: *Academic stress, social media dependence, academic performance, undergraduate students, Airforce Institute of Technology, Nigeria*

Introduction

Academic performance, defined as the extent to which students master course content, demonstrate understanding, and achieve the educational benchmarks set by their institutions, is among the most consequential indicators of individual potential and institutional effectiveness in higher education (Wibowo & Astutik, 2020; Hayat et al., 2022). Beyond grades and Grade Point Average, contemporary scholarship recognises academic performance as a multifaceted construct encompassing critical thinking, problem-solving capacity, self-regulation, and collaborative competence (Theobald, 2021; Sarwar et al., 2024). It exerts far-reaching downstream effects: high academic performance is associated with superior career prospects, social mobility, and institutional prestige, while poor performance signals the need for urgent structural and psychological interventions (Oreopoulos & Petronijevic, 2018). Within higher education institutions, particularly those operating within military or paramilitary frameworks, the pressure to achieve can manifest in high levels of academic stress that may compromise students' learning capacity. Understanding the factors that undermine or sustain academic performance in such environments is therefore both theoretically significant and practically urgent.

Two such factors have attracted mounting empirical attention in recent years: academic stress and social media dependence. Academic stress refers to the physiological and psychological responses to academic-related demands that exceed an individual's adaptive resources (Misra & Castillo, 2004). It encompasses emotional strain, cognitive impairment, and behavioural disruption arising from heavy workloads, examination pressure, fear of failure, and competitive academic environments (Agolla & Ongori, 2009; Wilks, 2008). The relationship between academic stress and academic performance is well-documented, though its dynamics are nuanced. Moderate stress can serve as a motivating force that sharpens focus and mobilises effort, but once stress exceeds an optimal threshold, performance deteriorates sharply (Yerkes & Dodson, 2016). Confirming this curvilinear pattern, Ma (2023) found that appropriate academic pressure can promote performance, while stress beyond a critical threshold impairs it. In the Nigerian context, studies have identified high workloads, poor time management, and limited institutional resources as principal stress drivers, concluding that stress exerts a net negative effect on academic performance (Akanpaadgi et al., 2023; Oyewobi et al., 2021).

Several mechanisms explain how stress degrades academic outcomes. Cognitively, stress impairs executive functions like working memory, selective attention, and cognitive flexibility that are essential for processing and retaining academic material (Vogel & Schwabe, 2016). Students under high stress demonstrate reduced class attendance, lower test scores, and difficulty completing assignments, creating a self-reinforcing cycle in which poor performance amplifies the very stress that caused it (Pascoe et al., 2020). Emotionally, chronic academic stress produces anxiety, fatigue, depression, and in extreme cases burnout, each of which further erodes

motivation and engagement, thereby undermining academic performance (Beiter et al., 2015; Abdullah et al., 2022; Deng et al., 2022).

Parallel to the stress literature, a robust body of evidence links social media dependence to academic performance. Social media dependence, refers to a compulsive pattern of excessive social media use that negatively affects daily life, academic productivity, and interpersonal relationships (Kuss & Griffiths, 2017). Social media platforms, including WhatsApp, Instagram, TikTok, Facebook, and X have become deeply embedded in Nigerian undergraduates' daily lives, functioning as tools for social interaction, entertainment, and information access (Appel et al., 2020). Previous studies have linked social media dependence to poorer academic outcomes, with highly dependent students reporting lower grades and higher stress (Kolek & Saunders, 2017; Kim et al., 2018). Social media dependence has also been associated with decreased attention span, increased procrastination and increased distraction leading to diminished academic focus (Li et al., 2020; Wang et al., 2019; Jasen & Smith, 2023). However, Zhang and Leung (2022) distinguished between passive use — scrolling through feeds without interaction — and active, academically oriented engagement, such as participation in study groups or academic discussions online; the former was negatively correlated with performance while the latter showed a positive association. This distinction clarifies that the mechanism of harm is not social media per se but the passive, avoidant pattern that characterises social media dependence (Andreassen et al., 2016).

Despite the theoretical and empirical support for the influence of academic stress and social media dependence on academic performance, studies within Nigerian military educational contexts remain sparse. Most existing research was conducted in East Asian or Western settings (Kim et al., 2018, 2019, 2024; Yuan et al., 2020; Zhang & Leung, 2022), with limited generalisability to the structural, cultural, and institutional realities of Nigerian military higher education. The few Nigerian studies that exist such as Oyewobi et al. (2021) and Akanpaadgi et al. (2023) focused on civilian institutions, and examined academic stress in isolation from social media dependence. The AFIT context, with its unique dual academic-military structure, its technically demanding curricula, and its demographically specific student population, represents both a significant research gap and a compelling site for empirical inquiry.

The present study was therefore designed to investigate the independent and joint influence of academic stress and social media dependence on academic performance among 376 undergraduate students across six departments at AFIT, Kaduna. Three hypotheses guided the study:

H₁: Academic stress will significantly influence academic performance among undergraduate students of AFIT.

H₂: Social media dependence will significantly influence academic performance among undergraduate students of AFIT.

H₃: Academic stress and social media dependence will jointly influence academic performance among undergraduate students of AFIT.

Theoretical Framework

This study draws on three complementary theoretical frameworks. Expectancy-Value Theory (Eccles et al., 1983) provides the primary lens for understanding how academic stress shapes academic performance. The theory posits that students' motivation is determined by their expectancy of success and the value they assign to academic tasks. When students are overwhelmed by stress, their expectancy beliefs deteriorate, leading to reduced motivation and lower engagement — a pattern particularly relevant in high-demand institutions such as AFIT.

Uses and Gratifications Theory (UGT; Katz, et al., 1973) offers a framework for understanding social media dependence. UGT posits that users actively seek media to fulfil specific psychological and social needs, including social interaction, entertainment, and emotional relief. When students use social media primarily as an escape from academic pressure, it creates a maladaptive cycle in which platform usage increases in proportion to stress, further eroding academic productivity (Kuss & Griffiths, 2017).

The Transactional Model of Stress and Coping (Lazarus & Folkman, 1984) bridges both constructs by highlighting how individuals appraise and respond to stressors. Students who perceive academic demands as threats and lack effective coping strategies may turn to social media as a form of emotion-focused coping. While this provides temporary relief, it constitutes a maladaptive strategy that perpetuates academic disengagement and compounds the negative effects of stress on performance (Folkman & Moskowitz, 2004).

Method

Research Design

A cross-sectional survey design was employed. This design allows for the simultaneous assessment of multiple variables at a single point in time and is cost-effective for large, institutionally constrained populations (Wang & Cheng, 2020). It facilitated the examination of both independent and joint influences of the predictor variables on academic performance.

Setting and Participants

The study was conducted at the Airforce Institute of Technology (AFIT), Kaduna, a military-affiliated institution established in 1977. AFIT offers undergraduate programmes in engineering, aerospace technology, computer science, cybersecurity, and allied disciplines to a student population of over 6,000. The institution's combination of academic rigour and military structure creates a uniquely high-pressure learning environment, making it an appropriate and significant site for this study.

The target population consisted of undergraduate students enrolled across six departments: Mechatronics, Mechanical Engineering, Aerospace Engineering, Cybersecurity, Computer Science, and Statistics. Using Yamane's (1967) formula with a 5% margin of error applied to the total population of 6,219 students, a required sample size of 376 was computed. Convenience sampling was used to recruit willing participants from across the six departments. Inclusion criteria required that participants be registered undergraduate students of AFIT. The final sample comprised 208 males (55.3%) and 168 females (44.7%), with ages ranging from 16 to 27 years ($M = 20.05$, $SD = 2.68$). Regarding religion, 218 participants (58.0%) identified as Christian and 158 (42.0%) as Muslim. By level of study, 34 (9.0%) were in 100 Level, 147 (39.1%) in 200 Level, 95 (25.3%) in 300 Level, 54 (14.4%) in 400 Level, and 46 (12.2%) at other levels.

Instruments

Educational Stress Scale for Adolescents (ESSA). Academic stress was measured using the 16-item ESSA developed and validated by Moustaka et al. (2023). Items span five dimensions: self-expectation, workload, despondency, study pressure, and grade worry. Responses are rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The original scale demonstrated good internal consistency (Cronbach's $\alpha = .878$). In the pilot study conducted with 30 students from Kaduna State University, the scale yielded a Cronbach's α of .737 and all 16 items met the minimum item-total correlation criterion of .30 (Cristobal et al., 2007).

Social Media Addiction Scale (SMAS). Social media dependence was assessed using the 41-item SMAS developed and validated by Aylin and Levent (2015). The scale covers four factors: occupation, mood modification, relapse, and conflict. Items are rated on a 5-point Likert scale (1 = Never to 5 = Always). The original scale reported excellent internal consistency ($\alpha = .967$) and test-retest reliability ($r = .84$). In the pilot study, the scale yielded $\alpha = .886$; nine items (5, 6, 12, 22, 23, 26, 29, 32, and 34) failed to meet the minimum item-total correlation threshold and were removed, yielding a 32-item version for the main study.

Academic Performance Scale (APS). Academic performance was assessed using the 8-item APS developed by Birchmeier et al. (2024) and validated by Raza et al. (2024). Items are rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with scores reflecting performance categories from failing (0–8) to excellent (33–40). The scale has reported internal consistency of $\alpha = .89$ and test-retest reliability of $r = .85$, and has been validated among Nigerian students (Esther et al., 2023; $\alpha = .95$). In the pilot study, three items (3, 6, and 8) were removed for failing to meet the item-total correlation criterion, resulting in a 5-item scale for the main study with $\alpha = .686$.

Procedure

Ethical approval was obtained from the relevant authorities of NDA and AFIT prior to data collection. Research assistants were trained to administer questionnaires across the six target departments. Participants provided written informed consent before completing the questionnaire. Confidentiality and anonymity were assured, and the voluntary nature of participation was clearly communicated. Data collection was completed in a single phase during normal academic hours.

Data Analysis

Data were analysed using IBM SPSS Statistics Version 26. Descriptive statistics and bivariate correlations were computed for all study variables. Simple linear regression was used to test Hypotheses 1 and 2, examining the independent influence of each predictor on academic performance. Multiple regression analysis was used to test Hypothesis 3, examining the joint influence of academic stress and social media dependence on academic performance. Parametric assumptions of normality, linearity, multicollinearity, and homoscedasticity were verified prior to analysis.

Results

Descriptive Statistics and Bivariate Correlations

Table 1: *Inter-correlations, Means, and Standard Deviations for Study Variables (N = 376)*

Variable	M	SD	1	2	3	4	5	6	7
1. Gender	—	—	—						
2. Age	20.05	2.68	-.016	—					
3. Religion	—	—	.037	.152*	—				
4. Level of Study	—	—	.018	.517*	.023	—			
5. Academic Stress	47.32	8.19	.043	-.032	-.028	.003	—		
6. Social Media Dep.	88.85	17.78	.222*	.108*	.079	-.030	.415**	—	
7. Academic Performance	15.31	3.63	.046	-.150**	-.119*	-.054	-.162*	-.570*	—

Note. * $p < .05$; ** $p < .001$ (2-tailed). Gender coded 1 = male, 2 = female.

Table 1 presents descriptive statistics and bivariate correlations for all study variables. Academic stress showed a significant positive correlation with social media dependence ($r = .415$, $p < .001$) and a significant negative correlation with academic performance ($r = -.162$, $p < .001$). Social media dependence showed a significant and strong negative correlation with

academic performance ($r = -.570$, $p < .001$). These bivariate relationships provided initial support for the hypothesised influences.

Hypothesis 1: Academic Stress as a Predictor of Academic Performance

Table 2: *Simple Linear Regression: Influence of Academic Stress on Academic Performance*

Predictor	B	SE	β	t	p
Constant	14.072	1.110	—	12.675	.000
Academic Stress	-.268	.231	-.616	-4.162	.000

Note. $R = .616$, $R^2 = .380$, $F(1, 354) = 17.349$, $p < .001$. Dependent variable: Academic Performance.

The result of the simple linear regression in Table 2 showed that academic stress significantly and negatively influenced academic performance among AFIT undergraduates [$B = -.268$, $SE = .231$, $\beta = -.616$, $t = -4.162$, $p < .001$; $R = .616$, $R^2 = .380$, $F(1, 354) = 17.349$, $p < .001$]. An increase in academic stress was associated with a corresponding decrease in academic performance. Hypothesis 1 was therefore accepted.

Hypothesis 2: Social Media Dependence as a Predictor of Academic Performance

Table 3: *Simple Linear Regression: Influence of Social Media Dependence on Academic Performance*

Predictor	B	SE	β	t	p
Constant	16.505	1.000	—	16.505	.000
Social Media Dep.	-.118	.110	-.573	-14.072	.000

Note. $R = .573$, $R^2 = .328$, $F(1, 349) = 14.150$, $p < .001$. Dependent variable: Academic Performance.

As presented in Table 3, social media dependence significantly and negatively influenced academic performance among AFIT undergraduates [$B = -.118$, $SE = .110$, $\beta = -.573$, $t = -14.072$, $p < .001$; $R = .573$, $R^2 = .328$, $F(1, 349) = 14.150$, $p < .001$]. Students reporting higher levels of social media dependence scored significantly lower on academic performance. Hypothesis 2 was therefore accepted.

Hypothesis 3: Joint Influence of Academic Stress and Social Media Dependence

Table 4: *Multiple Regression: Joint Influence of Academic Stress and Social Media Dependence on Academic Performance*

Predictor	B	SE	β	t	p	R	R ²	F
Constant	14.874	1.276	—	11.657	.000	.872	.762	16.882**
Academic Stress	-.389	.259	-.600	-8.499	.000			
Social Media Dep.	-.368	.220	-.473	-7.122	.000			

Note. *** $p < .001$. $df = (2, 332)$. Dependent variable: Academic Performance.

Table 4 presents the multiple regression results. The overall model was statistically significant [$R = .872$, $R^2 = .762$, $F(2, 332) = 16.882$, $p < .001$], with academic stress ($\beta = -.600$, $t = -8.499$, $p < .001$) and social media dependence ($\beta = -.473$, $t = -7.122$, $p < .001$) both contributing significantly as predictors. Together, academic stress and social media dependence accounted for 76.2% of the total variance in academic performance among AFIT undergraduates. Hypothesis 3 was therefore accepted.

Discussion

This study examined the independent and joint influence of academic stress and social media dependence on academic performance among AFIT undergraduates. All three hypotheses were accepted, with the combined model accounting for 76.2% of the variance in academic performance — a substantially high proportion underscoring the central role of these two variables in shaping academic outcomes.

The finding that academic stress significantly and negatively influenced academic performance aligns with a well-established body of literature. Deng et al. (2022) demonstrated that academic and family stress contribute to depression, which in turn undermines learning outcomes. Putwain et al. (2010) similarly established a negative correlation between academic anxiety and performance. The Yerkes-Dodson Law (Yerkes & Dodson, 2016) provides a theoretical account of this finding: while moderate stress may enhance performance through heightened arousal, stress levels that exceed an optimal threshold — as is likely in the combined military-academic environment of AFIT — consistently impair academic achievement. Hamaideh (2011) and Gibbons and Wentzel (2004) further corroborate this outcome, showing that students experiencing chronic academic stress exhibit elevated anxiety, reduced engagement, and long-term academic disengagement. In the Nigerian context, Akanpaadgi et al. (2023) and Oyewobi et al. (2021) identified workload, poor time management, and institutional pressure as key drivers of student stress, all of which are highly relevant to the AFIT environment.

The finding that social media dependence significantly and negatively influenced academic performance is equally consistent with the empirical literature. Zhang and Leung (2022) distinguished between passive and active social media engagement, finding that passive scrolling correlated with lower

grades while active, academically oriented engagement had a positive effect — suggesting that the problem lies not in social media per se but in how it is used. Li et al. (2020) and Wang et al. (2019) demonstrated that excessive social media use impairs attention and heightens procrastination, directly degrading academic productivity. Kim et al. (2024) further showed that heavy dependence reduces intrinsic academic motivation, and Jansen and Smith (2023) linked dependence to poor time management. The magnitude of the effect observed in the present study ($\beta = -.573$) is notably strong and is consistent with Kolek and Saunders (2017) and Kim et al. (2018), who found that social media dependency was negatively correlated with GPA and mediated by procrastination behaviours.

The joint influence finding is the most significant contribution of this study. Academic stress and social media dependence together explained 76.2% of the variance in academic performance — a finding that strongly implies a compounding or interactive dynamic between the two predictors. This is supported by Yuan et al. (2020), who found that academic stress is positively correlated with social media dependence and both are negatively correlated with academic performance. Kim et al. (2019) similarly found that academic stress and social media dependence jointly contribute to academic burnout, a state marked by emotional exhaustion and declining motivation. Park et al. (2020) identified procrastination as a key mediating pathway, whereby stressed students turn to social media for relief, thereby reinforcing avoidance behaviours that further suppress performance. This cyclical pattern — in which stress drives social media use, and social media use worsens academic outcomes — is of particular concern in a structured, performance-centric institution like AFIT, where the consequences of academic failure carry both academic and military implications.

Conclusion

This study provides empirical evidence that academic stress and social media dependence independently and jointly diminish academic performance among undergraduate students at AFIT, Kaduna. The combined model explained 76.2% of the variance in academic performance, underscoring the critical need to address both constructs simultaneously within military-affiliated higher education institutions. Excessive academic pressure undermines concentration, motivation, and cognitive efficiency, while social media dependence fosters distraction, procrastination, and reduced academic engagement. When students rely on social media as a coping mechanism for academic stress, the two factors reinforce each other, creating a cycle that exacerbates poor academic outcomes. These findings have implications for students, faculty, institutional administrators, and policymakers in Nigeria's military higher education sector.

Recommendations

Based on the findings, the following recommendations are proposed. First, AFIT should strengthen its counselling and psychological support

infrastructure to provide targeted stress-management services. This should also include workshops on time management, examination anxiety, and cognitive coping strategies. These services should be embedded within the academic calendar to ensure accessibility for all students. Second, the institution should implement digital wellness programmes that educate students on responsible social media use, fear of missing out (FOMO) management, and the academic consequences of excessive platform engagement. Third, AFIT management should consider incorporating modules on digital literacy and self-regulation into the orientation curriculum for all incoming students. Lastly, national policymakers should promote evidence-based mental health and digital wellness standards for military-affiliated institutions, drawing on findings from studies such as this.

Limitations and Directions for Future Research

This study is not without limitations. The cross-sectional design precludes causal inferences; longitudinal or experimental designs are needed to establish temporal relationships among the variables. The use of self-report instruments may introduce social desirability bias, particularly in a disciplined military environment. The sample was drawn from a single institution, limiting the generalisability of findings to other Nigerian universities or military colleges. Additionally, the study did not account for potential moderating variables such as self-efficacy, emotional intelligence, coping style, or socioeconomic background. Future research should adopt longitudinal designs, include diverse multi-institutional samples, and explore mediating and moderating pathways linking academic stress and social media dependence to academic performance. Mixed-methods approaches could further enrich understanding by capturing students' lived experiences.

References

- Abdullah, N. A., Shamsi, N. A., Jenatabadi, H. S., Ng, B. K., & Mentri, K. A. C. (2022). Factors affecting undergraduates' academic performance during COVID-19: Fear, Stress and Teacher-Parents' Support. *Sustainability*, 14, 7694. <https://doi.org/10.3390/su14137694>
- Agolla, J. E., & Ongori, H. (2009). An assessment of academic stress among undergraduate students: The case of University of Botswana. *Educational Research and Review*, 4(2), 063-070.
- Akanpaadgi, E., Binpimbu, F., & Kuuyelleh, E. N. (2023). The impact of stress on students' academic performance. *Eureka: Journal of Educational Research*, 2(1), 60-67.
- Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2016). The relationship between addictive use of social media and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychological Reports*, 119(3), 1544-1559.

- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79-95.
- Ayin, T. U., & Levent, D. (2015). Development of the social media addiction scale. *AJIT-e: Online Academic Journal of Information Technology*. Fall/Güz : 6 - Sayı/Num: 21 DOI: 10.5824/1309-1581.2015.4.004.x
- Beiter, R., Nash, R., McCrady, M., Rhoades, D., Linscomb, M., Clarahan, M., & Sammut, S. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *Journal of Affective Disorders*, 173, 90-96. <https://doi.org/10.1016/j.jad.2014.10.054>
- Birchmeier, C., Grattan, E., Hornbacher, S., & McGregory, C. (2024). Academic performance scale. *Indus Journal of Bioscience Research*, 2(03), 60-66.
- Cristobal, E., Flavián, C. & Guinaliu, M. (2007) perceived E-service Quality (PeSQ) measurement validation and effects on consumer Satisfaction and Web Site Loyalty. *Managing Service Quality: An International Journal*, 17, 317-340.
- Deng, Y., Cherian, J., Khan, N. U. N., Kumari, K., Sial, M. S., Comite, U., Gavurova, B., & Popp, J. (2022). Family and Academic Stress and Their Impact on Students' Depression Level and Academic Performance. *Frontiers in psychiatry*, 13, 869337. <https://doi.org/10.3389/fpsyt.2022.869337>
- Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., & Jacobs, J. E. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives: Psychological and sociological approaches* (pp. 75-146). W. H. Freeman.
- Gibbons, F. X., & Wentzel, K. R. (2004). Peer influences on academic achievement: The role of social comparison. *Journal of Educational Psychology*, 96(3), 341-353.
- Hamaideh, S. H. (2011). Sources of stress and coping strategies among university students. *International Journal of Social Psychiatry*, 57(1), 69-80.
- Hayat, K., Yaqub, K., Aslam, M. A., & Shabbir, M. S. (2022). Impact of societal and economic development on academic performance: a literature review. *iRASD Journal of Economics*, 4(1), 98-106.
- Jansen, B., & Smith, L. (2023). The influence of social media on time management and academic performance. *Educational Psychology Review*, 35(1), 45-67. <https://doi.org/10.1007/s10648-022-09645-6>
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *Public Opinion Quarterly*, 37(4), 509-523.

- Kim, J., Kim, H., & Lee, Y. (2019). The effects of academic stress and social media dependence on college students' burnout: A structural equation model approach. *Computers in Human Behavior*, 93, 102-112.
- Kim, J., Lee, S., & Choi, H. (2024). Social media dependence and its effects on academic motivation among undergraduates. *Computers in Human Behavior*, 143, 107721. <https://doi.org/10.1016/j.chb.2023.107721>
- Kim, J., Lee, Y., & Kim, B. (2018). The effects of Facebook addiction on college students' academic performance: A structural equation model approach. *Computers in Human Behavior*, 85, 105-114.
- Kolek, E. A., & Saunders, R. P. (2017). Can't look away: The psychology of non-consensual pornography sharing. *Journal of Children & Media*, 11(3), 253-267.
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: A systematic review of the evidence. *International Journal of Adolescent Medicine and Health*, 29(1), 1-12.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.
- Li, M., Zhang, J., & Chen, X. (2020). The relationship between social media addiction and attention span in Chinese college students. *Computers in Human Behaviour*, 102, 102752.
- Ma, Z. (2023). The Study on the influence of academic pressure on academic performance. *Journal of Education and Educational Research*, 3(2), 106-109. <https://doi.org/10.54097/jeer.v3i2.9045>
- Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students. *International Journal of Stress Management*, 11(2), 132-148. <https://doi.org/10.1037/1072-5245.11.2.132>
- Moustaka, E., Bacopoulou, F., Manousou, K., Kanaka-Gantenbein, C., Chrousos, G.P., & Darviri, C. (2023). Reliability and Validity of the Educational Stress Scale for Adolescents (ESSA) in a Sample of Greek Students. *Children*, 10, 292. <https://doi.org/10.3390/children10020292>
- Oreopoulos, P., & Petronijevic, U. (2018). The impact of education on the income distribution: Evidence from Canada. *Canadian Journal of Economics*, 51(2), 506-532.
- Oyewobi, L.O., Bolarin, G., Oladosu, N.T. and Jimoh, R.A. (2021), "Influence of stress and coping strategies on undergraduate students' performance", *Journal of Applied Research in Higher Education*, Vol. 13 No. 4, pp. 1043-1061. <https://doi.org/10.1108/JARHE-03-2020-0066>
- Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The impact of stress on students in secondary school and higher education. *International*

- Journal of Adolescence and Youth*, 25(1), 104-112.
<https://doi.org/10.1080/02673843.2019.1596823>
- Putwain, D. W., Woods, K. A., & Symes, W. (2010). Test anxiety and GCSE performance: The role of revision strategies. *Educational Psychology*, 30(3), 265-279.
- Raza, S., Akhtar, P., Memon, F., Rahimoon, M., Salam, M. U., & Rahimoon, U. (2024). Association of Breakfast Skipping with Academic Performance among Undergraduate Students. *Indus Journal of Bioscience Research*, 2(02), 660-665.
- Sarwar, M. N., Javed, Z., Farooq, M. S., Nazar, M. F., Wasti, S. H., Butt, I. H., & Ullah, Z. (2024). Impact of a Digital Growth Mindset on Enhancing the Motivation and Performance of Chemistry Students: A Non-Cognitive Approach. *Societies*, 14(8), 133.
- Theobald, M. (2021). Self-regulated learning training programs enhance university students' academic performance, self-regulated learning strategies, and motivation: A meta-analysis. *Contemporary Educational Psychology*, 66, 101976.
- Vogel, E. A., Westerstahl, J., & Bäckström, M. (2014). Social comparison, social media, and self-esteem: The role of social media in academic stress. *Computers in Human Behavior*, 36, 245-251.
- Wang, J., Liang, Y., & Wang, Y. (2019). The relationship between social media use and attention span in college students: A systematic review. *Journal of Educational Computing Research*, 57(2), 147-164.
- Wibowo, A., & Astutik, E. (2020). The influence of motivation and learning environment on academic performance: A study on Indonesian students. *International Journal of Educational Research*, 104, 101-108.
- Wilks, S. E. (2008). Resilience amid academic stress: The moderating impact of social support among social work students. *Advances in Social Work*, 9(2), 106-125. <https://doi.org/10.18060/51>
- Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.
- Yerkes, R. M., & Dodson, J. D. (2016). The relationship of strength of the stimulus to rapidity of habit formation. *Journal of Comparative Neurology and Psychology*, 18(5), 459-482.
- Yuan, Y., Wang, Y., & Zhang, J. (2020). The effects of academic stress and social media dependence on college students' academic performance: A structural equation model approach. *Computers in Human Behavior*, 102, 102752.
- Zhang, Y., & Leung, L. (2022). Social media engagement and academic performance: The role of passive versus active use. *Journal of Educational Technology & Society*, 25(3), 1-15. <https://www.jstor.org/stable/10.2307/26871159>

