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Abstract

The research delved into the ramifications of stress on the scholastic prowess of adolescents within the Ilorin metropolis, Nigeria. Employing both simple random and stratified sampling methodologies, a sample size of 400 secondary school students was meticulously selected. A bespoke instrument, designated "Influence of Stress on Academic Performance Questionnaire" (ISAPQ), received validation from subject matter experts, boasting a reliability coefficient of 0.88, and was subsequently utilized for data collection. The acquired data underwent analysis via descriptive statistics, including mean and rank order, alongside inferential statistics (t-test) to elucidate disparities in stress influence on academic performance contingent upon gender, class level, and school type. The findings elucidated a substantial adverse impact of stress on the academic performance of adolescents, manifesting primarily in impediments to concentration, retention of information, and effective time management. Noteworthy differences emerged concerning the moderating variables, revealing that female students, senior adolescents, those in upper secondary classes, and students in private educational institutions bore the brunt of stress's detrimental effects. This study underscores the imperative for holistic stress management interventions, advocating for synergistic collaboration amongst counselors, educators, and guardians to fortify adolescents in their academic endeavors amid stress.

Keywords: Influence, Stress, Academic Performance, In-School Adolescents and Nigeria

Introduction

Globally, stress represents an inexorable phenomenon, pervasive across multifaceted dimensions of human pursuits. Adolescents within educational settings encounter instances wherein their cognitive maturation intersects incongruously with physiological transformations or societal constructs, thereby precipitating challenges stemming from maladjustment to developmental and sociocultural dynamics. Stress has been reported to impact human daily activities (Jehi et al., 2024); with disparaging effects (Osborne et al., 2020); and a substantial impact on mental health (Wang et al., 2021). Stress encapsulates the intricate interplay of physiological and psychological responses triggered by a confluence of internal and external stimuli (Javis, 2018). Stress is a construct delineated by the manifestation of nonspecific bodily disruptions consequent to situational events or alterations in life circumstances. In essence, stress manifests as the physiological or psychological responses, engendered within the individual in reaction to environmental shifts or shifts in perception thereof. Any stimuli precipitating such bodily reaction is classified under the rubric of stress.

The phenomenon of stress is an inevitable facet that permeates diverse domains of human endeavours. Zhou et al. (2022) cited a global mental health study by Benjet et al. (2016) that 7 out of 10 individuals across the globe had experienced stress, while one out of three had repeatedly been traumatized severally. This has unconditionally led to a low quality of life among people experiencing stress and trauma (Hu et al., 2018). As observed, adolescents within educational environments often confront situations where their cognitive progression intersects discordantly with physiological metamorphoses or societal paradigms, thereby engendering their academic performance and social adaptation. Stress in any form that it is experienced by in-school adolescents tends to be accompanied by stimuli termed stressors. A stressor denotes a stimulus event necessitating adaptive responses from the organism (Adegunju et al., 2019). When an individual's ability to adapt is overwhelmed, stress ensues. Yet, a certain degree of stress is beneficial, keeping us vigilant and engaged. Typically, stress among students arises from a variety of sources, including academic tests, assignments, the inherent competitiveness of their chosen disciplines, and concerns about financial stability and future employment prospects (Anjali, Renu, & Veenu, 2019).

According to the American Psychological Association (2015), adolescence is a period of significant growth and development, during which young individuals navigate the complexities of identity formation, emotional regulation, and the establishment of independence. The onset of puberty, accompanied by hormonal fluctuations, can have a profound impact on an adolescent's physical and psychological well-being, often leading to heightened self-awareness and a heightened sensitivity to social cues (Steinberg, 2017). Cognitively, adolescents undergo a remarkable transition, as they develop the capacity for abstract thinking, problem-solving, and decision-making (Steinberg, 2014). This enhanced cognitive ability allows them to engage in more complex reasoning, explore hypothetical scenarios, and critically evaluate their thought processes. However, this transition is not without its challenges, as adolescents may struggle to balance their newfound cognitive capabilities with the still-developing emotional and impulse control

systems (Crone & Dahl, 2012). Socially, adolescence is a period of significant change and growth. The development of peer relationships, the exploration of romantic connections, and the negotiation of familial dynamics become increasingly important (Steinberg & Morris, 2001). Adolescents often seek greater autonomy and independence, which can sometimes lead to conflict with parents or caregivers. However, the successful navigation of these social relationships can foster a sense of belonging, support, and personal identity (Spear, 2000) and all of these have an impact on their academic performance.

The academic performance of an in-school adolescent refers to the student's learning outcomes, encompassing the knowledge, skills, and ideas acquired both within and outside the classroom environment. This performance is influenced by various factors such as the quality of education, family environment, time management, self-directed learning, and classroom management practices (Radhika, 2018). Most in-school adolescents in a school setting mostly experience academic stress such as academic demands, financial constraints, inability to properly plan their time, health-related and self-imposed types of stressors (Kalli & Shehu, 2018). One of

the most prominent challenges faced by in-school adolescents is the immense academic pressure they constantly experience (Conner et al., 2019). As students navigate the demands of rigorous coursework, extracurricular activities, and the pressure to excel, they may be overwhelmed, leading to heightened levels of stress and anxiety. Academic stress has been shown to negatively impact adolescents' well-being significantly. High levels of academic stress can lead to decreased academic performance, elevated rates of depression and anxiety, and deteriorated physical health (Mao-min, Kai, Zheng-yu & Pei-pei, 2022). Moreover, excessive academic pressure can cause emotional changes that may result in mental health issues such as depression (Keech, Hagger, O'Callaghan & Hamilton, 2018). Adolescents who experience chronic academic stress may also struggle with poor sleep quality, substance abuse, and difficulty in developing and/or maintaining healthy relationships (Seiffge-Krenke, 2016). Compounding the issue, many in-school adolescents were stressed to conform to societal expectations and achieve academic success leading to appalling mental and emotional well-being (Conner et al., 2019). This can lead to a sense of inadequacy and a reluctance to seek help, further exacerbating the negative effects of academic stress.

The poor level of academic performance of in-school adolescents is a critical issue that has become a major area of concern among teachers, counsellors and other stakeholders. This general concern stems from the prevailing poor academic achievement recorded in Nigerian external examinations such as WAEC, NECO and JAMB. Fadipe and Uwadia (2021) lamented that the level of performance in core subjects at the secondary school level has remained poor with no signs of improvement any time soon. Fadipe and Uwadia (2021) found that poor performance was recorded in core subjects (49,873 and 43,767 students failed English Language and Mathematics respectively). According to the data obtained in 2022 from the West African Examination Council (Daily Trust, 2022); there was a persistent dwindling academic performance and under-achievement among secondary school students was linked to weak emotional intelligence (Muhammad et al., 2016). Many in-school adolescents opined that their poor performance was caused by factors out of their control and unlikely to academically improve (Afshan et al., 2020).

Research indicates that the age of in-school adolescents does not shield them from the impacts of stress on their academic performance. Adolescents are susceptible to various types of mental stress, which can negatively affect their academic achievements (Akanpaadgi, Binpimbu & Kuuyelleh, 2023). Stress can lead to depression, distraction, and panic attacks, contributing to poor academic outcomes (Ntem, 2023). Additionally, high levels of academic stress can reduce motivation, hinder academic performance, and increase dropout rates (Georgia, Mahindra, Xiang, Humberto, Keith & Xue, 2022). Sad to say, was the affirmation of Odgers and Jensen (2020) that many young adolescents are usually exempted from traditional services that can mitigate the influence of stress. In-school adolescents in high school experienced more academic stress and mental concerns than university adolescents, with a negative impact on students' academic performance (Ahorsu, 2021). Research indicates that adolescents aged 11-14 often experience a decline in the academic attitudes necessary for good academic performance. This period, marked by significant developmental changes, can impact their focus, motivation, and overall engagement with schoolwork (Ying, Zeqing, Chenchen & Lulu, 2021).

The role gender plays in influencing the academic performance of in-school adolescents can not be underestimated in Nigeria. Female gender were more prone to academic stress resulting in poor academic performance than their male counterparts (Tharaldsen, 2022). In contrast, Carlos-Chavez (2024) argued that boys were more prone to academic stress and poor academic performance than male in-school adolescents, with females with high neuroticism and average extraversion experiencing stress and poor academic performance (Garces-Arilla, 2023).

According to Song (2023), new students experience a lot of stress and mental concerns in coping with the new school environment. For example, medical students had numerous trials to deal with that included high academic rigour, financial wherewithal, deprivation of sleep and medical challenges (Nair et al., 2023). Failure of new students to adapt well portends serious mental health challenges that negatively students' academic performance (Denovan & Macaskill, 2017; Zivin, 2009). In addition, financial constraint was the only common among students who were in their final academic year (Magier, 2023); that in turn negatively affected their academic performance.

School-age in-school adolescents are not exempted from experiencing academic stress and poor academic performance. Stress occurs to them in numerous ways (Aggad, 2022); that individual in-school adolescents must deal with to academically perform as expected of him/her. Paralkar and Knutson (2023) affirmed that stress remains a major setback for students' academic performance. Moreover, in-school adolescents' self-inflicted stress demands and social life (Córdova Olivera, 2023) and drug addiction (Akinduyo, 2024) without exception to the school type of in-school adolescents are too detrimental to their academic performance.

Adolescents in school often face various stressors related to their academic workload and environment. Stress-induced behaviours typically become apparent mid-term when the combined pressures of academic and extracurricular demands can overwhelm students, leading to physical and emotional breakdowns. Common symptoms of stress among students include headaches, fatigue, anxiety, and a general inability to cope, all of which can adversely affect their academic performance. This study specifically explored how stress impacts the academic performance of

in-school adolescents in the Ilorin metropolis, focusing on differences based on gender, age, class level, and school type.

Statement of the Problem

In contemporary educational settings, the academic performance of in-school adolescents is significantly influenced by myriad factors, among which stress emerges as a pertinent concern deserving scholarly attention. Despite the recognized importance of academic achievement, the extent to which stress impacts the scholastic endeavors of adolescents in Ilorin metropolis, Nigeria remains underexplored. There exists a significant gap in understanding the nuanced relationship between stress and academic performance among in-school adolescents. While anecdotal evidence suggests that stress adversely affects cognitive functioning and learning outcomes, empirical research on its specific mechanisms and differential impact based on demographic factors is limited. This study aims to investigate how stress influences academic performance in Ilorin metropolis, focusing on variations by gender, class level, and school type. The findings will help design targeted interventions to mitigate stress and promote academic success.

Research Question

The following research questions were raised for the conduct of the study:

- (1) What is the influence level of stress on the academic performance of in-school adolescents in Ilorin metropolis?

Research Hypothesis

The following null hypotheses were generated to guide the conduct of the study:

- (1) There is no significant difference in the influence level of stress on academic performance of in-school adolescents in Ilorin metropolis across gender, class level and school type.

Methodology

The study aimed to assess the influence of stress on the academic performance of in-school adolescents in Ilorin metropolis. The sample comprised 400 secondary school students selected using a combination of simple random and stratified sampling techniques. A specially designed questionnaire, "Influence of Stress on Academic Performance Questionnaire" (ISAPQ), was employed, validated by experts, and had a reliability coefficient of 0.88. Descriptive statistics (percentages, mean, and ranking order) were used to analyze the data and determine the influence of stress on academic performance. Inferential statistics (t-test and ANOVA) were applied to test for differences in the influence of stress across gender, class level, and school type.

Results

Research Question One: *What is the influence of stress on academic performance of in-school adolescents in Ilorin metropolis*

Table 1: Mean And Rank Order of the Influence of Stress on Academic Performance of In-School Adolescents in Ilorin Metropolis

Item No.	As far as I am concerned,	Mean	Rank
3	I find it difficult to concentrate on my studies when under stress	3.48	1 st
1	stress negatively affects my ability to retain information for exams.	3.29	2 nd
5	stress makes it challenging for me to manage my time effectively for assignments and exams	3.26	3 rd
10	I tend to procrastinate more when stressed, affecting my academic performance.	3.21	4 th
8	stress interferes with my sleep patterns, leading to fatigue during academic activities	3.1	5 th
6	stress has a noticeable impact on my emotional well-being, affecting my academic performance	3.03	6 th
9	stress makes me withdraw from social activities, impacting my overall well-being and academic performance.	3.02	7 th
4	stress negatively affects my performance during exams or tests	2.99	8 th
2	stress influences my attendance and participation in classes	2.91	9 th
7	stress impairs my ability to make sound academic decisions	2.62	10 th
Aggregate Mean		3.09	

Table 1 shows the aggregate mean of 3.09 which implies that stress has a negative influence on the academic performance of in-school adolescents because they found it difficult to concentrate on their studies when under stress; the stress negatively affected their ability to retain information for exams, tests and poor management of time effectively for academic rigours.

Hypothesis One: *There is no significant difference in the influence of stress on academic performance of in-school adolescents in Ilorin metropolis across gender, class level and school type*

Table 2: *Summary of t-test showing the differences in the Influence of Stress on Academic Performance of In-School Adolescents across Gender, Class Level and School Type*

Variable		Mean	df	Cal. t-value	p-value	Remark
Gender	Male	63.18	398	3.48*	.001	Rejected
	Female	65.62				
Class Level	JSS	64.30	398	2.91*	.004	Rejected
	SSS	67.32				
School Type	Public	62.41	398	3.52*	.000	Rejected

* Significant, $p < 0.05$

The result in Table 2 found significant differences in the influence of stress on academic performance among in-school adolescents based on gender, class level and school type. Based on gender ($t = 3.48, p < 0.05$), the male and female students experienced and responded to academic stress differently, thus impacting their performance in school. Additionally, variations in stress influence were noted across different class levels ($t = 2.91, p < 0.05$) and school types ($t = 3.52, p < 0.05$), highlighting the diverse factors affecting students' academic outcomes.

Discussion

The research highlighted that stress significantly impedes the academic performance of in-school adolescents. This impact stems from the difficulty students face in maintaining concentration and focus on their studies amidst stressors like academic workload, peer pressure, and personal challenges. Such distractions often lead to decreased motivation, poorer time management, and ultimately lower academic achievement (Ntem, 2023). Stress negatively affects in-school adolescents' ability to retain information for exams, poor management of time for assignments, tests and exams among others. This is consistent with the findings of Hagger and Chatzisarantis (2016); Conner et al. (2019) that stress had consistently demonstrated its detrimental effects on adolescent well-being and academic performance. Also, stress affecting in-adolescents could be self-imposed stress (Córdova-Olivera, 2023); poor family support system, bad peer pressure influence, poor amenities and engagement in non-profitable activities negatively affect students; academic performance (Salih, 2021). This may be possible due to a series of social activities in-school adolescents involving themselves such as regular pornographic film viewing (Akinduyo & Akomolafe, 2019), clubbing, poor reading habits, cyber-crime involvement and initiation into cultism at the expense of their academic activities.

Given gender differences, this study found that female in-school adolescents experienced a greater negative influence of stress on their academic performance compared to their male counterparts. This aligns with the findings of Steinberg (2017) & Crone & Dahl, (2012) that female adolescents are more adversely affected by stress in terms of academic performance compared to males. This disparity is attributed to societal pressures, hormonal fluctuations, and differences in emotional coping mechanisms between genders. In addition, male students cope with stress more than their female counterparts; the male gender was reportedly engaging in physical exercises and smoking to take the edge off stress (Ermasova, 2022). Nigerian culture demands that the female gender do almost all house chores before and after school activities, this probably leads to stress that will result in poor academic performance.

The influence of stress on academic performance among in-school adolescents in Ilorin metropolis varies significantly based on their class level. Senior secondary school students, facing higher academic expectations and pressures compared to their junior counterparts, tend to experience a greater impact of stress on their academic performance. This finding aligns with broader research indicating that academic-related stress can hinder academic achievement, particularly in higher educational stages (Pascoe, Hetrick & Parker, 2020). The study underscores the importance of considering class-level differences in addressing stress management and academic support strategies among secondary school students.

The study discovered a significant difference in the influence of stress on the academic performance of in-school adolescents in Ilorin metropolis based on school type. This suggests that students in public and private schools experience the impact of academic stress differently. Factors such as varying resources, support systems, and educational environments between public and private schools could contribute to this disparity. Studies have shown that students in private schools often face greater academic pressure and expectations compared to their counterparts in public schools (Kalli & Shehu, 2018; Kapur, 2018). The competitive nature of private educational institutions, coupled with the higher socioeconomic status and parental aspirations associated with this setting, can create a more stressful academic environment for students (Conner et al., 2019). This heightened stress could have a more pronounced negative impact on the academic performance of private school in-school adolescents in Ilorin metropolis. This may be due to the increased pressure to perform and the higher expectations often associated with private schooling, which can make it challenging for students to cope with academic demands and maintain their success.

Conclusion

Acute psychosocial stress leads to higher levels of mental abstraction following the stressor. This suggests that interventions designed to alleviate stress could be more effective if they consider the individual's level of mental abstraction, potentially tailoring strategies to better address the cognitive effects of stress. The study highlights that stress significantly impairs the academic performance of in-school adolescents in the Ilorin metropolis. This finding is critical as it suggests that interventions aimed at reducing stress levels among students could potentially improve their academic outcomes and overall well-being. Through an examination of stress-induced impediments such as compromised concentration, reduced information retention, and impaired time management, the research elucidates the profound implications for students' scholastic outcomes. Moreover, the study illuminates the nuanced nature of the stress-academic performance nexus, revealing significant disparities predicated on variables including gender, class level, and school type. These findings revealed the importance of recognizing and addressing the diverse needs and challenges encountered by in-school adolescents across various educational contexts. Accordingly, the study advocates for the implementation of tailored interventions aimed at mitigating academic stress, bolstering coping strategies, and establishing robust support frameworks within educational institutions. By fostering an environment conducive to stress management and academic success, schools can empower in-school adolescents to navigate their educational journeys with resilience and achieve their fullest potential.

Recommendations

1. Schools should collaborate with professional counsellors to develop and regularly implement stress management workshops and training sessions for in-school adolescents. These workshops should focus on teaching effective coping strategies, such as time management, relaxation techniques, and cognitive-behavioral strategies, to help students manage academic stress.
2. Schools should ensure the availability of accessible and comprehensive counselling services for in-school adolescents.
3. Counsellors should provide both individual and group counselling sessions to help students address their stress-related challenges and develop personalized coping mechanisms.

4. Counsellors should work collaboratively with teachers, administrators, and parents to create a supportive network and ensure consistent support for students across various settings.
5. Educational authorities and policymakers should review and modify existing policies, academic schedules, and support services to create a more nurturing and stress-mitigating environment for in-school adolescents. This may involve adjusting academic workloads, providing adequate resources and infrastructure, and ensuring the availability of mental health services and support programs within schools.

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