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INTERNET ADDICTION AND ACADEMIC PROCRASTINATION AS PREDICTORS OF ACADEMIC STRESS IN UNIVERSITIES IN THE SOUTH EAST

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ABSTRACT

Despite the constant efforts made by institutions of higher learning to reduce academic stress, studies show that stress among students is on a steady increase which could be a result of the ever-increasing attachment of students to the Internet. Furthermore, students' delay to complete academic tasks may result in overwhelm and eventually academic stress. The purpose of the study, therefore, was to ascertain if Internet addiction and academic procrastination are predictors of academic stress in universities in the South East. Four research questions were raised for the study while three hypotheses were tested. A correlational research design was adopted for the study. The population of the study comprised all 61, 026 regular first-year undergraduate students for the 2020/2021 academic session in the federal universities in the South East. The sample of this study was made up of 720 regular undergraduate students for the 2020/2021 session obtained through a multi-stage sampling procedure and purposive sampling technique. Academic Procrastination Scale (APS), Adolescents Educational Stress Scale (AESS), and Internet Addiction among Undergraduate Students Questionnaire (IAUSQ) were used to collect data. APS, IAUSQ, and AESS were validated by three experts in the Department of Educational Foundations, all at Nnamdi Azikiwe University, Awka. The reliabilities of APS, IAUSQ, and AESS were established using Cronbach alpha statistics. The reliability coefficient obtained was 0.78 for AESS, 0.83 for APS, and 0.76 for IAUSQ. Data collected were analyzed using Pearson product-moment correlation, multiple regression, and t-test of significance. The findings of the study revealed that while Internet addition did not significantly predict undergraduate students' academic stress while academic procrastination significantly predicted undergraduate students' academic stress. The implications of the study were brought to the fore and it was recommended among others that educational psychologists should evolve intervention and proactive prevention strategies that would address issues of academic procrastination and internet addiction so as to avert the trend of academic stress among undergraduate students. Lastly, suggestions for further studies were made.

KEYWORDS

Internet addiction, academic procrastination, predictors, academic stress, universities in the South East.



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INTRODUCTION

Academic stress occurs when academic demands made on a student exceed their coping limit. Lending credence to this assertion, Nordqvist (2017) noted that academic stress is an uncomfortable feeling to which students are subjected to that is too demanding and which poses a threat to their well-being especially, when such demands exceed the personal and social resources that they are able to mobilize. Put differently, when an undergraduate student is besieged with more academic tasks than what their resources can bear or accommodate within a specified period of time, they become overwhelmed and this could lead to academic stress. Buttressing this point further, Fasoro, Oluwadare, Ojo and Oni (2019) pointed out that academic stress is inevitable when a student's resources are insufficient to cope with situational demands and academic pressures.

It is noteworthy to mention that academic stress at a certain level can be a huge source of motivation for prompt delivery of assignments, examination preparation as well as the handling of other academic tasks (Akinci, 2021). Observation however, has shown that excessive academic stress could be problematic to the extent that it could affect a student's concentration and worse still, academic performance. According to Ramli, Alavi, Mehrinezhad and Ahmadi, (2018), academic stress culminates in outcomes such as impaired functioning, burnout, and other health problems that can adversely affect students and the society at large. Academic stress could lead to limited or lack of energy, high blood pressure, feelings of depression, poor concentration and restlessness (Nagle and Sharma, 2018). It is noteworthy to mention that these negative effects of academic stress on students may vary from one student to another based on the coping strategies available to them at a particular time. Interestingly, academic stress could be fueled by some factors including addiction to the internet. This means that the allures of the internet could take students attention away from their academic work leaving them worse off. Put differently, addiction to the Internet could be one of the crucial antecedents of academic stress among undergraduate students (Lee et al, 2014).

Internet addiction is the act of over depending on the Internet to the detriment of other aspects of life. It is when one engages in a heterogeneous spectrum of Internet activities with a potential illness value, such as gaming, shopping, gambling, or social networking (Kuss and Griffiths, 2012). Internet addiction could also be seen as the uncontrolled investment of time in the Internet on activities such as dating and gambling that are capable of causing psychological disorders. Internet addiction is a multidimensional syndrome that manifests with both cognitive and behavioural symptoms (Lin, et al. 2014). According to Bidi, Namdari-Pejman, Kareshki and Ahmadnia (2012), Internet addiction is one of the harmful effects of the Internet and a new form of psychological disorder whose consequences pose physical and mental health problems.

University students, compared to other segments of the society appear to be more vulnerable to Internet addiction. This could be traced to the fact that they are digital natives. Digital natives represent those adolescents who were born into and grew up surrounded by technology in their different homes in the 21st century (Unachukwu, Ebenebe and Nwosu, 2019). They added that these adolescents having grown up with technology as part of their lives are proficient at using them and spend long hours interacting on the Internet. University students' overdependence on the Internet could equally be attributed to their developmental needs as adolescents and young adults. In their search for identity as they transition from children to young adults physically, emotionally and otherwise, the adolescents yearn for interactions outside the home especially with their peers. These interactions are readily provided by other young adults on the Internet which accounts for the long hours they spend chatting online.

Furthermore, some university students' vulnerability to Internet addiction could equally be linked to the fact that they have the opportunity for free and unlimited Internet access, are free from parental control and interference while in school, and have flexible schedules (Kuss, et.al, 2013). They are equally proficient at using the internet and this high rate of Internet proficiency among undergraduate students could make them susceptible to Internet addiction. Additionally, Internet addiction among undergraduate students could stem from the fact that the Internet facilitates the ease of doing their assignments, research works and by extension, enhances interpersonal communication with peers and mentors (Chang, 2014). These activities could lead to heavy internet use which may become detrimental to other areas of life if left unchecked.

Internet addiction is a huge source of worry to relevant stakeholders in the university as it could be related to other academic vices which could be detrimental to a student's academic wellbeing. Interestingly, Günlü and Ceyhan (2017) buttressed this point as they noted that internet addiction fuels academic procrastination among undergraduate students. This is to say that students who are compulsively addicted to the internet may have the tendency of procrastinating academic tasks.

Academic procrastination is the tendency of a student to defer or put off academic tasks till a later date. According to Klingsieck (2013), it could be defined as the voluntary delay of a vital and/or crucial activity, despite the expectation of potential negative consequences that outweigh the positive consequences of the delay. Going further, Klingsieck asserted that academic procrastination is an irrational behavior that is often accompanied by subjective discomfort and negative consequences. Obviously, academic procrastination is not likely to serve the academic interest of students. It is therefore glaring that a student that is susceptible to academic procrastination is more concerned about the immediate pleasure it offers than the ultimate loss they incur in terms of time. It is interesting to note that there are causative factors to academic procrastination.

Academic procrastination could be caused by poor time management, poor study skills and low self-efficacy. For instance, a student that is a poor manager of time is likely to keep postponing academic works. More so, a student that lacks the requisite study skills of study aids, note taking and test-taking strategies is likely to be vulnerable to academic procrastination. Furthermore, the inability of a student to exude self-efficacy in undertaking academic tasks can lead to academic procrastination. Dionne (2016) stated that academic procrastination is caused by the failure to cope with negative emotions that arise in challenging situations. Similarly, Sirois (2016) equally posited that academic procrastination can be caused by lack of self-regulation which leads to the voluntary delay of the onset or completion of the intended academic tasks. Thus, academic procrastination has traditionally been conceptualized as a self-regulation or time management problem (Wolters, Won and Hussain, 2017). Yang, Asbury and Griffiths (2019) observed that students who experience academic procrastination, feel academic anxieties, and have low self-regulation skills. As an extension to self-regulation, students who procrastinate exhibit deficits in short-term mood repair and deficits in emotion regulation over long-term goals (Sirois and Pychyl, 2013). Thus, students are bound to procrastinate academic tasks when they consider such tasks as boring, de-motivating and frustrating. In this digital era, students tend to delay their homework and other academic tasks as the chunk of their time is spent surfing the internet. In other words, students who exude academic procrastination behavior and perfectionist behaviours are found to be at higher risk of Internet addiction (Malyshev and Arkhipenko, 2019). Academic procrastination is not without its impacts on students' academic output.

Academic procrastination could affect a students' performance. This is obvious because a student who defers studying a course material till the eve of an exam may end up not performing well in the exam as they are likely to be overwhelmed. Lending credence to this assertion, Janssen (2015) noted that academic procrastination might have a detrimental impact on a student's life due to the multitude of examinations, term papers, and projects that the student have to wrestle with in the course of their academic pursuit. However, Jorke, Thau and Fries (2011) maintained that academic procrastination has a more significant impact on student's well-being than the other domains. Worse still, academic procrastination may lead to high rate of repetition and attrition. This is understandable given that students who perform poorly in exams as a result of academic procrastination may end up either repeating a particular level or in the worst case scenario, discontinue their education. Academic procrastination could equally lead to academic stress. This is because procrastinating students tend to put off academic activities till the expiration of most academic assignments leaving them overwhelmed and stressed at the end.

Academic procrastination and other psychological variables such as Internet addiction could play complementary roles regarding academic stress and in order to understand the underlying mechanism behind their relationship, there is the need to explore the predictive effect of internet addiction and academic procrastination may have on this relationship. For instance, Souza, Manish and Shravan (2018) examined the relationship between academic stress and internet addiction among college students in Mysuru city and found that almost all domains of internet addiction highly and positively correlated with the domains of stress.

Similarly, Feng, Ma and Zhong (2019) in their study indicated that internet addiction positively correlated with stress and social anxiety.

In federal universities in the South East, anecdotal observation shows that there is a relatively high rate of academic stress among undergraduate students arising from pressure to pass examinations, heavy academic workloads, short length of semesters, overloaded curriculum and the daunting challenge of meeting assignment and project deadlines. More so, these challenges appear to have originated from academic procrastination and internet addiction among them. However, how academic stress is predicted by Internet addiction and academic procrastination seem underexplored in South East. It is therefore research worthy to examine how Internet addiction and academic procrastination predicts academic stress among undergraduate students in universities in the South-East.

Research Questions

The following research questions guided this study:

1. What is the nature of the relationship that exists between Internet addiction, academic procrastination and academic stress among undergraduate students?
2. What is the nature of the regression equation for predicting academic stress using internet addiction and academic procrastination as predictors?
3. Which of the predictors best predicts undergraduate students academic stress?
4. What proportion of variation in undergraduate students academic stress score is accounted for by Internet addiction and academic procrastination scores?

1.7 Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. Internet addiction will not significantly predict undergraduate students' academic stress.
2. Academic procrastination will not significantly predict undergraduate students' academic stress.
3. The regression model will not significantly predict undergraduate students' academic stress.

METHOD

Correlation research design was adopted for the study. The population of the study comprised all 61,026 regular first year undergraduate students for the 2020/2021 academic session in the federal universities in the South East. Data were collected from 708 regular first year undergraduate students through multi-stage sampling procedure and purposive sampling technique. Academic Procrastination Scale (APS), Adolescents Educational Stress Scale (AESS), and Internet Addiction among Undergraduate Students Questionnaire (IAUSQ) were used to collect data. The Academic Procrastination Questionnaire is an adaptation of Mahasneh, Bataineh and Al-Zoubi (2016) English version of the Academic procrastination scale developed by Abu Ghazal (2012). This instrument is a 21-item instrument. The items were constructed in such a manner that the respondents will respond by opting for one of four response categories viz: strongly disagree, disagree, agree, and strongly agree. Adolescents Educational Stress Scale (AESS) was adapted from Jiandong (2011) refined version of the Educational Stress Scale for Adolescents. The items on the 16-item instrument are Likert scaled ranging from 1=strongly disagree to 5=strongly agree with higher scores indicating greater stress. The Internet Addiction among Undergraduate Students Questionnaire (IAUSQ) was adapted from the Internet Addiction Test (IAT) developed by Young (1998). The IAUSQ in this study is a Likert scale containing 20 items using five sets of responses to measure the presence and level of characteristics and behaviours that represent Internet dependency among respondents. They were constructed in such a manner that the respondents will respond by opting for one of five response categories with 5 being the most extreme behaviour and 1 as the least extreme behaviour. The response categories are Rarely (R=1), Occasionally (O=2) Frequently (F=3) Often (OF=4), and Always (A=5). APS, IAUSQ and AESS were validated by three experts in the Department of Educational Foundations, all at Nnamdi Azikiwe University, Awka. The reliabilities of APS, IAUSQ and AESS were established using Cronbach alpha statistics. The reliability coefficient obtained were 0.78 for AESS, 0.83 for APS and 0.76 for IAUSQ. Data collected were analyzed using Pearson product moment correlation, multiple

regression and t-test of significance. Guideline for assessing the strength of correlation according to Nworgu (2015):

Coefficient (r)	Relationship
+/- .00 to .19	Very Low Relationship
+/- .20 to .39	Low Relationship
+/- .40 to .59	Moderate Relationship
+/- .60 to .79	High Relationship
+/- .80 & Above	Very high Relationship

The null hypothesis would be rejected if the p-value is less than 0.05 alpha level. However, the null hypothesis would not be rejected if the p-value is greater than or equal to 0.05.

RESULTS

Table 1: Pearson’s Correlations among Undergraduates’ Internet Addiction, Academic Procrastination and Academic Stress.

Variables	N	Internet Addiction	Academic Procrastination	Academic Stress
Internet Addiction	708	1		
Academic Procrastination	708	-.14*	1	
Academic Stress	708	-.03	.10*	1

*Significant

The Pearson’s correlation displayed in Table 1 shows that a very low negative relationship exists between internet addiction and academic procrastination as shown by the correlation coefficient (r) = -.14. Similarly, a very low negative relationship exists internet addiction and academic stress, r = -.03. However, very low positive relationship exists between academic procrastination and academic stress, r = .10.

Table 2: Coefficients of Equation for Predicting Undergraduates’ Academic Stress Using Internet Addiction and Academic Procrastination (n=708).

Model	Unstandardized B	Std Error	Standardized β
Constant	37.00	1.65	
Internet Addiction	-.02	.02	-.04
Academic Procrastination	.08	.03	.10

The model for predicting academic stress from internet addiction and academic procrastination presented in Table 2 reveals a regression equation presented as follows:

$$Y_{\text{Academic stress}} = 37.00 - 0.02X_{1\text{Internet Addiction}} + 0.08X_{2\text{Academic Procrastination}}$$

This equation shows that for every unit increase in internet addiction (X₁), academic stress (Y) decreases by 0.02; and for every unit increase in academic procrastination, academic stress (Y) increases by 0.08.

Table 3: Model Summary of Proportion of Variance in Undergraduate Students' Academic Stress Accounted for by Internet Addiction and Academic Procrastination (n=708)

Model	R	R ²	% of Variance	Std. Error
Internet Addiction	.11	.01	1%	8.82
Academic Procrastination				

Table 3 reveals that the model using internet addition and academic procrastination to predict undergraduate students' academic stress yielded an R = .11 and R² = .01. This suggests that both predictors accounted for .01 variance in academic stress. This implies that only 1% of the variance in academic stress was accounted for by the two predictors. Therefore, 99% of the variance in undergraduate students' academic stress could be accounted by other variables not included in this model.

Table 4: Significance of Coefficients of Equation for Predicting Undergraduates' Academic Stress Using Internet Addiction and Academic Procrastination (n=708).

Model	Unstandardized B	Std Error	Standardized β	T	p-value	Remark
Constant	37.00	1.65		22.38	.00	S*
Internet Addiction	-.02	.02	-.04	-1.03	.30	NS**
Academic Procrastination	.08	.03	-.10	2.72	.01	S

*Significant; ** Not Significant

The coefficients of regression presented in Table 4 shows that internet addiction was not a significant predictor of undergraduate students' academic stress, $t = 1.03$, $p = .30$. Since the obtained p -value was greater than 0.05, the null hypothesis was not rejected. This implies that internet addition does not significantly predict undergraduate students' academic stress.

Table 5: Significance of the Regression Model for Undergraduate Students' Academic Stress Using Internet Addiction and Academic Procrastination (n=708).

Model	R	R ²	% of Variance	Std. Error	F	p-value
Internet Addiction	.11	.01	1%	8.82	3.91	.02*
Academic Procrastination						

*Significant

Table 5 shows that the regression model using undergraduate students' internet addiction and academic procrastination as predictors of their academic stress was significant, $F = 3.91$, $p = .02$. Considering that the p -

value was less than 0.05 level of significance, the null hypothesis was rejected. This implies that the model significantly predicted undergraduate students' academic stress.

Discussion

Relationship among Undergraduate Students' Internet Addiction, Academic Procrastination and Academic Stress

The finding of the study revealed that a very low negative relationship existed between internet addiction and academic procrastination; a very low negative relationship existed between internet addiction and academic stress while very low positive relationship existed between academic procrastination and academic stress. Put differently, the more a student is addicted to internet, the less likely the student procrastinates; the more the addiction, the less the academic stress while the higher the disposition to procrastinate, the more stressed the student will be. The findings of the current study are rather in dissonance with the position of Feng, Ma and Zhong (2019) that internet addiction positively correlated with stress and social anxiety. Going further, Feng, Ma and Zhong pointed out that stress influences the choices students make concerning social media use. In other words, there is a high tendency of student who is academically stressed to seek solace in the internet by way of addiction. The contradiction between the current study and the reviewed study may not be separated from the disparity in sample characteristics. Succinctly, the more a student procrastinates, the more vulnerable the student is to academic stress. More so, this apparent contradiction with the findings of the current study may not be unconnected to the peculiarities of the category of respondents in the disparate areas of study.

Undergraduate Students' Internet Addiction as a Predictor of Academic Stress.

The finding of the study depicted that a very low negative relationship existed internet addiction and academic stress. This points to the fact that students that are given to internet addiction are less stressed academically. It could be linked to the fact that the students that are addicted to the internet do so for academic purpose. That is to say that their addiction is for the purpose of gathering information that will aid them aid their academic engagement and by extension, performance. The finding of the present study is in disagreement with that of Souza, Manish and Shraavan (2018) who found that almost all domains of internet addiction highly and positively correlated with the domains of stress. Similarly, MicNicol and Thorsteinsson (2017) found a positive relationship between internet addiction and psychological distress among students. The contradiction may not be unrelated to the disparity in the pedagogical interventions employed by the educational psychologists in the areas of study under review.

The finding of the current study further revealed that Internet addition did not significantly predict undergraduate students' academic stress. In other words, internet addiction is not a major causative variable of academic stress as there are other variables acutely responsible for academic stress among undergraduate students. The finding of this study is in contradiction with the position of Oluwole, Obadeji and Dada (2021) that a significant positive relation between Internet addiction and Insomnia among medical students. This contrast could be traceable to the gap in counselling sessions scheduled for the category of respondents within the disparate areas of study.

4.2.1 Undergraduate Students' Academic Procrastination as a Predictor of Academic Stress.

The finding of the study indicated that a very low positive relationship existed between academic procrastination and academic stress. This is understandably so given that students who put off academic task are likely to be stressed as they are bound to be inundated with future tasks which will make them unable to concentrate. Buttressing this point, students who defer their study time may realize too late that they have overloaded course contents to deal with over time and begin to experience fear of failure. In that case, retention and by extension, transfer of knowledge in testing situations becomes difficult. The logical consequence of the afore-mentioned is academic stress. The finding of the current study is in alignment with the position of Hailikari, Katajavuori and Asikainen (2021) that psychological flexibility correlated with academic stress and had a huge role to play in explaining the variance of procrastination level among the students. In addition, Hailikari, Katajavuori and Asikainen established the ability of students to organize their time and effort had the highest relation with procrastination; implying that students time and effort management can be used to understand their self-reported level of academic procrastination.

The finding of the current study further indicated that academic procrastination significantly predicted undergraduate students' academic stress. Put differently, academic procrastination is a major contributor to academic stress among undergraduate students. Corroborating this position, Ashraf, Malik and Musharraf (2019) found out that high levels of peer influence resistance buffered against effect of academic procrastination on the academic stress of students. In addition, Ashraf, Malik and Musharraf stated that peer influence resistance serves as a protective factor against negative consequences of academic procrastination in decreasing academic stress.

Conclusion

Based on the findings of the study, it was concluded that a very low negative relationship existed internet addiction and academic stress; a very low positive relationship existed between academic procrastination and academic stress while undergraduate students' academic procrastination better predicted their academic stress than their internet addiction. More so, it was concluded that while Internet addition did not significantly predict undergraduate students' academic stress while academic procrastination significantly predicted undergraduate students' academic stress.

Recommendations

The following recommendations are made based on the findings and the implications:

1. Educational psychologists should evolve intervention and proactive prevention strategies that would address issues of academic procrastination and internet addiction so as to avert the trend of academic stress among undergraduate students.
2. Guidance counsellors should strengthen their counselling sessions on the need to eschew academic procrastination so as not to be academically stressed.
3. Undergraduate students should be committed to timely handling of their academic tasks to avoid imminent academic stress.

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