Effect of Social Networking Technology Addiction on Academic Performance of University Students in Nigeria

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Abstract: The benefits of social media networking platforms on students’ academic performance in contemporary times cannot be overemphasized. These social networking platforms craft out opportunities for information sharing and also danger for students in diverse fields. The danger of social networking addiction on students’ academic performance, health, and social well-being triggered this study. 400 students enrolled in this cross-sectional study, through stratified random sampling technique. Using the online survey of Google Form for data collection. The Ordinary Least Square and Pearson’s correlation coefficient was used to quantify and examine the impact. Findings revealed that social networking impact significantly on students’ academic performance, and was more prevalent among undergraduate students (P = 0.000). Pearson’s correlation coefficient revealed a significant relationship between social networking addiction, academic performance, health and social well-being of students (p≤0.001). The misapplication of social media can become addictive among users and students. Cognitive Behavioral Therapy is proposed to diminish the negative effect of social network addiction on students and other co-users.

Keywords: Academic performance, addiction, business student, online survey, social networking

1. INTRODUCTION

Innovation in Information and Communication Technology (ICT) particularly mobile- smartphone technology has significantly redesigned the academic, and professional activities of university students specifically in Nigeria vis-à-vis the internet connectivity providing social networking platforms. Social networking services (SNS) platforms of websites and software applications allow users social, educational, professional, political and religious interconnectivity, and content sharing through multimedia communication platforms of Instagram, Telegram, Facebook, Twitter, Skype, LinkedIn, my space, google+, WhatsApp among others. The geometric increase in internet connectivity and network improvement from 2G, 3G, 4G, and the projected 5G by 2020 have made SNS an accepted piece in the user’s social life and in students’ academic life. According to Facebook statistics “more than 30 billion pieces of content are shared each month” and “Facebook users install 20 million applications every day”. On YouTube, every minute, 10 hours of content are uploaded to the video-sharing platform. According to the Global Digital 2018 report, regular internet users globally are estimated at about 4.021 billion and social network users 3.196 billion. (30) reports that 73% of adults in the United States are SNS users, about 350 million are estimated to be internet users in India with Social networking services (SNS) growing proportional (37).

Nigeria is technological evolving nations where SNS and internet connectivity in the last decade have grown geometrical. According to the Nigerian Communication Commission 2018 report active mobile phone lines increase from 144,631 million in 2017 to 146 million in 2018. Smartphone users are estimated at 40 million and projected to increase to 140 million by 2025. The increase in SNS and internet connectivity offers students new prospects for self-innovation and for educational activities while substituting the customary classroom and library-based research activity to e-research and learning (28). Edmodo is an SNS platform designed for educational activities. The convenience of the SNS allows users customizations of the learning process. SNS among business students (undergraduates and postgraduates) in Nigerian universities in the last decade has witnessed a remarkable surge.

Educationalist in technologically advanced nations now substitutes traditional classroom lecturing, seminar among others with social media seminars, and online small group work. In Nigeria, such is limited although contemporary data have revealed changing inclinations towards the adoption of e-research and learning. (39) as cited in (28) observed that the risk of SNS becoming addictive among students is very high. Hence, there is a need to identify a threshold upon which excessive use tantamount to unproductive diminishing academic performance, social, physical and health condition of the student. In the bid to checkmate the use of SNS among physicians and medical students in America and Europe, the American and British Medical Associations collectively put forward recommendations for the professional use of social media by students. In Nigeria SNS addiction among students is on the increase diminishing students’ academic performance, while instigating social, and physical well-being challenges as a result of abuse.

Social networking addiction is a mental devotion, apportionment of time and resources to social networking platforms deserting other educational, and professional activities, along with social, health and physical interpersonal relationships (6). Social networking is a soft addiction (40). (13) observed a positive and significant correlation between social network addiction among German students. (4) Qatari reported a positive nexus between student’s addiction to social networking and academic performance.

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(22) in Iran reported a positive relationship between social networking addiction and academic performance. (24) in Korea reported a negative nexus between social networking addiction and academic performance. Addictive behavior is a repeated habit and is associated with salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse (21). (6); (21); (25); (16) acknowledged the following as factors associated and responsible for internet and SNS addiction among students and other users to include;

a. online shopping,
b. dating,
c. gaming and entertainment,
d. seeing of pornographic images,
e. low self-esteem,
f. depression among others.

Empirical studies on social networking addiction and students’ academic performance in Nigeria are very scanty, given the high rate of suicide cases reported among university students in Nigeria, resulting from poor academic performance, stress, depression, anxiety among other factors. Most studies on SNS addiction focus on medical students in Asia, America, and Europe ignoring business students in African universities especially Nigerian Universities where cases of addiction are prevalent. The social networking addiction can also be referred to as cyber-relationship addiction (15).

This study is designed to examine social networking addiction on the academic performance of students in the Business Faculty at the University of Nigeria Enugu Campus (UNEC) and University of Uyo Akwa Ibom State along with their social, and physical well-being implications. This study is unique, being web-based study.

Objective
The broad objective is to examine social networking addiction on the academic performance of business students, along with their physical and social welfare.

II. REVIEW OF LITERATURE

Theoretical Framework
This study employs the psychodynamic theory, social control theory, behavioral explanation, biomedical explanation, and cognitive explanation to examine students’ social networking addiction.

a. Psychodynamic Theory:
Developed by Sigmund Freud (1856-1936) roots from factors underlying human behavior, feelings, emotions and their relationship to conscious and unconscious motivation. The psychodynamic theory posits that social networking among university students is traceable to conscious and unconscious emotional motivation, resulting from content sharing between users, personality traits, and psychosocial status of users.

b. Social Control Theory:
Developed by Travis Hirschi proposed that family, colleagues, and school bonds among other social controls serve to diminish an individual’s inclination to abnormal behavior. The theory argued that without such bond crime, and addiction are inevitable outcomes in society. Addiction and crimes vary in terms of age, sex, economic status, and nationality, certain types of addiction are more likely to be found in certain groups of society than in other groups (35).

c. Behavioral Explanation Theory:
proposed that ideas and behaviors are acquired through the learning process or condition. The behavioral explanation theory believes that social networking addiction is acquired through the learning process or condition of escaping reality for entertainment. According to (9) as cited in (8) the biomedical explanation theory states that addiction becomes inevitable in the presence of some chromosomes or hormones, or in the absence of certain mental reactions regulating the functionality of the brain and its activity.

d. Cognitive Explanation Theory:
the cognitive theory propounded by Jane Piaget in 1936 examines and explains behavioral activities through thoughtful analysis and processes. The theory posits that social networking addiction among users are traceable to defective perception, and user’s intentions to evade internal and external difficulties through active use of social networking platforms (3).

2.3 Empirical Reviews

| Authors | Objective | Findings |
|---------|-----------|---------|
| (8)     | Examine social networking on Iranian medical student’s academic performance. | Moderate level of social networking addiction among male students compared to female students. |
| (12)    | Investigate social networking on students’ academic performance in 10 public tertiary institutions in five regions of Ghana. | Positive nexus between social networking addiction and students’ academic performance. |
| (29)    | Examine social networking on 139 students’ academic performance in Sombor. | A positive and significant relationship between social networking and academic performance of students. |
| (42)    | Examine the effect of social networking on academic performance of 110 nursing training college students in Ghana. | A positive relationship between social networking through Whatsapp on their academic performance. |
| (43)    | Social media, social multitasking and students’ academic performance of students in Hong Kong. | A negative relationship between social media, and students’ academic performance. |
| (41)    | The nexus between social media and academic performance. | A negative relationship between social media and academic performance. |
| (19)    | Examine social media on 60 (60) Business Administration and Management Information System students’ academic performance. | Social media have a dual impact on students’ academic performance. |
| (34)    | relationship between social Media and academic performance of students. | A negative and significant relationship between social media and academic performance of students. |

Source: Authors (2019)
III. METHODOLOGY

Research Design:
This study employed the descriptive-analytical technique to examine the effect of social networking addiction on students' academic performance in Nigeria. The study was conducted as an online cross-sectional survey on second-semester students of Business Faculty at the University of Nigeria Enugu Campus (UNEC) and the University of Uyo in September 2019.

Population and Sampling Technique
The population comprised of all second semester students of 2018–2019 academic years in both federal universities. To ensure the appropriate respondents where capture the following criteria where set: the respondent must be a second-semester student of the faculty, willing to take active participation in the research and must be 18 years of age and above. The Stratified random sampling technique was adopted to ensure all the respondents are capture. The sample size study of (32) was adopted from his study in Oman examining social networking addiction among health sciences in calculating the sample size. The findings show 14.2% addiction to Facebook, 33.3% Twitter and 47.2% YouTube. If the predominance of social networking addiction among health sciences students accepted at about 33.3%, the sample size is considered to be 340 taking into consideration 10% of the respondents drop out. To ensure data stability, reliability and accuracy this study selected 400 participants using the random sampling method across various departments in the faculty of Administration Business.

Data and Instrument of Collection
Data were collected using online Google Forms. The respondents were provided with the link to fill the questionnaires through email and text. Respondents were instructed to respond within the time frame of the study.

| Table (1) | Gender | Frequency | Percent | P-Value |
|-----------|--------|-----------|---------|---------|
| Male      | 210    | 52.5      | 0.000   |
| Female    | 190    | 47.5      |         |
| Total     | 400    | 100.0     |         |

| Years     | Frequency | Percent | P-Value |
|-----------|-----------|---------|---------|
| 18-23     | 174       | 43.5    | NS*     |
| 24-34     | 176       | 44.0    |         |
| 35-44     | 20        | 5.0     |         |
| 45-54     | 25        | 6.3     |         |
| 55 above  | 5         | 1.3     |         |
| Total     | 400       | 100.0   |         |

| Educational level | Frequency | Percent | P-Value |
|-------------------|-----------|---------|---------|
| Undergraduate Student | 208       | 52.0    | NS*     |
| Postgraduate Student | 141       | 35.3    |         |
| Doctoral Student   | 51        | 12.8    |         |
| Total              | 400       | 100.0   |         |

| Department         | Frequency | Percent | P-Value |
|--------------------|-----------|---------|---------|
| Banking and Finance| 105       | 26.3    | NS*     |
| Management         | 104       | 26.0    |         |
| Accounting         | 107       | 26.8    |         |
| Marketing          | 84        | 21.0    |         |
| Total              | 400       | 100.0   |         |

| Academic          | Frequency | Percent | P-Value |
|-------------------|-----------|---------|---------|
| Year 1            | 154       | 38.5    | NS*     |
| Year 2            | 102       | 25.5    |         |
| Year 3            | 100       | 25.0    |         |
| Final Year 4      | 44        | 11.0    |         |
| Total             | 400       | 100.0   |         |

| Social Media Usage | Frequency | Percent | P-Value |
|--------------------|-----------|---------|---------|
| Yes                | 310       | 77.5    | NS*     |
| No                 | 90        | 22.5    |         |
| Total              | 400       | 100.0   |         |

| Time spent         | Frequency | Percent | P-Value |
|--------------------|-----------|---------|---------|
| Less<1h/day        | 120       | 30.0    | NS*     |
| 1-3h/day           | 205       | 51.3    |         |
| 3-6h/day           | 65        | 16.3    |         |
| >6h/day            | 10        | 2.5     |         |
| Total              | 400       | 100.0   |         |

| Social Networking Platform | Frequency | Percent | P-Value |
|-----------------------------|-----------|---------|---------|
|                             |           |         |         |
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| Social Networking Platform | Frequency | Percentage | p-value |
|----------------------------|-----------|------------|---------|
| Facebook                   | 109       | 27.3       | 0.000   |
| Whatapp                    | 105       | 26.3       | 0.005   |
| Twitter                    | 81        | 20.3       | 0.000   |
| Instagram                  | 49        | 12.3       | 0.000   |
| Telegram                   | 33        | 8.3        | 0.003   |
| Skype                      | 5         | 1.3        | 0.005   |
| LinkedIn                   | 4         | 1.0        | 0.000   |
| My Space                   | 2         | 0.5        | 0.345   |
| Google+                    | 9         | 2.3        | 0.349   |
| Other                      | 3         | 0.8        | 0.056   |
| Total                      | 400       | 100.0      | 0.001   |

*Non-significant*

N/B: All Educational level except postgraduate and doctoral students were >4 years in duration

Fig 1: Use of social media – Variation by Networking Service

Source: Authors (2019)

Social networking addiction among male students in business faculty was positive and statistically higher than female students (p=0.000). The result of this study supports the findings of other studies of (8); (33) in urban Bengaluru, (38); (18) in South India; (10) in Poland suggest that Facebook social networking addiction among female Polish students is statistically higher than the male student. (7) posit that gender (female) has a positive nexus with social networking addiction. According to social control theory, social networking addiction varies according to different platforms and demographics variables of sex (35). The findings revealed that 52.2% represent males and 47.5% females. 310 (77.5%) of the respondents confirm using social media for academic purposes of research and downloading of academic materials (Table 1). Most of the participants confirmed that social networking is for informal communication and downloading of academic materials (n = 310; 77.5%) and not merely sharing of information (n = 90; 22.5%). Most of the respondents confirm the use of multiple networking services 51.3% (n=205) devote 1–3 h/day “online” and 30% (n=120) less1h/day on an average (P = 0.009) although the extent of use for the academic purpose was comparable across the categories of students. Facebook (27.3%), Whatapp (26.3%), Twitter (20.6%), Instagram (12.3%) and Telegram (8.3%) were the most popular platforms. (23) posit that Twitter can be used as a learning tool by students and professors. Most of the respondents report that they spend more time on social media on weekends, free time and not during school hours. Abuse of social networking platforms can become addictive diminishing academic performances and instigating social and health-related challenges.
Table 2 Impact of Social Media Usage On Academic Performance, Physical and Social Well-Being.

| Academic Performance | Frequency | Percent | P-Value |
|-----------------------|-----------|---------|---------|
| Affected              | 209       | 52.3    | 0.000   |
| Not Affected          | 120       | 30.0    |         |
| Uncertain             | 71        | 17.8    |         |
| Total                 | 400       | 100.0   |         |

| Physical well Being   | Frequency | Percent | P-Value |
|-----------------------|-----------|---------|---------|
| Affected              | 170       | 42.5    | 0.0030  |
| Not Affected          | 154       | 38.5    |         |
| Uncertain             | 76        | 19.0    |         |
| Total                 | 400       | 100.0   |         |

| Social Well Being     | Frequency | Percent | P-Value |
|-----------------------|-----------|---------|---------|
| Affected              | 149       | 37.3    | 0.000   |
| Not Affected          | 154       | 38.5    |         |
| Uncertain             | 97        | 24.3    |         |
| Total                 | 400       | 100.0   |         |

Source: Authors (2019)

52.3% (n = 209) of the 400 participants felt that social networking positively and significantly impacts on their academic performance, while 30.0% (n= 120%) shared contrary view and 71% (17.8%) uncertain of the impact on their academic performance (p-value 0.000).

Perceived negative effects of social networking on physical well-being include “hacking or leakage of personal information, intrusion in personal living space, physical ill effects among others. Excessive use of social platforms can become addictive to the user; 42.5% (n=170) believed excessive use of various social media platforms affects their physical well-being and health causing eyes related problems among others. While 38.5 (n=38.5) shared contrary view and 19.0% (n=76) uncertain of the impact on their physical well-being (p-value of 0.003).

The findings buttress the findings of (2), (27), and (24). 38.5% (n=154) believed that social media networking does not affect their social well-being, thus friendships are better sustained using social networking for constant communication while 37.3% (n=149) believed that social media networking affects their social well-being. 37.3% (n=149) of the respondent perceived that they are “addicted” to social media, while 24.3% (n = 97) were uncertain.

REGRESSION ANALYSIS

Analysing impact of social media addiction on academic performance, physical and social well-being of students.

Validity and Reliability Test

The reliability and validity of the questionnaire construct were determined using the Cronbach alpha test to confirm the reliability of the response for a meaningful analysis. According to Nunually (1978), the Cronbach alpha coefficient of 0.7 and above is the best measure of data validity and reliability (1).

Table 3 Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.927            | 7          |

Source: Authors (2019)

IV. RESULTS AND DISCUSSION

Table 4 Model Summary

| Model | R   | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|----------|-------------------|---------------------------|
| 1     | .924 | .853     | .852              | .70359                    |

a. Predictors: (Constant), Social Well Being, Academic Performance, Time spent, Physical well Being

Table 5ANOVA

| Model | Sum of Squares | Df  | Mean Square | F        | Sig.   |
|-------|----------------|-----|-------------|----------|--------|
| 1     | Regression     | 1135.302 | 4 | 283.825 | 573.345 | .000<sup>a</sup> |
|       | Residual       | 195.538  | 395 | .495   |         |
|       | Total          | 1330.840 | 399 |         |         |

a. Dependent Variable: Social Networking Platform

b. Predictors: (Constant), Social Well Being, Academic Performance, Time spent, Physical well Being

Sources: Researcher computation (2019)
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Table 4 shows the model summary and the fitness of the regression model. The R² of 85.2 (85.3%) is the coefficient determinant explaining the variation in the dependent variable as accounted for by the independent variables with an unexplained variation of 14.7%.

The F-statistics of 573.345 and the corresponding p-value of 0.000, show and confirm that the overall result is statistically significant for a robust analysis. Social networking platform addiction positively and significantly impact students’ academic, physical and social well-being at a (p-value 0.005) significant level. Table 5 the ANOVA result revealed that the independent variables statistically and significantly predict an impact on the dependent variable, F = (3,395) = 573.345, P< 0.000.

The ANOVA result further validates the robustness of the regression analysis. Social networking platform addiction positively and significant impact on students’ academic, physical and social well-being at 5% significant level.

**Table 6**

| Model     | Unstandardized Coefficients | Standardized Coefficients | T     | Sig. | Collinearity Statistics |
|-----------|-----------------------------|---------------------------|-------|------|-------------------------|
|           | B                           | Std. Error                | Beta  |      | Tolerance   | VIF    |
| 1 (Constant) | -1.434                     | .098                      | -14.639 | .000 |             |       |
| Time spent | 1.457                       | .016                      | .595   | 13.684 | .000  | .197 | 5.085 |
| Academic Performance | 1.215                     | .115                      | .508   | 10.544 | .000  | .161 | 6.230 |
| Physical well Being | - .571                     | .160                      | -.234  | -3.570 | .000  | .086 | 11.569 |
| Social Well Being | .221                       | .122                      | .094   | 1.813  | .071  | .139 | 7.206 |

Sources; Researcher computation (2019)

a. Dependent Variable: Social Networking Platform

From the results in table 6, it can be inferred that social network platform addiction vas-vis times spent positively and significantly impact on students’ academic performance and on their social well-being.

A unit increase in social media platform addiction vas-vis times spent decreases study time, academic performance and increases social well-being related challenges by 1.215% and 22.1% respectively (P < 0.05). Social network platform addiction has a negative and significant impact on student physical well-being. A unit increase in social network platform addiction negatively and significantly impact student physical well-being causing physically related challenges by 57.1%.

The excessive use or abuse of social media either for academic and non-academic purposes decreases reading time and negatively affects academic performance.

**Correlations**

**Table 7**

| Correlations | Time spent on social media | Academic Performance | Physical well Being | Social Well Being | The intensity of social network addiction |
|--------------|----------------------------|----------------------|---------------------|-------------------|-----------------------------------------|
| Time spent   | Pearson Correlation 1      | Sig. (2-tailed) .832** | 400                 |                   |                                        |
| Academic Performance | Pearson Correlation .883** | Sig. (2-tailed) .857** | 400                 | 1                 |                                        |
| Physical well Being | Pearson Correlation .870** | Sig. (2-tailed) .678** | 400                 |                   |                                        |
| Social Well Being | Pearson Correlation .759** | Sig. (2-tailed) .649** | 400                 |                   |                                        |
| Intensity of social network addiction | Pearson Correlation .678** | Sig. (2-tailed) .617** | 400                 |                   |                                        |

**.** Correlation is significant at the 0.01 level (2-tailed).

Sources; Researcher computation (2019)
The Pearson Product Movement correlation was conducted to determine the relationship between time spent, academic performance, physical being well, social being well, intensity social network addiction. The Pearson correlation coefficient, (r) shows a positive and statistically significant relationship (p<0.01) level. It can be inferred that social network addiction has a positive and significant relationship with time spent, academic performance, physical being well, social being well, and intensity social network addiction among students. Students, with a high level of anxiety, stress, depression and low level of self-esteem are at risk of social networking addiction.

V. DISCUSSION

Social media usage among students of the University of Nigeria Enugu Campus and the University of Uyo was on the high side but not 100% among the surveyed students. The utilization of social media platforms and internet connectivity for academic activities (research) was high as 87.5%, and 89.4% of the surveyed students report that social media usage impact significantly on their academic activities. 48.1% Postgraduate and doctoral students report that social media internet connectivity significantly impacts on their research works. The findings support the university's objective of graduating well informed and trained graduates and professionals of business to handle the economic, business and co-operate affairs of the nation and proffer solutions to the problems facing the nation. Justifiable use of social media networking platforms by business students will heighten their academic performance and professionalism. Social networking platforms addiction stimulate high levels of anxiety, stress, depression and low level of self-esteem. (17) in Nepal reported mix results on the effects of the social media platform of Facebook on health science students' social and health life. The adverse effect reported includes; a scorching of the eyes, lack of sleep, and headache. Cognitive Behavioral Therapy (CBT) is proposed to diminish social network addiction. It’s the most effective psychoanalyses for plummeting social network addiction. According to the CBT method, feelings and emotions are the determinants of reaction, adjusting negative feelings, and emotions reduce social networking addiction.

V. CONCLUSIONS

The use of social media internet connectivity for academic purposes was high among undergraduate students and addiction was high among undergraduates. Most students are conscious of the positive impact of social media on their academics but not on their social and physical well-being. Time spent on social media, addiction, and academic performance was significantly correlated. The issue of social networking addiction was widely spread among male students. Social networking addiction is gradually becoming a cankerworm and threats diminishing students’ academic performance, social and physical well-being. A similar study is recommended in secondary schools across Nigeria given its negative impact on university students' academic performance and social and physical well-being.

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