

**ROLE OF PERSONALITY TRAITS AND CYBERCRIME TENDENCIES
AMONG UNDERGRADUATES IN NIGER STATE, NIGERIA. IMPLICATION
OF PERSONALITY IN PROMOTING QUALITY RESEARCH OUTPUTS AND
COMBATING ACADEMIC CRIME**

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ABSTRACT

The study was on the role of personality traits and cybercrime tendencies among undergraduates in Niger State, Nigeria. The implication of personality in promoting quality research outputs and combating academic crime. The study posed three objectives with three research questions and hypotheses answered and tested. The research design adopted for this study was ex post facto design and the population of this study comprised all four hundred level students in the three (3) conventional public universities, that is, one Federal University and two state-owned Universities in Niger state, Nigeria (Federal University of Technology, Minna, Ibrahim Badamasi Babangida University, Lapai and AbdulKadir Kure University, Minna Niger State) totaling 7,020 (Academic Planning Unit & Management Information System, 2022/2023 of the respective Universities). Stratified random sampling was adopted for the study. Stratification was based on faculties and gender (male and female). The essence of choosing stratified random sampling was to make room for the heterogeneous characteristics of the population. The sample used for the study comprised 421 (6%) students which were also confirmed using Taro Yamane's formula in the study area. The instrument for data collection was a researchers' developed questionnaire titled "Personality Types and Cybercrime Tendencies Questionnaire (PTCTQ)", constructed by the researchers. Face validity was established by experts' scrutiny of the research instrument. To verify the instrument's reliability, the instrument was trial-tested on 50 respondents outside the study area. The Cronbach Alpha reliability coefficient. The reliability coefficient estimates ranged from .77 to .75 which showed that the instruments consistently measured what it was purported to measure. The method of data analysis was Simple Linear Regression Analysis and the findings revealed that agreeableness significantly predicts cyber-crime Tendencies of undergraduates, Extraversion significantly predicts cyber-crime Tendencies of undergraduates, conscientiousness significantly predicts cyber-crime Tendencies of undergraduates and neuroticism significantly predicts cyber-crime Tendencies of undergraduates. It was concluded that personality types are very vital construct in determining students' tendencies to cybercrime. It was recommended among others that the government should endeavour to include in the curriculum educational programs focused on the youths to create awareness of internet safety and a sense of responsibility towards one's behaviour in cyberspace.

Keywords: Personality Traits, Cybercrime, Tendencies & Quality Research Outputs

INTRODUCTION

In the educational sphere, cybercrime Tendencies has attracted so many questions from academic stakeholders in which students are involved in one form of academic dishonesty, just to attain a particular degree or the other. The daily demands of computer technological devices ease human endeavours. These computer devices ranging from laptops, desktops, and smart smartphones are being used by individuals regularly to engage in all facets of life which include buying and selling, communications, finance, education and others. Today's university students use the internet in their social interactions and academic activities than university students of other generations. The students of this generation constantly use technology as a tool to grow. Information technology and the internet have become key to educational growth, therefore providing access to high-quality learning and better academic achievement. Computers, mobile phones, and the internet have spiced modern life with many benefits. Companies, governments, schools, religious centres and individuals now depend on the internet and computers to preserve and maintain sensitive records and information that may be of interest. However, one cannot say it's been smooth sailing. Regardless of all the benefits of internet and computer use, a safe cyberspace is crucial for the computer age to realize its full potential. Unfortunately, the case is different as cyberspace has become a haven for cybercrimes to thrive hacking accounts of individuals and organizations.

The increasing dependence on technology to support and manage our lives has created a wide range of threats that make us vulnerable to financial loss or damage to our reputation and also the nation's economy. The involvement of youths, mostly undergraduates in cybercrime is affecting the reputation of this country. Most form of crime now involves technology in some ways, either through the use of cell phones, or more novel applications of technology to commit crimes that are not otherwise possible outside of digital devices. The World Wide Web (w.w.w.) and the Internet also provide a venue for individuals who engage in crime to communicate and share information, which would not have been possible in the real world. Sim cards and individual accounts are being hacked daily by cyber criminals. Nigeria has long been a cyber-crime hot sport, dating back to the days of the 419 scam, now known as Yahoo Boys. As a result, we must begin to understand how these changes are occurring and what acts constitute cyber-crimes.

Individuals have personal characteristics and these characteristics make people uniquely themselves. In agreement with this statement (Friedman and Schustack, 2011) describe personality as the set of psychological traits and mechanisms within an individual that are organized and relatively enduring and influence his or her interactions with, adaptations to, the intra-psychic, physical and social environments. An individual's personality type may play a major role in once engagement or disengagement from cybercrime. Personality is a dynamic organization that creates a person's characteristic pattern of behaviour, thoughts and feelings. Personality is the more or less stable and enduring organization of a person's character, temperament, intellect and physique, which determine his unique adjustment to the environment (Eysenck, 1959 in Shashirekha & Chengti, 2018)

Ryckman (2018) opined that personality is a dynamic and organized set of characteristics possessed by a person uniquely influencing his or her cognitions, motivations and behaviour in various situations. Larsen and Buss (2015) conceived personality as an internal construct that has a significant effect on human activities and behaviours and as an important determinant of thoughts. Personality is related to individual differences as it shapes

how a person will act, think and feel. As being a relatively stable and lasting organization of an individual's character, temperament, body and intellect personality is the main determinant of one's cybercrime Tendencies (Eysenck, 2013).

Palmieri and Neil (2021) examined the effect of personality on Cybercrime Tendencies. The reinforcement sensitivity theory (RST) proposed by Gray (1982; 1987) was used as a framework for explaining cybercrime. In the study, 577 participants reported engagement in cybercrime behaviours and completed the RST Personality Questionnaire (RST-PQ). Overall, it was found that RST-related traits were associated with cybercrime. The four BAS sub-factors (Reward Interest, Goal-Drive Persistence, Reward Reactivity and Impulsivity) were found to have differing relationships with cybercrime. The agreeableness trait was also positively associated with cybercrime, possibly deriving from the effect of increased anonymity online. The study supported the application of RST to the study of cybercrime.

In a study by Eyong, David and Umoh (2014) study investigated the influence of personality traits on academy achievements of secondary school students in Cross River State. Two research questions and hypotheses were tested at .05 levels of significance to guide the conduct of the study. The research design used was casual-comparative or ex-post facto. The population of the study consisted of 13, 838 SSI students in all 239 public secondary schools throughout Cross Rivers State. A total of 7 LGAs were randomly drawn out of 23. Then 20 schools were randomly selected, from which a sample of 8530 SSI students was finally drawn. The instrument adapted for the study was the 44-item standardized questionnaire known as the big five personality model by Robert McCrae and Paul Costa (1999). This was validated by expert in the field of measurement and evaluation; the reliability was established using the test re-test method and the reliability coefficient was calculated using Pearson moment correlation coefficient (r) and the reliability indices obtained were, 0.68, and 0.62 respectively for conscientiousness and agreeableness. The data collected were analyzed using the mean (\bar{x}) and standard deviation (SD) to answer the research question. The independent sample t- test was used to test the hypothesis in order to determine whether there is a significance difference between the means two independent groups being compared for each trait. A significant difference was found between the achievements of students with high level of conscientiousness and agreeableness, and those with low levels of the traits. Based on the findings, the following recommendations were made. Parents and teacher should encourage their children/ wards or students to set clear goals, and ensure that they are disciplined and careful to consistently achieve them. Incentives should be arranged to accompany success to encourage continuous positive performance. This will serve as positive reinforcement. Teacher should endeavor to be close to their students through interaction outside the classroom. Government too can encourage more sponsorship programs to encourage the indigent but conscientious students further their education. Also Neurotic tendencies such as anger, depression, anxiety, and a low self-esteem should be discouraged in students at all levels both at home and in the school. Parent should inculcate self confidence in their children by affirming them whenever they do the right thing and correct in love whenever they do wrong. Teachers and counseling psychologists should help them have a positive self-esteem through affirmation. This is why guidance and counseling units must be encouraged in all school where this is not the case, especially in the rural areas

Also, Van De Weijer and Leukfeldt (2017) examined the big five personality traits of cybercrime Tendencies. The study used a representative sample of Dutch individuals (N= 3,648) to study the relationship between cybercrime Tendencies and the key traits from the Big Five model of personality (i.e., agreeableness, extraversion, conscientiousness, emotional stability and openness to experience). First, multinomial logistic regression analyses were used to examine the associations between the personality traits and three victim groups, that is, cybercrime victims versus non-victims, traditional crime victims versus non-victims and cybercrime victims versus traditional crime victims. Next, logistic regression analyses were performed to predict cyber-dependent crimes (i.e., hacking and virus infection) and cyber-enabled crimes (i.e. online intimidation, online consumer fraud and theft from bank accounts). The analyses showed that personality traits are not specifically associated with cybercrime Tendencies and victimization, but rather with victimization in general. Only those with higher scores on emotional stability were less likely to become a victim of cybercrime than traditional crime. Furthermore, the results indicated that there are few differences between personality traits related to the victimization of cyber-enabled and cyber-dependent crimes. Only individuals with higher scores on agreeableness have higher odds of becoming a victim of cyber-enabled crimes.

Again, Thakur and Kang (2018) assessed the effect of personality traits on the cybercrime awareness of adolescents. The study was based on 200 adolescents (100 rural and 100 urban) in the age range of 16-18 years. The sample was randomly drawn from four Government Senior Secondary Schools purposively selected from rural as well as urban areas of Ludhiana district. A self-structured general information sheet was prepared to collect the general information of the adolescents. Differential personality inventory by Singh and Singh (2014) and the Cyber Crime Awareness Scale by Rajasekhar (2011) were used to assess the personality traits and cybercrime awareness of the respondents respectively. Results revealed that masculinity, responsibility, dominance, decisiveness, curiosity, hetero sexuality, ego strength, friendliness and overall personality traits had made a significant contribution towards cybercrime awareness of the adolescents.

Shappie, Dawson and Debb (2019) investigated Personality as a Predictor of Cybercrime tendencies. Data were collected from 676 undergraduate students who were administered the Online Cybercrime Tendencies and Beliefs questionnaire and the Big Five Inventory– 44. Significant correlations were observed between self-reported cyber crime Tendencies in Conscientiousness, agreeableness and openness personality constructs. Linear regression was used to examine whether the 5 personality factors were significantly associated with cybercrime Tendencies and a hierarchical regression examined the personality factors that explained additional variance over and above cybercrime Tendencies. Conscientiousness, agreeableness and openness were significantly associated with self-reported cybercrime Tendencies. Results suggest that personality plays an important role in understanding cybercrime Tendencies, which is consistent with a growing body of literature highlighting conscientiousness as a strong predictor of cybercrime behaviours.

Sajad, Mahsa, Valiullah and Heshmatullah (2014) investigated the mediating role of conscientiousness in the relationship between attitudes and cybercrime Tendencies among students. The cross-sectional study, the number of 106 medical students of Guilan University in 2020-2011 was randomly selected as the study sample and responded to the items of conscientiousness subscale of NEO Personality Inventory and attitude measurement questionnaire towards cybercrime Tendencies. Results showed that in the first step, the

regression was significant based on the tendencies towards cybercrime. In the second step, however, with the entry of conscientiousness as a mediator, a significant decrease was revealed in the β coefficient of attitude towards cybercrime Tendencies and the significance vanished. In other words, the moderating variable of consciousness plays a mediating role in the relationship between attitude and cybercrime Tendencies. In general, these two variables could moderately explain %12 of the variance of cybercrime Tendencies.

Neuroticism refers to peoples' dispositions to experience negative emotional states, feel distressed and view the world around them negatively. They may play devil's advocate in an organization pointing out problems with a proposed course of action. Neuroticism traits may often feel angry and dissatisfied and complain about their own and others' lack of progress. They also experience negative moods, feel stressed and have a negative orientation (Louisburg, Moffitt, Gibson, Drost & Stevenson, (2017). They are more critical, a tendencies that drives them to make improvements and excel in critical thinking and evaluations. Neuroticism is the tendencies to show poor emotional adjustment and experience greater stress, anxiety and depression (Judge & Ilies, 2012). Meanwhile, trait negative affect (NA) is conceptualized as the general tendencies to feel anxious, angry and upset.

A study by Sev (2019) examined the big five personality traits as factors influencing the cybercrime Tendencies of students in universities in the south-south zone in Nigeria. Data for the research was obtained from both primary and secondary sources. The sample size for the study was 352 determined through Taro Yamane's formulae. Bowley's population allocation formula was used to obtain individual university sample sizes from 6 institutions. ANOVA (Analysis of Variance) was adopted in the testing of the two formulated hypotheses. The study findings revealed that the Big Five Personality Traits of Openness to Experience, Conscientiousness, Extraversion and Agreeableness negatively influence cybercrime while Neuroticism had a positive significant influence on cybercrime behaviours among students in Nigeria.

Idowu (2021) examined the challenges of controlling cybercrime in Nigeria. The study employed a survey method and used a questionnaire to source data from 150 respondents from Wuse, Abuja FCT, Nigeria. Linear regression was used for data analysis. The findings of the study revealed that the major perpetrators of cybercrime are young males, unemployed youths and students within the age ranges of 21-35 years. They made use of Laptops, advanced Android/hi-phones and the internet. It was also found that cybercrime is perpetrated by students with low physical self-concept and is caused by unemployment, the quest for quick wealth syndrome, corrupt society, criminal mindedness of the youths, and weak criminal laws and implementation, among others. The study concluded that there are several multi-faceted factors militating against the control of cybercrime in Nigeria. Hence, the thrust to investigate the role of personality traits and cybercrime tendencies among undergraduates in Niger State, Nigeria. The implication of personality in promoting quality research outputs and combating academic crime.

Statement of problem

The issue of cybercrime among youths in Nigeria has become so worrisome to stakeholders in an academic environment. The evolution of new waves of crime has marred the contribution of the internet to the development of the nation. The Internet has become an environment where the most lucrative and safest crime thrives. Organized criminal activities are being carried out by criminal groups using cyberspace for money laundering and identity

theft. Cybercrime has emerged as a grave menace to our society, economy and personal security. With each passing day, Nigeria witness more and more alarming cases of cybercrimes with each new case being more shocking than the one before. It has become a worrisome situation that causes Nigerians much pain and shame. Criminally-minded individuals in the country are stealing and committing atrocity through the aid of the internet. Also to say that personal interaction with most school authorities has shown that cybercrime has resulted to all sort of academic fraud in most computer based test in which sometimes students are even hired to write internal and external examinations for others. This problem has seriously affected our academic system and may continue to pose greater challenges to the credibility of examination conduct in our (Eyong & Udemba, 2021). The prevalence rate of internet fraud among emerging adults in different parts of the world gives room for concern. In Nigeria, the involvement of youths in cybercrime is affecting the reputation of the country. One of the biggest problems for the e-commerce industry is cybercrime. Perpetrators of the crime who are usually referred to as “Yahoo boys” are taking advantage of the e-commerce system available on the Internet to defraud victims who are mostly foreigners thousands and sometimes millions of dollars. They fraudulently present themselves as having particular goods to sell or that they are involved in a loan scheme project. Some key factors like unemployment, quest for riches and lack of strong cyber laws among others have made cybercrime a significant problem in Nigeria. In its punch newspaper report, the Nigerian Communications Commission (NCC) claimed that Nigeria is losing \$500 million annually to all forms of cybercrime including hacking, identity theft, cyber terrorism, harassment and internet fraud. In this regard, so many persons have been duped or fallen victim. Attempts to address cybercrime/internet fraud by the government through the Financial Crime Commission (EFCC) and international organizations have not been successful because the identities and space remains unidentified as a result of modern technologies. Hence, this study seeks to investigate the role of personality traits and cybercrime tendencies among undergraduates in Niger State, Nigeria. The implication of personality in promoting quality research outputs and combating academic crime.

Purpose of the study

The purpose of this study was to examine the role of personality traits and cybercrime tendencies among undergraduates in Niger State, Nigeria. the implication of personality in promoting quality research outputs and combating academic crime. Specifically, the study;

1. determine how agreeableness predicts cyber-crime Tendencies of undergraduates of universities in Cross River State.
2. examine the extent to which extraversion predicts cyber-crime Tendencies of undergraduates.
3. determine the extent to which conscientiousness predicts cyber-crime Tendencies of undergraduates.
4. examine the extent to which neuroticism predicts cyber-crime Tendencies of undergraduates.

Research questions

The following research questions were developed to guide the study;

1. To what extent does agreeableness predict the cyber-crime Tendencies of undergraduates?
2. To what extent does extraversion predict cyber-crime Tendencies of undergraduates?
3. To what extent does conscientiousness predict cyber-crime Tendencies of undergraduates?

4. To what extent does neuroticism predict cyber-crime Tendencies of undergraduates?

Statement of hypotheses

The following hypotheses were formulated to guide the study;

1. Agreeableness does not significantly predict cyber-crime Tendencies of undergraduates.
2. Extraversion does not significantly predict cyber-crime Tendencies of undergraduates.
3. Conscientiousness does not significantly predict cyber-crime Tendencies of undergraduates.
4. Neuroticism does not significantly predict cyber-crime Tendencies of undergraduates.

METHOD AND PROCEDURE

The study aimed to examine the role of personality traits and cybercrime tendencies among undergraduates in Niger State, Nigeria. The implication of personality in promoting quality research outputs and combating academic crime. The study posed three objectives with three research questions and hypotheses answered and tested. The research design adopted for this study was ex post facto design and the population of this study comprised all four hundred level students in the three (3) conventional public that is one Federal university and two state-owned universities in Niger state, Nigeria (Federal University of Technology, Minna, Ibrahim Badamasi Babangida University, Lapai and AbdulKadir Kure University, Minna Niger State) which numbered 7,020. Stratification was based on faculties and gender (male and female). The essence of choosing stratified random sampling was to make room for the heterogeneous characteristics of the population. The sample used for the study comprised 421 (6%) students which were also confirmed using Taro Yamane's formula in the study area. The instrument for data collection was a researchers' developed questionnaire titled "Personality Types and Cybercrime Tendencies Questionnaire (PTCTQ)", constructed by the researchers. Face validity was established by experts' scrutiny of the research instrument. To establish the instrument's reliability, the instrument was trial-tested on 50 respondents outside the study area. The Cronbach Alpha reliability coefficient. The reliability coefficient estimates ranged from .77 to .75 which showed that the instruments consistently measured what it was purported to measure. The method of data analysis was Simple Linear Regression Analysis.

Hypothesis-by-hypothesis presentation of results

The procedures followed in testing each of the stated hypotheses are explained very briefly. This is followed by the presentation and interpretation of the results. All decisions were taken at .05 level of significance such that a null hypothesis was rejected if the p-value associated with the computed test statistics was less than .05, but retained if otherwise.

Hypothesis one

Agreeableness does not significantly predict the cyber-crime Tendencies of undergraduates. To test this hypothesis, simple linear regression analysis was applied, with agreeableness as the predictor variable and cyber-crime Tendencies as the dependent variable. The F-ratio test was used to test for the significance of the overall prediction model, while the t-test was used to test for the significance of the relative contribution of the

regression constant and coefficient in the prediction model. The results are presented in Table 1.

Table 1

Regression of student cyber-crime Tendencies on agreeableness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	.099 ^a	.010	.008	2.72174		
Sources of variation		Sum of Squares	df	Mean Square	F-value	p-value
Regression		37.857	1	37.857	5.110	.024*
Residual		3829.881	517	7.408		
Total		3867.738	518			
Model		B	Std. Error	Beta	t-value	p-value
Constant		18.667	.672		27.773	.000
Agreeableness		-.046	.020	-.099	-2.261	.024

*p<.05

The results in Table 1 show that all R-value of .099 was obtained, giving an R-squared value of .010. This means that about 1.0% of the total variance in students' cyber-crime Tendencies is accounted for by the variation in agreeableness. The p-value (.024) associated with the computed F-value (5.110) is less than .05. Thus the null hypothesis was rejected. This means agreeableness does significantly predict cyber-crime Tendencies, with both the regression constant (18.667) and coefficient (-.046) making significant contributions in the prediction model (t = 27.773 & -2.261 respectively, p = .024 < .05). The prediction model may therefore be written as: Where x = agreeableness and y = cyber-crime Tendencies.

Hypothesis two

Extraversion does not significantly predict the cyber-crime Tendencies of undergraduates. To test this hypothesis, simple linear regression analysis was applied, with extraversion as the predictor variable and cyber-crime Tendencies as the dependent variable. The F-ratio test was used to test for the significance of the overall prediction model, while the t-test was used to test for the significance of the relative contribution of the regression constant and coefficient in the prediction model. The results are presented in Table 2.

Table 2

Regression of student cyber-crime Tendencies on extraversion

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
	.111	.012	.010	5.22310	
Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value
Regression	137.229	1	137.229	5.030	.025
Residual	10939.600	401	27.281		
Total	11076.829	402			
Variables	B	Std. Error	Beta	t-value	p-value
Constant	32.039	.644		49.749	.000
Extraversion	.093	.041	.111	2.243	.025

*p<.05

The results in Table 2 show that all R-value of .111 was obtained, giving an R-squared value of .012. This means that about 1.2% of the total variance in students' cyber-crime Tendencies is accounted for by the variation in agreeableness. The p-value (.025) associated with the computed F-value (5.030) is less than .05. Thus the null hypothesis was rejected. This means extraversion significantly predicts cyber-crime Tendencies, with both the regression constant (32.039) and coefficient (.093) making significant contributions in the prediction model (t = 49.749 & 2.243 respectively, p = .000 < .05). The prediction model may therefore be written as: Where x = extraversion and y = cyber-crime Tendencies.

Hypothesis three

Conscientiousness does not significantly predict the cyber-crime Tendencies of undergraduates. To test this hypothesis, simple linear regression analysis was applied, with conscientiousness as the predictor variable and cyber-crime Tendencies as the dependent variable. The F-ratio test was used to test for the significance of the overall prediction model, while the t-test was used to test for the significance of the relative contribution of the regression constant and coefficient in the prediction model. The results are presented in Table 3.

Table 3

Regression of student cyber-crime Tendencies on conscientiousness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	.101	.010	.008	5.87826		
Sources of variation		Sum of Squares	df	Mean Square	F-value	p-value
Regression		142.892	1	142.892	4.135	.043
Residual		13856.150	401	34.554		
Total		13999.042	402			
Variables		B	Std. Error	Beta	t-value	p-value
Constant		35.969	1.883		19.102	.000
Conscientiousness		-.210	.103	-.101	-2.034	.043

*p<.05

The results in Table 3 show that all R-value of .101 was obtained, giving an R-squared value of .010. This means that about 1.0% of the total variance in students' cyber-crime Tendencies is accounted for by the variation in agreeableness. The p-value (.043) associated with the computed F-value (4.135) is less than .05. Thus the null hypothesis was rejected. This means conscientiousness significantly predicts cyber-crime Tendencies, with both the regression constant (35.969) and coefficient (-.210) making significant contributions in the prediction model (t = 19.102 & -2.034 respectively, p = .000<.05). The prediction model may therefore be written as: Where x = conscientiousness and y = cyber-crime Tendencies

Hypothesis four

Neuroticism does not significantly predict cyber-crime Tendencies of undergraduates. To test this hypothesis, simple linear regression analysis was applied, with neuroticism as the predictor variable and cyber-crime Tendencies as the dependent variable. The F-ratio test was used to test for the significance of the overall prediction model, while the t-test was used to test for the significance of the relative contribution of the regression constant and coefficient in the prediction model. The results are presented in Table 4.

Table 4

Regression of student cyber-crime Tendencies on neuroticism

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	.104 ^a	.011	.008	5.87670		
Sources of variation	Sum of Squares		df	Mean Square	F-value	p-value
Regression	150.287		1	150.287	4.352	.038 ^b
Residual	13848.755		401	34.536		
Total	13999.042		402			
Variables	B	Std. Error	Beta	t-value	p-value	
Constant	34.774	1.275		27.283	.000	
Neuroticism	-.169	.081	-.104	-2.086	.038	

*p<.05

The results in Table 4 show that all R-value of .104 was obtained, giving an R-squared value of .011. This means that about 1.1% of the total variance in students' cyber-crime Tendencies is accounted for by the variation in agreeableness. The p-value (.038) associated with the computed F-value (4.352) is less than .05. Thus the null hypothesis was rejected. This means neuroticism significantly predicts cyber-crime Tendencies, with both the regression constant (34.774) and coefficient (-.169) making a significant contribution to the prediction model ($t = 27.283$ & -2.086 respectively, $p = .000 < .05$). The prediction model may therefore be written as: Where $x =$ neuroticism and $y =$ cyber-crime Tendencies.

Summary of result

From the analysis of the data collected for this study and subsequent test of stated hypotheses, the results showed that

1. Agreeableness significantly predict cyber-crime Tendencies of undergraduates.
2. Extraversion significantly predicts cyber-crime Tendencies of undergraduates.
3. Conscientiousness significantly predict cyber-crime Tendencies of undergraduates.
4. Neuroticism significantly predicts cyber-crime Tendencies of undergraduates.

Discussion of the findings

The findings emanating from the testing of each hypothesis are discussed hypothesis by hypothesis as presented below.

Extraversion and cyber-crime Tendencies.

The findings revealed that extraversion significantly predicts cyber-crime Tendencies of undergraduates. The finding is in this direction because extroversion is a personality trait typically characterized by outgoingness, high energy, and/or talkativeness. In general, the term refers to a state of being where someone "recharges," or draws energy, from being with

other people. The findings are in line with Van de Weijer and Leukfeldt (2017) who indicated that individuals who score highest on Openness to Experience have higher odds of becoming a victim of cybercrimes. Personality may influence the tendencies to display certain behaviours, which in turn influence the chance of cybercrime Tendencies. Cybercrimes and threats are daily problems in the current internet environment. With all the new technologies in place, these threats are likely to increase in the future.

Similarly, Kokkinos, Antoniadou, Dalara, Koufouzou and Papatziki, (2013) also found that when scoring higher on Extroversion, Openness to Experience and Conscientiousness results in a more likely involvement in cybercrime. However, it is interesting to see the relationship between the Big Five personality traits and cybercrime victimization. Leaking and sharing sensitive information on social media can result in negative consequences of cybercrime. People who score high on the traits of Extraversion and Openness to Experience tend to post more information on Facebook and have less strict privacy, which could lead to more cyber-attacks and violations of privacy. People who score high on Agreeableness, Conscientiousness and Emotional Stability tend to have a lower chance of becoming victimized by cybercrime than Neuroticism. In an era where technologies play a much more important role, cybercrime has become a much greater threat to the world. People who score high on the traits Extraversion are more involved in cybercrime and people who score high in Conscientiousness and Agreeableness behave more securely online and are therefore less likely to become a victim of cybercrime. The research also tested whether there was an effect of age and education on online behaviour. No significant result was found for the effect of these control variables on the cybercrime Tendencies.

Conscientiousness and cyber-crime Tendencies.

The findings revealed that conscientiousness significantly predicts cyber-crime Tendencies of undergraduates. The findings are in this direction because conscientiousness is a trait that is commonly associated with awareness. Typically, conscientious people are well-organised, demonstrate self-control and can plan their time very well. They are known as great team players and diligent workers. Conscientiousness is the personality trait of being responsible, careful or diligent. The findings are in alignment with Shappie, Dawson and Debb (2019) results suggest that personality plays an important role in understanding cybercrime Tendencies, which is consistent with a growing body of literature highlighting conscientiousness as a strong predictor of cybercrime behaviours. The findings also agree with Shazia, Naveed and Ayse (2015) results revealed that Conscientiousness has a negative association with and also an invalid predictor of Cybercrime Tendencies. The findings also agree with that of Sajad, Mahsa, Valiullah and Heshmatullah (2014) results showed that in the first step, the regression was significant based on the tendencies towards cybercrime.

Neuroticism and cyber-crime Tendencies.

The findings revealed that neuroticism significantly predicts cyber-crime Tendencies of undergraduates. Thus neuroticism is a personality trait associated with negative emotions. Neuroticism is a core personality trait characterized by emotional instability, irritability, anxiety, self-doubt, depression, and other negative feelings. Like other personality traits, neuroticism exists on a continuum, which means that people can be high, low, or somewhere in the middle in terms of this trait. The findings agree with the study of Sev (2019) study findings revealed that the Big Five Personality Traits of Openness to Experience, Conscientiousness, Extraversion and Agreeableness negatively influence cybercrime while Neuroticism had a positive significant influence on cybercrime behaviours among students

in Nigeria. The present finding agrees with Idowu (2021) was also found that cybercrime is perpetrated by students with low physical self-concept and is caused by unemployment, quest for quick wealth syndrome, corrupt society, criminal mindedness of the youths, and weak criminal laws and implementation, among others. Also in line with the present study is that Bahramizadeha and Ehsana (2011) result of Correlation analyses showed cybercrime tendencies positively associated with Neuroticism and negatively associated with Extraversion.

CONCLUSION

The advent of computer technologies in Nigeria has resulted in increasing possibilities of cyber-crimes which has made most Western countries of the world rate Nigeria as one of the countries with the highest levels of e-crime activities. The outcome of the study shows that cybercrime is increasing at an alarming rate and undergraduates are seeing it as a means of livelihood. Cyber security must be addressed seriously as it is affecting the image of the country in the outside world and causing damage to the educational system. Based on the findings, the study concludes that cybercrime has a significant negative effect on students' learning outcomes also Nigerian value system, social status, etc are some of the factors responsible for students' involvement in cybercrimes.

RECOMMENDATIONS

Based on the findings, the study, therefore, recommends the following:

1. The government should endeavour to include in the curriculum educational programs focused on the youths to create awareness of internet safety and a sense of responsibility towards one's behaviour in cyberspace.
2. The policymakers should also structure a good, peer-based learning system, using successful role models and key players that may assist in preventing the pursuit of illegal online activities.
3. Guidance and counsellors/educators in the academic environment should counsel students on the need to understand the legal consequences of cybercrime and the psychological harm that anti-social behaviour online can cause. This will help them understand and comport themselves in the society.
4. Psychometricians/researchers: it has recently been claimed that the five dimensions of personality have distinct impacts on research performance. For instance, conscientiousness and openness are associated with students' academic performance (Serrano et al., 2022). Hence, this can foster research activities among scholars
- 5.

LIMITATIONS OF THE STUDY

The study is highly limited in terms of generalizability. This is because the findings are only applicable to the respondents used in the study since it relied solely on self-reported data which could have influenced the findings. However, the study suggests that a similar study should be conducted with a larger sample size using a more robust research design (experimental design).

IMPLICATION OF PERSONALITY IN PROMOTING QUALITY RESEARCH OUTPUTS AND COMBATING ACADEMIC CRIME IN SOCIETY

It is no gainsaying that the internet has come to stay in the academic environment. This is because the Internet provides quick and worldwide access to information from a variety of sources, including scholarly authors, governments, and private companies. Internet research can provide quick, immediate, and worldwide access to information, although results may be affected by unrecognized bias, and difficulties in verifying a writer's credentials (and therefore the accuracy or pertinence of the information obtained). Thus, the legitimacy of internet activities has strongly been affected by cybercrime which has made most students plagiarise (direct duplication) of most work by authors. Research Output means information resources that have been developed, researched and published by the University community such as Projects, Theses and Dissertations, Presentations, Conference Papers, seminars, symposiums etc. Hence, the internet has facilitated faster and wider dissemination of research findings, enabling scientists around the world to share and access information instantly. It has also made collaboration easier, allowing researchers from different locations to work together on projects. Hence, researchers can find relevant existing research papers and the gap from the existing literature on the internet. However, cybercrime has made most scholars see the introduction of the internet be more dangerous than helpful to students due to the daily nefarious activities such as Yahoo, cybercrime, over-emphasis of the internet facilities, poor quest for originality, lack of interest in reading especially with the introduction of artificial intelligence.

Finally, to combat cybercrime, a better understanding of the personality traits of the individual can help track the potential victims, tailor cybersecurity awareness campaigns, and even predict cybercriminal behaviour, focusing on traits like impulsivity, low self-control, high openness to experience, (narcissism, Machiavellianism, and psychopathy) which can make individuals more susceptible to falling victim to cyberattacks or engaging in cybercriminal activities which are detrimental to the society at large.

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