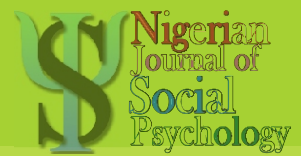


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# SELF-CONTROL, MATERIALISM, AND NEED FOR ACHIEVEMENT AS PREDICTORS OF CYBERCRIME BEHAVIOUR AMONG YOUTHS IN IBADAN METROPOLIS

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## **Abstract**

*The study investigated self-control, materialism, and need for achievement as predictors of cybercrime behaviour among youths in Ibadan metropolis. The study adopted ex-post factor research design while 200 youths in Ibadan metropolis were conveniently selected to respond to four validated questionnaires: Cybercrime Behaviour Scale, Brief Multidimensional Self-Control Scale, Materialistic Value Scale, and Need for Achievement Scale. Four hypotheses were tested using zero-order correlation, multiple regression, and t-test of independent sample. All hypotheses were accepted at a  $p < .05$  level of significance. The result revealed that need for achievement [ $r(197) = .415, p < .05$ ] and materialism [ $r(197) = .291, p < .05$ ] had significant relationship with cybercrime behaviour, while self-control [ $r(197) = -.362, p < .05$ ] inversely correlated with cybercrime behaviour. Also, the result indicated that self-control, need for achievement and materialism jointly predicted cybercrime behaviour [ $R^2 = .34, F(2,198) = 87.22, p < .05$ ]. Furthermore, self-control [ $\beta = -.29, p < .05$ ], need for achievement ( $\beta = .28, p < .05$ ) and materialism ( $\beta = .51, p < .05$ ) independently predicted cybercrime behaviour among the study participants. Finally, gender  $t(197) = 7.11, p < .05$  and employment status  $F(2,197) = 4.49, p < .05$  significantly influenced cybercrime behaviour among youths in Ibadan metropolis. The study concluded that self-control, need for achievement, materialism, gender, and employment status are strong predictors of cybercrime behaviour among youths in Ibadan metropolis. The study recommended that government should be proactive in meeting the needs of the youths to reduce cybercrime behaviour.*

**Keywords:** *Cybercrime behaviour, Ibadan, Materialism, Need for achievement, Self-control*

## **Introduction**

Crime has been in existence since the beginning of the human race. Crime is an unlawful act punishable by laws as defined by different sovereign countries (e.g., the various Laws of the Federal Republic of Nigeria). The traditional crimes against individuals include murder,

robbery, rape, illegal drug trade, sex trafficking, kidnapping, etc (Halder & Jaishankar, 2011). However, the advent of Internet in the mid 21<sup>st</sup> century has made crime to move from the traditional level to a modernized and faceless activity. The proliferation of computers, mobile telephone and other electronic devices present an opportunity for modernized crime. Cybercrime is one of the crimes committed online using a computer and a vast network service such as the Internet (Attrill-Smith & Wesson, 2020). Cybercrime involves the use of computers and the Internet to defraud unsuspecting victims ranging from identity theft, credit card theft in which victims' credit cards or bank account numbers are stolen by computer scammers and used to pay for goods and services to money laundering by terrorists and organized crime syndicates (Shehu, 2014).

Peter Cassidy, Secretary General of the Anti-Phishing Working Group, used the term Cybercrime to distinguish computer programmes that are designed specifically to animate financial crime from other kinds of malevolent packages (Shehu, 2014). Accordingly, Attrill-Smith and Wesson, (2020) view cybercrime as offences committed against an individual or group of individuals with a criminal motive to intentionally harm the reputation of the victim or cause physical or mental harm to the victim directly or indirectly, by using modern telecommunication networks such as Internet and mobile phones.

In Nigeria, cybercrime is popularly known as 'Yahoo Yahoo' or 'Yahoo Plus', or 'Next Level Cyber Criminals'. The Yahoo Yahoo cybercrime perpetrators tend to use voodoo power/magic to influence their potential targets, while the 'Next Level Cyber Criminals' engaged in a more complex schemes such as Business Email Compromise and tax scams to defraud their potential victims (Adeniran, 2008; Essien, 2019). Because there more than 4.6 billion Internet users globally, cybercrimes have affected the lives of many people negatively.

Although, the Internet and digital devices have brought astounding accomplishments and made communication easy, however, there is plethora of risks such as hacking, spoofing, child pornography, cyber terrorism, cyber bullying, denial of service attack, spamming, malware, business email compromise, cyber fraud by cybercrime perpetrators which causes pain and agony to their victims.

The first factor considered in this study as likely predictor of cybercrime behaviour is self-control which is the ability of individuals to restrain from carrying out unwanted behaviours or refrain from acting out undesirable behaviours (Duckworth & Kern, 2011). Expanding further, it is 'the capacity for altering one's own responses, especially to bring them in line with standards such as ideals, values, morals, and social expectations, and to support the pursuit of long-term goals' (Baumeister et al., 2007, p. 351). Self-control is related to self-regulation and impulsivity (Duckworth et al., 2016).

The General Strain Theory argues that when individuals with low self-control are presented with an avenue to gratify themselves with socially undesirable behaviour, the chances of acting on these impulses are high (Gottfredson & Hirschi, 1990; Veilleux et al., 2018). These have implications for cybercrime involvement. Youths low in the ability to refrain from acting out socially frowned on behaviours find themselves using Internet to perpetuate crimes. Studies have found that lower self-control increases involvement in criminal behaviour in the physical world (Li et al., 2015), and in online (cyberspace) settings, individuals with low self-control are more likely to engage in cybercrime behaviour. And Donner et al. (2014) explored a link between self-control and youths engaging in cybercrime and found that low self-control is a significant predictor of online hacking behaviours, specifically Facebook account hacking and unauthorized website crimes. Therefore, self-control tends to predispose youth to committing online fraud and illegal activities via the Internet.

The second factor considered in this study as likely predictor of cybercrime behaviour is materialism which is an orientation that assigns and places importance on the acquisition of material and worldly possessions (Adekanmbi & Ukpere, 2020). Materialism as a psychological construct reflects the extent to which an individual believes that it is important to attain money, possessions, image and status relative to other aims in life (Kasser, 2018). Materialism is associated with negative values such as greed, possessiveness, envy, lack of generosity, and jealousy (Fasanmi et al., 2015). Greed associated with materialism would lead to vices such as fraud, deceit and theft. For example, Burroughs and Rindfleisch (2002) found high level of material values to create tension between individual orientation towards material values and a collective orientation towards family and religious values. Individuals learn to

adopt materialistic values through social learning from family members, peers, and the materialistic messages frequently found in television programmes and commercials (Kasser et al., 2004). Material wealth has taken a centre stage in every individual including the youths in Nigeria (Fasanmi et al., 2015). Study revealed that materialistic individuals are the most supportive of fraud, bribery, and tax evasion in contrast to non-materialistic individuals who have the weakest degree of fraudulent support (Swader, 2016). Other studies have indicated that individuals owning excessive materials would be the most attracted to fraudulent and questionable practices including cybercrime behaviour (Li et al., 2015).

The third factor considered in this study as likely predictor of cybercrime behaviour is need for achievement which is described as an individual's drive to excel with respect to some established set of goals (McClelland, 1985). Need for achievement is associated with a range of actions which include intense, prolonged and repeated efforts to accomplish something difficult (Eisenberger et al., 2005). Individual's achievement needs are satisfied when they are able to actualize their own purposes relative to and regardless of the situations of others (Yamaguchi, 2003). Individuals high in achievement needs dislike succeeding by chance and seek personally identifiable sources for their success or failure rather than leaving the outcome to chance (Robbins, 2003). Need for achievement serves as a motivation for cybercriminals to exert effort, ability and concentration requires to benefits from it in terms of monetary reward. Cybercriminals are known to spend months developing relationships with unsuspecting victims in order to gain their trust so as to defraud them later which serve as an achievement for them. For example, Fasanmi et al. (2014) found that need for achievement significantly and independently predict youths' cybercrime behaviour.

Two socio-demographic factors: gender and employment status have been implicated to influence cybercrime behaviour among youths. For example, Adekanmbi and Ukpere (2020) found in a study that investigated the influence of materialism, job satisfaction, and perceived managerial trustworthiness on fraudulent behaviours among finance officers of selected universities across the South-west, Nigeria, that gender and employment status were major factors that influenced fraudulent behaviours. Also, Berry and Bainbridge (2017) found in a study that examined the relationship among cyber-stalking, victimization, gender and

employment status among youths that cyber-stalking experience of Internet users varies according to their gender and employment status. Female tends to have more experience of cyber-stalking than male Internet users. Mitsopoulou and Giovazolias (2015) found that male participants were more into cybercrimes than their female counterparts in a study of the perception of cybercrimes among school-age children in Oyo and Ondo States, Nigeria.

Because of the high rate of unemployment among youths and the need to meet their basic living conditions act as a motivating factor to acquire illegal funds to meet basic needs by engaging in cybercrime behaviour. Winter-Ebmer and Raphael (2001) found that unemployment leads to incidence of property crimes such as burglary, property theft, etc in a general population. Finally, because of inequalities in income and employment opportunities tainted with high rate of poverty has turned youths into cybercrime as a means of alleviating poverty and becoming financially independent(The National Bureau of Statistics , 2019, 2023).

### **Statement of Problem**

The last two decades has seen increased in the incidence and prevalence of cybercrimes in Nigeria. The number of youths engaging in cybercrimes using different trade names: Yahoo Yahoo, Yahoo Boys, or Next Level Cyber Criminals have changed the economy, financial, and value systems of Nigeria (Bissell et al, 2019; Mickelberg et al., 2014; Ojedokun, 2012).

There has been a lot of concern about the amount of cyber dependent and cyber enabled crimes that emanate from Nigeria, including financial fraud hacking, drugs and human trafficking, and terrorism (Quarshie & Martin-Odoom, 2012). Nigeria has been ranked as the leading State in West Africa for the conduct of malicious Internet activities (Aransiola & Asindemade, 2011; Jegede et al., 2016). The cybercrimes that originate from Nigeria have become a global problem, affecting individuals, organisations and countries especially in the Western societies (Jack & Ene, 2016).

Given that cybercrimes are real and that it affects individuals, organisations, and the society at large, it is imperative to investigate some self-control, materialism, and need for achievement that predispose youth to cybercrimes. Therefore, the main purpose of this study was to

examine whether psychological and socio-demographic factors such as self-control, materialism, need for achievement, gender, and employment status would predict cybercrime behaviour among youths in Ibadan metropolis. The following specific objectives were explored:

- To examine the relationship among self-control, materialism, need for achievement, and cybercrime behaviour among youths in Ibadan metropolis.
- To determine whether self-control, materialism, and need for achievement would jointly and independently predict cybercrime behaviour among youths in Ibadan metropolis.
- To explore the significant contribution of socio-demographic factors such as gender and employment status on cybercrime behaviour among youths in Ibadan metropolis.

### **Relevance of study**

The findings of this study would provide fresh insights into how the self-control, materialism, and need for achievement investigated contribute to cybercrime behaviour among youths in the study population. Also, the law enforcement agencies such as Economic and Financial Crimes Agency (EFCC), the Independent Corrupt Practices Commission (ICPC) and the Nigerian Police Force (NPF) would use the findings in this study to better understand the predictors of cybercrime behaviour, and therefore deploy effective techniques to deter the continuous involvement of youths in cybercrimes. Finally, the finding in this would help to develop psycho-educational programmes to rehabilitate perpetrators and victims of cybercrimes in the society.

### **Theoretical Reviews**

Three theoretical concepts guided this study.

**Social Learning Theory** Bandura (1997) pioneered this theory. The theory posits that individuals learn from their interactions with others in a social context. It states that by observing the behaviours of others, individuals develop similar behaviour. In addition to observing the behaviour of others, people assimilate and imitate that behaviour, especially if

their observational experiences are positive ones or include rewards related to the observed behaviour. Imitation involves the actual reproduction of observed motor activities (Nabavi, 2012). Social learning theory has been employed to explain cybercrime behaviour. This holds that cybercrime and deviance behaviour lies in the fact that individuals who engage in these behaviours must by nature, learn not only how to operate a highly technical piece of computer but also specific procedures, programming, and techniques for using the computer illegally' (Skinner & Fraem 1997).

### **Self-Control Theory**

The theory was postulated by Gottfredson and Hirschi (1990). The theory posits that all individuals are self-interested and inclined to commit a crime when the opportunity arises. That is, it is self-control that inhibits the non-offender from engaging in delinquent behaviours; while the offender's low self-control causes them to commit crimes. This means that low self-control is the primary cause of much delinquent and criminal behaviour across all cultures, places, and times (Akers, 2012). Self-control theory has become one of the dominant theories used to explain cybercrime behaviour (Akers, 2012). Individuals with low self-control are more likely to engage in cybercrime than those high in self-control. Low self-control manifests in the form of criminal behaviour.

### **Need for Achievement theory**

The Need for Achievement theory was first proposed by McClelland and has been revised over the years including Rybnicek et al. (2019) neuroscientific study of the need theory. The theory is based on two psychological principles: The motive of an individual to achieve success and the motive of an individual to avoid failure. The theory classified individuals as 'high achievers' to mean individuals who choose difficult or challenging tasks and 'low achiever' as individuals who choose easier tasks because they are less likely to fail. High achievers are more likely to engage in risky behaviour while low achiever would avoid high-risk activities and just settle for leaving things as they are. When the theory is applied to cybercrime behaviour, it means that an individual with a high need for achievement would



engaged in cybercrime because of the high potential for success and the challenge it poses for them compared to individuals with low need for achievement.

### **Review of Empirical Studies**

Some studies have been investigated on self-control and cybercrime behaviour. For instance, Louderback and Antonaccio (2020) tested the effects of behavioural and cognitive measure of self-control on computer-focused cyber deviance and cyber victimization with survey data from 1,036 adult employees. Also, they examined the moderating effects of cyber deviant peers and gender in the relationship between self-control and cyber deviance and victimization. The result showed that cognitive self-control predicted cybercrime deviance behaviour while behavioural self-control predicted reduced cyber victimization among the participants.

Nodeland (2020) investigated the effects of self-control on cybercrime (victim-offender overlap) among youths. The result revealed that low self-control significantly predicted participation in cyber offending as well as cyber victim-offending, but has a weak relationship with cyber victimization. Also, self-control and deviant cyber peers were good predictors of cybercrime behaviour among the study participants.

Nodeland and Morris (2018) studied the effects of both social learning theory (SLT) that focuses on peer interactions (including both traditional and virtual peers) and on self-reported cyber offending. Results for the two strongest social learning predictors, differential association and definitions favourable to crime, were in line with previous studies of both traditional and cyber offending in their conditional relationship with cyber offending. Self-control had no direct effect on cyber offending but displayed a significant interaction effect with both differential reinforcement and definitions.

Donner et al. (2014) explored the extent to which low self-control predicts online deviance behaviour (cybercrime) in general and digital piracy specifically among 488 undergraduates. The results supported the hypothesis that low self-control is related to cybercrime behaviour among youths in the study population.

Holt et al. (2012) investigated the relationship between low self-control, deviant peer associations, and cybercrime behaviour in a youth sample. The results showed that low self-control and deviant peer associations were good predictors of cyber deviance behaviour as well as piracy, harassment, online pornography, and hacking crimes.

Finally, Bossler and Burruss (2012) used survey data from a sample of college students to investigate the relationship between self-control and three low-level types of hacking and found that low self-control predicted these outcomes.

Also, studies have been conducted on materialism and cybercrime behaviour. For example, Adekanmbi and Ukpere (2020) examined the influence of materialism, job satisfaction and perceived managerial trustworthiness on attitude towards fraudulent behaviours among finance officers of selected universities across the South-west, Nigeria. The result revealed that materialism significantly predict attitude towards fraudulent behaviour. They all obtained a substantial main effect on attitude towards fraudulent behaviours among finance officers of designated universities across South-west Nigeria. The study concluded that attitude towards fraudulent behaviours is a determinant of how materialistic employees are.

Idom and Tormusa (2016) carried out a study to ascertain the causes, types and likely victims of cybercrimes among 384 participants accidentally selected from six higher institutions in South-south, Nigeria. The results revealed that of the several causes of cybercrimes, materialism was identified as one of the major factors.

Eigbadon and Adejuwon (2015) investigated peer influence, materialistic value, impulsivity, self-control, age, sex and highest educational factors as predictors of Internet fraud behaviour among 986 youths that patronise cybercafés in South-western Nigeria. The results showed the independent variables to jointly predict Internet fraud behaviour among the study population. Also, peer influence and materialistic value independently predicted Internet fraud behaviour among the study population.

Finally, some studies have been conducted on need for achievement and cybercrime behaviour. Kennedy-Turner et al. (2021) explored the role of need (academic) achievement and school absences in the developmental trajectory from childhood behaviour and

disadvantaged environments to adult criminal behaviour. The study included 1,050 participants (52% women) from the Concordia Longitudinal Research Project in Montreal, Quebec. They found that academic achievement and school absences was important predictor to educational attainment.

Hoffman (2018) evaluated the association between under achievement and delinquent (criminal) behaviour. The results of the study showed a modest association between academic under achievement and delinquent behaviour, but it was partially attenuated by attention deficits, an indicator of low self-control.

Fasanmi et al. (2015) examined the influence of personality traits, need for achievement and cybercrime behaviour among youths in Nigeria. Data were sampled from 200 undergraduates in the Benue State University, Makurdi. Result showed that gender, need for achievement, psychoticism, neuroticism and extraversion independently and jointly predicted attitude towards Internet fraud among youths. Also, it was found that need for achievement independently predict attitude towards Internet fraud among youths in the study population.

**Hypotheses** The study tested the following hypotheses:

**H1** There would be significant relationships among cybercrime behaviour, self-control, need for achievement and materialism among youths in Ibadan metropolis.

**H2** Self-control, need for achievement, and materialism would jointly and independently predict cybercrime behaviour among youths in Ibadan metropolis.

**H3** Male youths would score higher on cybercrime behaviour than the female youths in Ibadan metropolis.

**H4** Unemployed youths would be significantly more disposed to cybercrime than employed and self-employed youths in Ibadan metropolis.

## **Method**

### **Design**

The study adopted ex-post factor research design while data were collected using validated questionnaires. The ex-post facto design enabled the researcher to gather data from a wide range of participants about dependent variables that has been manipulated by nature and the researchers simply went there to measure the effects. The dependent variable was cybercrime behaviour while the independent variables were self-control, need for achievement, materialism, gender, and employment status.

### **Setting**

The study was conducted among youths in Ibadan metropolis in Ibadan North Local Government Area, Oyo state, Nigeria.

### **Sampling Technique**

Purposive sampling technique was used to select Ibadan North Local Government in Oyo State, Nigeria. Convenience sampling technique was used to sample participants at the shopping malls, grocery stores, Lounges, cybercafés and eateries in Ibadan North Local Government Area.

### **Participants**

Descriptive statistics revealed that 107 (53.5%) of the participants were males while 93(46.5%) were females. The age bracket showed that 32(16%) of the participants were under 20 years age bracket, 65(32.5%) were between 20 and 24 years, 89(44.5%) were between 26 and 30 years age bracket, while 14 (7%) were 31 years and above. The employment status indicated that 98 (49%) of the participants were unemployed, 80(40%) were self-employed while 22(11%) were employed in both government and private sectors. The qualifications of the participants showed that 86(43%) were secondary school holders, 102(51%) indicated being to tertiary institutions, while 12(6%) did not indicate their qualifications.

## **Instruments**

**Cybercrime Behaviour** This was measured using Internet Fraud Behaviour Scale developed by Eigbadon (2015). It is a 23-item scale presented on a 5-point Likert's format that ranges from Strongly Agree (5), Agree (A), Undecided (3), Disagree (2) to Strongly Disagree (1). Sample items include: 'It is not a bad practice to harvest other people's email address without their permission' and 'There is nothing wrong if you cleverly collect money or goods from people through Internet'. High score indicates high behaviour to be involved in Internet fraud while low score indicates either low or no Internet fraud behaviour. The author reported the scale Cronbach's alpha of 0.84 with the Guttman split-half reliability coefficient of 0.83 and Spearman Brown coefficient of 0.86. The current study reported the scale Cronbach's alpha of 0.81.

**Self-Control** This was assessed using the Brief Multi-Dimensional Self-Control Scale (BMDSC) developed by Nilsen, et al. (2020). It is a 29-item that consists of 6-first order factors (Procrastination, Attentional Control, Impulse Control, Emotional Control, Goal Orientation, and Self-Control Strategies), 2-second order factors (Inhibition and Initiation), then 3-order self-control factors. The present study used the 8-item BMDSCS version. The scale is presented on 5-point Likert's response format ranges from 1 (strongly disagree) to 5 (strongly agree). Sample items include: 'When I feel stuck, I try to look at the situation from another perspective' and 'I put things off for so long that my well-being or efficiency suffers unnecessarily' and 'I know what I have to do to reach my goals'. The author reported the scale Cronbach's alpha of 0.74. The present study reported the scale Cronbach's alpha at 0.71.

**Materialism** This was measured using the Materialistic Value Scale developed by Richins (2004). It is a shortened 6-item version that measures the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states. It has three domains: success, centrality and happiness. The scale is presented on 5-point Likert's response format that ranges from strongly agree (5) to strongly disagree(1). Samples item include: 'Some of the most important achievement in life includes material possession' and 'I usually buy the things I need'. High scores on this scale indicate higher behaviour

towards materialistic values. The author reported the scale Cronbach's alpha of 0.76 while in the present study, the scale cronbach's alpha was 0.69.

**Need for Achievement** This was measured using Need for Achievement Scale developed by Ray (1979). It is a 14-item scale presented on a Yes (1) or No (0). Sample items include: 'Do you tend to plan ahead for your job or career?' and 'Would you prefer to work with a congenial but incompetent partner rather than with a difficult but highly competent one?' High scores indicate high need for achievement while low scores indicate low need for achievement. The author reported the scale Cronbach' alpha of 0.70 while in the present study, the scale Cronbach's alpha is 0.69.

### **Procedure for data collection**

The researchers collected Letter of Introduction from the Department of Psychology, University of Ibadan for identification while soliciting for potential participants. The issue of informed consent was clearly observed by collecting data from participants who willingly indicated their interest to participate in the study. They were told that participation in the study is voluntary and that they can decline to response to the questionnaires at any point in time. Also, there was no inducement or monetary reward for participation in the study. The questionnaire took 15 minutes on the average to fill. A total of 208 questionnaires were distributed, two participants refused to hand in the questionnaire while 206 were retrieved (i.e., 99% response rate). However, six questionnaires were half-filled and were removed left with 200 questionnaires that were used for the final analysis.

### **Data analysis**

Data collected were analyzed using Statistical Package for Social Sciences (SPSS) version 23. Hypothesis one was tested with zero-order correlation, Hypothesis two was tested using multiple regression analysis, hypothesis three was tested using t-test for independent samples, while hypothesis four was tested using one-way analysis of variance.

## Results

**H1** There would be significant relationships among cybercrime behaviour, self-control, need for achievement and materialism among youths in Ibadan metropolis.

**Table 1**

*Zero-order Correlation among Cybercrime Behaviour, Self-Control, Need for Achievement and Materialism among the study Participants*

S/N	Variables	1	2	3	4
1	<b>Cybercrime Behaviour</b>	-	-.362**	.415**	.291**
2.	<b>Self-control</b>		-	-.149**	-.311**
3.	<b>Need for Achievement</b>			-	-.612**
4.	<b>Materialism</b>				-

\*\* Correlation is at .05

Result from Table 1 revealed that cybercrime behaviour had significant positive relationship with need for achievement ( $r = .415, p < .05$ ) and materialism ( $r = .291, p < .05$ ) but inversely correlated with self-control ( $r = -.362, p < .05$ ). The stated hypothesis is confirmed.

**H2** Self-control, need for achievement, and materialism would jointly and independently predict cybercrime behaviour among youths in Ibadan metropolis. This was tested using multiple regression analysis and the result is presented in Table 2.

**Table 2**

*Multiple Regression showing Self-control, Need for Achievement and Materialism as Predictors of Cybercrime Behaviour among Youth in Ibadan Metropolis.*

<b>Criterion</b>	<b>Predictors</b>	<b><math>\beta</math></b>	<b><math>t</math></b>	<b><math>p</math></b>	<b><math>R</math></b>	<b><math>R^2</math></b>	<b><math>F</math></b>	<b><math>p</math></b>
	<b>Self-control</b>	-.293	-7.15	< .05				
<b>CB</b>	<b>NACH</b>	.276	3.18	<.05	.58	.34	87.22	<.05
	<b>Materialism</b>	.513	9.29	<.05				

CB = Cybercrime Behaviour, NACH = Need for Achievement

Table 2 presents results on self-control, need for achievement and materialism as predictors of cybercrime behaviour among youths in Ibadan metropolis. The results revealed that self-control, need for achievement and materialism jointly predicted cybercrime behaviour among youths in Ibadan metropolis [ $R^2 = .34$ ,  $F(2,198) = 87.22$ ,  $p < .05$ ]. Hence, when combined, self-control, need for achievement and materialism accounted for about 34% variance in cybercrime behaviour. Also, self-control [ $\beta = -.29$ ,  $t = -7.15$ ,  $p < .05$ ], need for achievement ( $\beta = .28$ ,  $t = 3.18$ ,  $p < .05$ ) and materialism ( $\beta = .51$ ,  $t = 9.29$ ,  $p < .05$ ) independently predicted cybercrime behaviour among the study participants. Thus, the hypothesis was supported.

**H3** Male youths would score higher on cybercrime behaviour than female youths. This was tested using t-test for independent samples and the result is presented in Table 3.

**Table 3**

*T-test for Independent Samples showing the Influence of Gender on Cybercrime Behaviour among Youths in Ibadan metropolis*

<b>DV</b>	<b>Gender</b>	<b><math>N</math></b>	<b><math>M</math></b>	<b><math>SD</math></b>	<b><math>t</math></b>	<b><math>Df</math></b>	<b><math>p</math></b>
	<b>Male</b>	107	28.15	8.9	7.11	198	< .05
	<b>Female</b>	93	23.28	9.3			

CB= Cybercrime Behaviour, DV = Dependent Variable



Table 3 presents results on gender difference on cybercrime behaviour among youths. It is shown on Table 3 that there is a significant gender difference in cybercrime behaviour [ $t(197) = 7.11, p < .05$ ] such that male youths ( $M = 28.15, SD = 8.9$ ) reported higher level of cybercrime behaviour than female youths ( $M = 23.28, SD = 9.3$ ). This confirmed the hypothesis.

**H4** Unemployed youths would significantly be more disposed to cybercrime behaviour than employed and self-employed youths. This was tested using one-way Analysis of Variance (ANOVA) and the results are presented in Tables 4 and 5.

**Table 4**

*One-way ANOVA showing the Influence of Employment Status on Cybercrime Behaviour among Youths in Ibadan Metropolis*

Source	SS	df	MS	F	p
Between groups	5744.129	3	152.181	4.189	<.05
Within groups	113401.221	197	187.675		
Total	121052.164	200			

Table 4 presents result on the influence of employment status on cybercrime behaviour among youths. The result revealed that employment status had a significant influence on cybercrime behaviour [ $F(3,197) = 4.189, p < .05$ ].

**Table 5**

*LSD Multiple Comparison of Employment Status with Cybercrime Behaviour among Youths in Ibadan Metropolis.*

S/N	Variable	1	2	3	Mean
1	Employed	-	3.07*	6.41*	22.75
2	Self-employed		-	3.34*	25.16
3	Unemployed			-	29.16

Result of LSD multiple comparison from Table 5 revealed that youths who are unemployed have the most positive attitude toward cybercrime behaviour ( $M = 29.16$ ), followed by the self-employed youths ( $M = 25.82$ ) and least were the employed youths ( $M = 22.75$ ). This confirmed the stated hypothesis.

## **Discussion**

This study investigated self-control, need for achievement and materialism as predictors of cybercrime behaviour among youths in Ibadan metropolis. Four hypotheses were generated and tested.

The hypothesis that there would be significant relationships among self-control, need for achievement materialism and cybercrime behaviour among youths in Ibadan metropolis was supported. This means that cybercrime behaviour among youths increases with increase in need for achievement and materialism but decreases with increase in self-control. In other words, when need for achievement and materialism increases among youths, their behaviour toward cybercrime tend more towards positive but become negative when their self-control increases. Hence, the more self-controlled youths are the more negative they think and feel about cybercrime; but increase in materialism and need for achievement tends to push their cybercrime behaviour toward positivity. This result is consistent with the finding by Fasanmi et al. (2015) who reported that need for achievement had significant and independently predict youths' cybercrime Internet fraud. Also, the finding by Nodeland (2020) that low self-

control significantly influenced participation in cyber offending as well as cyber victim offending are in agreement with the present findings. Finally, there was a significant positive relationship between materialism and cybercrime behaviour. This finding is in line with the study by Eigbadon and Adejuwon (2015) whose result showed that materialistic value predicted Internet fraud behaviour among Internet users.

The results confirmed the hypothesis that self-control, need for achievement and materialism would jointly and independently predict cybercrime behaviour among youths in Ibadan metropolis. This finding is in line with Adekanmbi and Ukpere's (2020) result which showed that materialism significantly predicts cybercrime behaviour among their study population. Also, the findings of Fasanmi et al. (2015) which showed that need for achievement independently and jointly predicted youths' behaviour towards Internet fraud is in agreement with that of this study. Furthermore, Donner et al.'s (2014) study on low self-control and online deviance in general found to be true that low self-control is related to non-digital piracy online deviance. This could be explained using the self-control theory which has been employed to argue that low self-control is the primary cause of many delinquent behaviours among youths especially cybercrime (Nodeland, 2020; Nodeland & Morris, 2018).

The result of hypothesis that male youths would score higher on cybercrime behaviour than female youths was confirmed. That is male youths reported higher level of cybercrime behaviour than female youths. The finding supported that of Ige (2008) who discovered that male students are much more involved than their female counterparts in Internet crimes.

Finally, the hypothesis that unemployed youths will be significantly more disposed to cybercrime than employed and self-employed youths was confirmed. That is, employment status had a significant influence on cybercrime behaviour. LSD multiple comparison of employment status on cybercrime behaviour revealed that youths who are unemployed demonstrates the highest level of cybercrime behaviour, followed by self-employed youths and the least were the employed youths. This finding is in agreement with that of Okeshola and Adeta (2013) who found unemployment to be a strong predictor of cybercrime behaviour among youths in tertiary institutions in Zaria, Kaduna State, Nigeria.

**Recommendations of the Study** The following recommendations are offered based on the findings of this study:

First, because self-control has inverse relationship with cybercrime behaviour and jointly and independently predicted cybercrime behaviour, it recommended that parents, tertiary institutions, religious and youth organisations who are committed to enriching and enhancing the quality of life of youths should endeavour to place sufficient and adequate emphasis on the need to exercise and demonstrate high self-control which would reduce cybercrime behaviour among our youths.

Second, as need for achievement was found to be positively correlated with cybercrime behaviour such that, the more the need for achievement in youths, the more they are disposed toward cybercrime behaviour. And that need for achievement independently and jointly predicted cybercrime behaviour; it is recommended that youths should be encouraged and motivated towards accomplishing societal relevant tasks. That is, as the need for achievement increases among youths, it should be geared towards social and economic growth, advancement and development of the country.

Third, since materialism positively correlated with cybercrime behaviour and jointly and independently predicts cybercrime behaviour among the youths in Ibadan metropolis, it is recommended that the society should re-evaluate the societal collective norms and values that place much emphasis on material acquisitions in lieu of striving towards a selfless society that is not so ravaged with material possessions.

Fourth, as male youths reported a higher level of cybercrime behaviour than their female counterparts, it is recommended that more intervention programmes should be directed towards the male population than female to decrease cybercrime behaviour.

Finally, since employment status of youths significantly influence cybercrime behaviour among youths in Ibadan metropolis, the government both at the State and Federal levels should endeavour to create more jobs and implement vocational training programmes in tertiary institutions such that those who are sufficiently educated without a job would be able

to sustain their cost of living from the vocational training programmes received pending the time they will secure better employment offers.

**Limitations and Recommendations for Further Study** This study is not without limitations which should be addressed in further studies. First, self-reported questionnaires were used for the data collection which is not devoid of response bias. Further studies should include personal diary and other secondary sources to validate the data collected from the questionnaire. Second, the population size of 200 limits generalisation of the study findings beyond the Ibadan metropolis. Further studies should increase the sample size to allow for generalisation. Third, three independent variables were used in this study; further studies should investigate personality traits, self-esteem, social support, and learned helplessness.

**Conclusion** This study has empirically established that psychological factors of self-control, need for achievement, materialism and demographic factors of gender and employment status are good predictors of cybercrime behaviours among youths in Ibadan metropolis in Oyo State, Nigeria.

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