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Peer Social Comparison As Predictor Of Cyber Crime Among Students Of Tertiary Institutions In Delta Central Senatorial District

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ABSTRACT*: his study examined peer social comparison as a predictor of cybercrime among students of tertiary institutions in the Delta Central Senatorial District. The study was guided by two research questions and two null hypotheses. The study adopted a correlational research design, with a population of 46,600 students of tertiary institutions in the Delta Central Senatorial District in the 2023/2024 academic session. A sample of 378 students was selected using a multi-stage sampling method. A questionnaire was used for data collection in this study. The psychometric properties of the instrument were established and adjudged to be adequate. The Pearson's coefficient of determination was used to answer the research questions. Regression statistics were used to test the hypotheses at a 0.05 level of significance. The findings of the study revealed that there is no significant relationship between peer social comparison and cybercrime among students of tertiary institutions and that there is no significant moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions. The study recommended, among other things, that educational institutions should incorporate ethics and digital citizenship into their curricula to foster a culture of integrity and responsibility among students.*

Key words: Peer Social Comparison, Cyber Crime, Sex, Tertiary Institutions

INTRODUCTION

The rapid growth of the internet in the 21st century across the globe has had tremendous changes in virtually every institution within different societies. Nonetheless, these developments might be described as having positive as well as negative consequences. Although the positive dimension of the internet revolution is fascinating, the negative dimensions are, however, overwhelming and often produce maladies that threaten the social order of the society. A significant negative consequence of the internet revolution, particularly in developing countries like Nigeria, is the increasing prevalence of cybercrimes. The advancement of technology and online communication has led to a significant surge in cybercrimes and the development of seemingly new types of criminal activities. Cybercrime is a crime committed mostly by individuals or organised groups in which computers or computer networks are a tool, a target, or a place of criminal activity and include everything from electronic cracking to denial-of-service attacks. According to Muraina and Muraina (2015), cybercrimes also include offenses committed against people or organizations with the intention of purposefully harming the victim's reputation or causing them physical or psychological harm, either directly or indirectly, via contemporary telecommunication networks like the internet (e.g., chat rooms and emails) and mobile phones. Examples of cybercrime include denial of service attacks, cyber theft, cyber trespass, cyber obscenity, critical infrastructure attacks, online fraud, online money laundering, ID fraud, cyber terrorism, and cyber extortion.

In recent times, Nigerians have been in the news for cyber-related crimes. For instance, an arrest was made of a high-profile entrepreneur, Obinna Okeke (owner of the Invictus Group of Companies), who was arrested and arraigned before a US attorney's office, where he pleaded guilty to a computer-based intrusion fraud scheme that resulted in an $11 million (eleven million dollars) loss for his victim (Belgore, 2020). Secondly, the popular Ramon Olorunwa Abbas (aka Hushpuppi) was arrested alongside a few Nigerians in Dubai; they are being investigated and undergoing trial for their involvement in money laundering, computer intrusion, and BEC schemes (Mrozek, 2020). A 25-year-old Nigerian named Dton, also known as Bill Henry, uses programs like Aspire Logger, Origin Logger, and Nanocore to exchange credit card details that have been stolen (Checkpoint, 2020).

The Economics and Financial Crime Commission (EFCC) in Nigeria, along with the Federal Bureau of Investigation (FBI), arrested 281 individuals for various crimes, of which 167 were Nigerian students (Abubukar, 2020). In 2017, Nigerians were rated as 37% users of online transactions within African countries; 7% of these online transactions are fraudulent in nature (Proshare, 2020). Cyberattacks on Nigerian companies, banks, and government infrastructure were projected to have cost the country N250 billion in 2017 and N288 billion in 2018. These losses increased dramatically during the 2020 general lockdown. According to reports, Nigeria loses $500 million a year to cybercrime—a significant amount, but one that is less than the GDP of the country. Among the industries most impacted are banks and corporate headquarters (Net, 2016). The Economic and Financial Crimes Commission (EFCC) warned that more than 70% of Nigeria's youngsters may be imprisoned on August 27, 2021, in response to the country's students' increasing engagement in cybercrime. Delta State's position is equally concerning. According to Ngboawaji, Urowayinor, Bribena, and Onyeka (2020), cybercrime is quite common among pupils in the area. Nigeria has seen especially concerning cybercrime events from 2017 to 2021, according to Statistica statistics (Statistica, 2022). This is a worrisome situation.

The problem has often attracted the attention of the government, religious institutions, and other concerned security agencies into devising measures and policies that could ameliorate this trend. For instance, the Cybercrime Act (2015) makes the provision that any individual or group of individuals found guilty of hacking or unlawful accessing of a computer system or network is liable

to a fine of up to ten million (N10 million) naira or a term of imprisonment of 5 years (depending on the purpose of the hack). Yet, the trend of cybercrime has seen a dramatic influx of many vibrant students into more dynamic forms of cybercrime, and this poses a huge burden on the general society. Its effects on the reputation of the country and on the physical and mental well-being of victims cannot be overemphasised.

Cyberattack victims usually suffer from emotional trauma, which commonly leads to ASD and melancholy. On a psychological level, a lot of victims choose to handle the matter alone and avoid engaging others since they believe they are to fault for the crime. Other impacts are isolation and drug abuse. Cyberattacks have grown beyond the attack on data, information, and devices to the attack that affects physical structure. These physical attacks are targeted at critical infrastructure (like taking down a power grid), medical facilities, and financial institutions. Unauthorized location monitoring by a cyberattack victim using their smartphone and Google Maps is a real-world example. In order to become cybercriminals, some pupils even go so far as to quit school. Revenue losses, company interruptions, profit theft, and welfare reductions are just a few of the pervasive negative effects of cybercrime. Affected stakeholders often estimate losses based on assumptions and either seek to hide this information or lack accurate records of the losses incurred. Cybercrime claims millions to billions of naira every year, but stakeholders often accept these losses as a trade-off for the benefits and continued operations. Several factors have been identified to be responsible for students' involvement in cybercrime. However, the focus of this present study is on peer social comparison as a predictor of cybercrime. This is considering the fact that serious research efforts, as much as the researcher knows, have not been focused on this area of research interest, particularly within the context of students in tertiary institutions in the Delta Central Senatorial District.

Peer social comparison refers to the process by which individuals assess their own abilities, behaviors, or qualities in relation to those of their peers or social groups. In this form of comparison, individuals seek to evaluate how they measure up against others in terms of various attributes, such as appearance, achievement, skills, or social status. The comparison with peers serves as a benchmark against which individuals gauge their own standing and performance within a specific context. There are several ways in which this comparison can take place, including upward and downward social comparison. Comparing oneself to those who are seen to be better in a certain field is known as upward social comparison, and it is often done to motivate oneself or spur self-improvement. Downward social comparison, on the other hand, compares oneself to those who are seen as less successful or lucky, which may increase self-esteem or lessen feelings of inadequacy.

Peer social comparison may influence participation in cybercrime among students in tertiary institutions to some extent. It may contribute to the establishment of perceived norms within a student community. If individuals believe that engaging in cybercrime is a common or accepted behavior among their peers, they might be more inclined to participate so they can fit in or gain social approval. If students perceive that their peers who engage in cybercrime receive recognition or status within the group, it may create an incentive for others to participate as well. This can be particularly relevant in environments where certain cybercriminal activities are glorified or considered prestigious within the student community. Individuals might engage in cybercrime as a means of competing with or outperforming their peers. The desire to be seen as more skilled, daring, or successful in these activities could drive some students to participate in cybercriminal behaviours.

Tertiary students often spend significant time online, and peer comparisons in the virtual world can be influential. If students observe their peers participating in cybercrime or discussing it positively on social media or other online platforms, it may contribute to normalizing such behavior. Peer social comparison might also contribute to a lack of awareness about the legal and ethical consequences of cybercrime. If students primarily compare themselves to peers who appear to be engaging in cyber activities without facing consequences, they may underestimate the risks involved. It is important to note that these dynamics are speculative, and actual engagement in cybercrime is influenced by a myriad of factors, which may include the parenting styles practiced by the parents of the students. In view of the above, the aim of this study is to examine peer social comparison as a predictor of cybercrime among students of tertiary institutions in the Delta Central Senatorial District.

Statement of the Problem

The present high value for money and other acquisitions regarded as yardsticks for determining the status of individuals in the society seem to have worsened the plight of the most students in tertiary institutions in the Delta Central Senatorial District. This is because, by focusing their energy on making a livelihood by unethical methods, they have undermined society's norms for moral integrity and the dignity of employment. The fact that some students commit cybercrimes to damage the image of their institutions is depressing. This assertion is supported by data from Delta State's Economic and Financial Crimes Commission (EFCC) and statistics organisations. For instance, on August 27, 2021, the EFCC warned that more than 70% of Nigeria's young may soon be ex-offenders, expressing alarm about the country's students increasing engagement in cybercrimes.

The situation is not different in Delta State. Ngboawaji, Urowayinor, Bribena, and Onyeka (2020) decried a high rate of cybercrime among students of Delta State. From the information obtained from Statistica, between 2017 and 2021, Delta State has recorded a total of 7,150 cases of cybercrime (Statistica, 2022). This is a worrisome situation. One may be wondering why most students engage or are involved in cybercrimes in tertiary institutions in the Delta Central Senatorial District. Interestingly, cybercrimes, like other criminal activities, are highly motivated by certain conditions, some of which may include peer social

comparison and parenting styles. The problem of this study, therefore, is, to what extent can peer social comparison predict cybercrime among students in tertiary institutions in the Delta Central Senatorial District?

Research Questions

The following research questions guided the study:

1. What is the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District?
2. What is the moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District?

Hypotheses

The following null hypotheses have been formulated and were tested at a 0.05 level of significance:

1. There is no significant relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District
2. There is no significant moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Research Method

This study adopted a correlational research design. The choice of correlational design is that it helped the researcher to examine the relationship that exists between peer social comparison, parenting styles, and cybercrime. The population of the study comprised 46,600 students in tertiary institutions in the Delta Central Senatorial District in the 2023/2024 academic session. The study sample comprised 378 students. The choice of sample size was based on the recommendation of Gill et al. (2010), which says that 378 is adequate for a total population of between 25,000 and 49,999. The students were selected from all the institutions across the Delta Central Senatorial District using a multi-stage sampling method.

A questionnaire was used for data collection in this study. The questionnaire is titled Questionnaire on Peer Social Comparison and Cybercrime (QPSCPSC). It contains two sections. Section A contains respondent demographics such as sex, while Section B contains the Peer Social Comparison Rating Scale (PSCRS) and the Cybercrime Rating Scale (CRS). Peer Social Comparison Rating Scale (PPRS**)** was adopted from the Social Comparison Scale, developed by Schneider and Schupp (2011). The scale contains 11 items structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree. Cybercrime Rating Scale (CRS) was self-constructed by the researcher. The instrument contains a total of 26 items, structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree. The face validity of the instruments was established by three experts in the Guidance and Counselling Department, among whom is the research supervisor. The experts evaluated the tools for appropriateness and fit to the study's goal, and their recommendations were implemented.

After the face validity, the researcher printed and administered 50 copies to respondents at the University of Science and Technology, Ozoro, Delta State. The data were subjected to factor analysis, which estimated the content and construct validities of the instrument. The principal component analysis of the extraction method was used to estimate the content validity of the instrument. It yielded the following values: Peer Social Comparison Scale = 74.46% and Cybercrime Scale = 73.03%. The rotated factor loadings of the varimax method were used to estimate the construct validity of the instrument. Eigenvalues above 1 were used to select factors that measure similar constructs. It yielded the following range of values: Peer Social Comparison Scale = 0.73-0.89 and Cybercrime Scale = 0.52-0.85. In order to establish the reliability of the instruments, 50 copies of the instruments were distributed and administered to students at the University of Science and Technology, Ozoro, Delta State. The data generated were analysed with the Cronbach Alpha Reliability Coefficient to determine whether the instruments have internal consistency. The Peer Social Comparison Scale yielded a coefficient of $r = 0.74$, $p < 0.05$ level of significance, and the Cybercrime Scale yielded $r = 0.92$, $p < 0.05$ level of significance. These values indicate that the various scales are highly reliable. The questionnaire was administered directly to the respondents by the researcher. The questionnaire was retrieved immediately to avoid loss of data. Data were analysed with the Pearson Product Moment Correlation Coefficient (PPMC) and regression statistics. The Pearson's coefficient of determination was used to answer the research questions. Regression statistics were used to test the hypotheses at a 0.05 level of significance.

RESULTS

Research Question 1: What is the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District?

Table 1: Correlation and coefficient of determination of the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Variable	*N*	*r*	r^2	r^2%	Remark
Peer Social Comparison Cybercrime	378	0.053	0.003	0.3	Low Positive Relationship

In Table 1, the result shows a correlation and coefficient of determination, which was used to examine the relationship between peer social comparison and cybercrime among students of tertiary institutions in the Delta Central Senatorial District. The result shows that r = 0.053, r^2 = 0.003, and r^2% = 0.3. The result implies that a low positive relationship exists between peer social comparison and cybercrime among students of tertiary institutions in the Delta Central Senatorial District. Peer social comparison contributes 0.3% variability to cybercrime among students of tertiary institutions in the Delta Central Senatorial District.

Research Question 2: What is the moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District?

Table 2: Correlation and coefficient of determination of the moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Variable	*N*	*R*	R^2	R^2%	Remark
Peer Social Comparison Cybercrime Sex	378	0.053	0.003	0.3	Low positive relationship

In Table 2, the result shows a correlation and coefficient of determination, which was used to examine the moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in the Delta Central Senatorial District. The result shows that *R* = 0.053, R^2 = 0.003, and R^2% = 0.3. The result implies that a low positive relationship exists among peer social comparison, sex, and cybercrime among students of tertiary institutions in the Delta Central Senatorial District. Peer social comparison and sex contribute 0.3% variability to cybercrime among students of tertiary institutions in the Delta Central Senatorial District.

Testing of Hypotheses

Hypothesis 1: There is no significant relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Table 3: regression analysis of the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Model	Sum of Square	*df*	Mean Square	*F*	Sig
Regression	270.011	1	270.011	1.042	.308[b]
Residual	97467.692	376	259.223		
Total	97737.704	377			

a. **Dependent Variable:** Cybercrime
b. **Predictors (Constant):** Peer Social Comparison

In Table 3, the result of a regression analysis, which was used to test the hypothesis that states that there is no significant relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District. The result shows *F* (1, 376) = 1.042, p>0.05 level of significance. The null hypothesis is, therefore, accepted. This implies that there is no significant relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District.

Hypothesis 2: There is no significant moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Table 4: Multiple regression analysis on moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District

Model	B	*Std Error*	Beta	*t*	*Sig.*
Constant	51.943	4.094		12.689	.000
Peer Social Comparison	-.132	.129	-.053	-1.021	.308
Sex	-.629	.350	-.084[b]	-1.643	.101

Table 4 shows the result of the moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District. The beta weights of -0.053, t = -1.021 for peer social comparison; and -0.084, t = -1.643 for sex are indicators of the degree of correlation between each variable of peer social comparison and sex with cybercrime. From the result, peer social comparison and sex are not significant at an alpha level of 0.05. Hence, the null hypothesis was accepted, indicating that there is no significant moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District.

Discussion of Results

Relationship between Peer Social Comparison and Cybercrime among Students of Tertiary Institutions in Delta Central Senatorial District

The first finding showed that there is no significant relationship between peer social comparison and cybercrime among students of tertiary institutions in the Delta Central Senatorial District. This finding suggests that comparing oneself to peers does not necessarily drive students to engage in cybercrime. This outcome could indicate that other factors, such as individual values, personal ethics, or societal norms, may mitigate the influence of social comparisons on deviant behaviours, like cybercrime. Students may engage in social comparison without it leading to illegal activities, possibly because they have alternative, legitimate ways to achieve social status or because they prioritise moral or legal considerations over financial gain. The finding might also suggest that while peer influence is present in tertiary institutions, it does not have a direct impact on every form of deviance, such as cybercrime. Instead, other factors like personality traits, self-control, or access to technological knowledge might play a more significant role in determining whether a student engages in cybercrime. Moreover, the lack of a significant relationship could also reflect the varying motivations behind cybercrime, which may not always stem from social pressures. For some students, cybercrime may be motivated by financial desperation, technical curiosity, or opportunity rather than a need to match or surpass their peers' social or economic standing. The above finding agrees with Adewale and Ojo (2022) who found that motivations for cybercrime among students are often rooted in financial struggles and a desire for quick monetary gain, rather than social comparison or peer influence. The finding is also consistent with Gottfredson and Hirschi's (1990) general theory of crime, which states that self-control is a crucial factor in determining criminal behaviour and implies that students with high self-control may resist the temptation of cybercrime even in the face of unfavourable social comparisons.

Moderating Impact of Sex on the Relationship between Peer Social Comparison and Cybercrime among Students of Tertiary Institutions in Delta Central Senatorial District

The second finding revealed that there is no significant moderating impact of sex on the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District. This finding suggests that the influence of peer social comparison on cybercrime does not differ based on whether the student is male or female. This indicates that both male and female students experience similar levels of susceptibility to peer pressure or social comparison in relation to cybercrime involvement. In other words, gender does not play a decisive role in how peer social comparison affects students' likelihood of engaging in cybercrime. This finding could be explained by the evolving social dynamics in educational settings, where male and female students are increasingly exposed to similar technological environments, academic pressures, and social expectations. As access to technology becomes more gender-neutral and digital platforms provide equal opportunities for both sexes to participate in cyber activities, the motivations behind cybercrime may also become less gender-specific. The above finding is in line with **a study** by Smith et al. (2021) which showed that there is little difference between male and female students in their engagement with online activities, including those with deviant intentions, suggesting that sex is less of a differentiating factor than previously thought.

Conclusion

The findings of this study provide important insights into the relationship between peer social comparison and cybercrime among students of tertiary institutions in Delta Central Senatorial District, as well as the moderating role of sex in this relationship. The results indicate that peer social comparison does not significantly influence students' engagement in cybercrime, suggesting the need to conduct a further research to identify other factors that may play a more decisive role in influencing cybercrime among students of tertiary institutions in Delta Central Senatorial District. Furthermore, the study found no significant moderating impact of sex, implying that both male and female students experience similar levels of susceptibility to social comparison in the context of cybercrime.

Recommendations

Arising from the findings of this study, the following recommendations were made:

1. Educational institutions should incorporate ethics and digital citizenship into their curricula to foster a culture of integrity and responsibility among students. These programs should emphasize the consequences of cybercrime and promote legal avenues for achieving success.
2. Since financial desperation can be a motivator for cybercrime, tertiary institutions and governments should implement or expand scholarship programs, grants, and other financial aid initiatives to alleviate students' economic challenges.
3. Universities should provide counseling services to address issues of peer pressure.
4. Institutions should organize workshops and seminars on the responsible use of technology, emphasizing the ethical implications of digital actions and the importance of cybersecurity awareness.

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