

Journal of Applied Sciences, Information and Computing

Volume 5, Issue 2, November 2024

School of Mathematics and Computing, Kampala International University



ISSN: 3007-8903

<https://doi.org/10.59568/JASIC-2024-5-2-05>**Psycho-social variable and cybercrime among library users in tertiary institutions in Cross River State Nigeria****¹Joseph Ungwugwaye Igligli, ²Benedicta Echija Ethothi, ³Samuel Ibor Ubi, ⁴Felicia Nkatv Undie, ⁵Patience Owere Ekpang**¹Department of Library and Information Science, University of Calabar, Calabar.²Department of History and International Studies, University of Calabar, Calabar Nigeria³Department of Library and Information Technology, Federal Polytechnic Ugep, Cross River State⁴Department of Library and Information Science, University of Cross River State.⁵Department of Library and Information Technology, Kampala International University, Uganda
Corresponding Author. josephigligli@yahoo.com**Abstract**

Investigating cybercrime and the psycho-social variable among library users in tertiary institutions in Cross River State, Nigeria, was the aim of this study. Three objectives and research questions were developed to help the study accomplish its goal. The variables under investigation guided the completion of the literature review. For this study, a survey research design was chosen. For the study, a sample of five hundred and five (505) respondents was chosen. Purposive sampling was used in the selection process to guarantee that each faculty sample method was equally represented. This came to eight (8) tertiary institutions in all. 10% of the library's patrons were then chosen by accidentally sampling them. A statistical analysis method called Pearson Product Moment Correlation Analysis was used to evaluate the research ideas. Because of the characteristics of the variables included in the investigation, this statistical method was employed. Every hypothesis was tested using relative degrees of freedom and at the .05 level of significance. The analysis's conclusions showed a relationship between cybercrimes in tertiary institutions and self-esteem, emotional intelligence, and gender. Based on the findings of the study it was recommended among others that management should adopt and Implement Psychological Support Services, integrated emotional intelligence training services, and promote gender-sensitive cyber security initiatives in the library.

Keywords: Cybercrime, University Library, Psycho-social, Emotional Intelligence, Gender, Self-esteem.

1. Introduction

Cybercrime is the term for illegal actions carried out through the use of the internet. Though the World Wide Web's launch on August 6, 1991, could be considered a "start date" for the Internet, its widespread use by the general public dates back only a few decades. Nevertheless, online activity has already become ingrained in much of the developed world and is increasingly becoming common in the developing world as well (Naughton, 2016).

ICT helps its users with a range of demands, including those related to education, entertainment, communications, business, and other fields, to name a few. "However, these advantages have also brought about a new wave of criminal activity known as cybercrime." According to Saban, McGivern, and Saykiewicz (2002), a computer can encourage or facilitate any illegal act, regardless of whether the computer is the target of the crime, a tool for committing it, or a storehouse for evidence connected to it (Royal Canadian Mounted Police, 2000, in Hinduja and Schafer 2009). Cybercrimes are offenses conducted within an electronic or online platform.

The nature of computer crimes started to change as the Internet became widely used for business purposes. While an electronic tool may have been used to perpetrate part of a crime in certain cases, other crimes are committed entirely online or in an electronic environment. These offenses, sometimes referred to as cybercrimes, typically take place in cyberspace, or the virtual community of the Internet (Heather 2008, Newton 2008). The internet provides a multitude of possibilities and activities for criminals to participate in anti-social and/or deviant behaviors, as you have undoubtedly discovered from participating in Activity. As a result, the term "cybercrime" refers to a wide range of actions that go beyond the simple fact that they rely on or are made possible by the internet. Indeed, distinct objectives can be evident in real-world crimes; for instance, stealing for financial gain can have a different motive than murder committed as retaliation. The Internet has developed into such a vital platform that studies on globalization have confirmed its impact on the integrating currents of the modern world. Townes (2012)

According to Adakawa et al. (2020), the millions of cyberattacks that occur every day throughout the world have made it necessary for librarians to be trained in cyber security. The act of defending library data, network servers, electronic systems, mobile devices, servers, etc. against malicious attacks is referred to as cyber security in libraries. It is often referred to as electronic information security and information technology security. This study divided cyber security in libraries into two categories: information security, which

is the act of preserving the confidentiality and integrity of staff and user data while it is being stored or transferred, and network/computer security, which is the act of defending the library's computer network against malicious attacks and malware. Because of their line of work, library personnel deal with cyber security concerns such as the libraries and their users' data being stored and used by a third party without authorization. Also, viruses targeted at the library's information system and the library resources like databases hacked and used without consent, are some problems of cyber security in libraries. It is unclear, nevertheless, how well libraries and their staff can address these problems, which runs counter to the curriculum of their library schools. Moreover, there is a lack of information on cyber security in libraries because it is still an understudied study topic (Renaud et al., 2020). In this instance, the psycho-social factors among library patrons in Cross River State University libraries include self-esteem, emotional intelligence, and attitude.

1.1 Statement of the problem

The rise of academic libraries as a result of the internet has opened the door for new types of criminal activity. Additionally, it has developed into a supportive atmosphere where safe and effective offense flourishes. The university libraries in our higher education institutions are one place to get a free Internet connection. These libraries offer these services to fulfill the needs of their patrons for education and to keep up with the digital revolution. Most customers abuse their access. To perpetrate cybercrimes, they make use of the internet connection that is offered and the digital technologies that the libraries have incorporated. Cybercrimes continue to rise despite government and university administration efforts to significantly curtail the activities of cybercriminals; novel situations emerge with each new. Wall (2017) asserts that it is impossible to completely abolish cybercrime and that it is not possible to "turn these technologies off." Cybercrime can only be controlled to the extent necessary to minimize risks and damage, though. This study aims to investigate the psycho-social variable and cybercrime among library users in tertiary institutions in Cross River State, Nigeria, with the ultimate goal of reducing the frequency of cybercrime in the country as a whole and tertiary institution libraries in particular.

1.2 Objective of the study

The purpose of this study is:

1. To find out the level of Self-esteem and cybercrime among library users in tertiary institutions in Cross River State

2. To find out the influence of Emotional intelligence and cybercrime among library users in tertiary institutions Cross River State
3. To find out the relationship between Gender and cybercrime among library users in tertiary institutions Cross River State

1.3 Research Question

1. To what extent does self-esteem influence cybercrime among library users at tertiary institutions in Cross River state
2. How does emotional intelligence influence cybercrime among library users in tertiary institutions in Cross River State?
3. How do gender and cybercrime influence library users in tertiary institutions in Cross River state

2. Literature Review

2.1 Self-esteem and cybercrime

The ability to read one's surroundings and circumstances, manage one's conduct in response to issues and circumstances, and present oneself in social situations is known as self-control. Close sentiments include the capacity for self-control, the propensity for attention-seeking, the drive to modify conduct to fit the needs of others, and the constant comfort of others. Risniwita & Ghufon (2011). The following are some aspects of self-control proposed by Ghufon & Risniwita (2011):

Behavioral control is the readiness or availability of a response that can directly affect or modify an unpleasant situation. Cognitive control is an individual's ability to manage unwanted information by interpreting, assessing, or combining an event in a cognitive framework as a psychological adaptation or to reduce pressure; and Decisional control: The power to make decisions or act based on beliefs or agreements is known as decisional control.

Self-esteem is also the assessment of a person's views and convictions regarding their skills and morals. Rosenberg (1965). Adolescents' roles and responsibilities change frequently, which causes their self-esteem to fluctuate during this time. Early adolescence is typically a time of fall for self-esteem, which then rises in the middle and later stages of the stage. (2003) Trzesniewski et al. Teens who have strong self-esteem typically have favorable experiences with themselves. Peng et al., 2019); greater physical and mental health; and high-quality interpersonal connections Cameron and Granger, 2019 Li and associates (2010).

Self-esteem is a fundamental psychological construct that can act as a catalyst for academic engagement. Lee & Lim (2017). According to expectation-value theory,

academic results like academic engagement can be predicted by an individual's favorable self-evaluation Fang (2016). According to a study by Sirin and Rogers-Sirin (2015), there is a substantial positive correlation between academic engagement and self-esteem, and self-esteem has an impact on the fields linked to academic engagement.

2.2 Emotional and Intelligence

In cyber-psychology, the study of the intersections between technology and human emotions, emotional intelligence is essential. Professionals in the security industry with high emotional intelligence can identify, comprehend, and control their own emotions as well as those of others (Yeke, 2023). Possessing these abilities affects many factors that contribute to the success of a company as a whole. One prominent example is how people respond to cyber-attacks. Such situations may cause these impacted parties to feel vulnerable, fearful, and frustrated. This is the exact moment when a security practitioner's capacity to show empathy and offer emotional support is most greatly enhanced. Professionals establish trust among themselves by placing themselves in the shoes of those affected, which simultaneously comforts victims and fosters rapport.

According to Goleman (2009), emotional intelligence is a dynamic skill that involves self-discipline, perseverance in the face of difficulty, impulse control, self-motivation, mood regulation, empathy, and the capacity to form relationships with others. Emotionally intelligent people are generally able to motivate others, tolerate frustration, restrain desires without exaggerating their pleasure, control their moods, and prevent stress from impairing their capacity for thought and empathy. Follow these steps to continue Goleman's (2009) Aspects of Emotional Intelligence as follows:

1. Recognizing one's own emotions, an individual's ability to monitor feelings from time to time to pay close attention to the feelings that arise.
2. Managing emotions, the ability to entertain oneself, release anxiety, moodiness, or resentment, and the consequences of failure of basic emotional skills.
3. Motivate yourself; the ability to regulate emotions is a tool to achieve goals and is very important for motivation and self-mastery.
4. Recognizing the emotions of others, this ability is often called empathy, which is an ability that depends on emotional self-awareness; this ability is an essential social skill; and
5. Fostering relationships, the art of fostering social connections, is the skill of managing other people's emotions

2.3 Gender and cybercrime

Igbo, Onu, and Obiyo (2015) assert that gender and self-perception are related, with persons of the same sex

believing they possess distinct qualities. Previous studies have suggested that several factors, such as social media use and relationships with friends and family, may influence students' opinions (Ryabov, 2011; Othman & Lang, 2011; Khan, 2012; Ige, 2008). Students' interactions with computers at low, middle, and high levels are referred to as technological fluency. It is thought that how students use technology may have an impact on the study's findings. As a result, the technical fluency test was employed to assess the pupils' computer proficiency. Throughout the training, the low, medium, and high technological influences were assigned at random to encourage group learning.

The participants' gender is also reflected in the focus group conversation. The research question, "What are secondary students' perceptions of the action cybercrime prevention program?" is addressed in this study. And conducted 0.05-level tests on two hypotheses. There is no significant interaction effect between gender and technology fluency and students' attitudes toward cybercrime prevention, according to these two hypotheses. Similarly, there is no significant effect between treatment, gender, and technical fluency and students' attitudes toward cybercrime prevention. Raytheon, Force Point, and the National Cyber Security Alliance (2017) found that while 83% of Millennials think cyber security is vital, their gender might put employers at risk if leveraged in the workplace. For example, the study found that millennials are adept at using passwords and PINs to secure their laptops (83%), smart phones (87%), and other gadgets, but they neglect to do the same for other devices. Since 2014, there has been a 15% rise in public knowledge of cyber security. Parents, professionals, and peers can use this increased understanding of cybersecurity issues as a benchmark to influence the employment selections of young individuals. .. According to these digital natives, social networks, communication technology, and other advancements have completely changed how individuals interact online and live their lives, making physical places irrelevant in today's transactions (Ogutcu, Cirakoglu, & Cula, 2016). Due to this, data and information assets are now in circulation and require the highest level of protection, much like other commodities in typical situations. People's daily interactions are making them increasingly complex and dependent on one another. This is accurate, as our students are

Demanding that these new technologies be utilized, at least in part, in their education. Because they are aware

of their potential benefits, the students already possess these talents and employ them in their daily lives. Prensky (2006). As stated by Frand (2000), Gros (2003), Oblinger (2003), and Prensky (2001); they are versatile because they prefer receiving information quickly, are skilled at processing information quickly, enjoy multitasking and non-linearity in information access, choose active learning, are dependent on communication technology, and need social and professional interactions.

3. Methodology

A survey research design was employed for this investigation. All library users at the eight tertiary institutions in Cross River State during the 2023–2024 academic year make up the study's population. Five thousand fifty (5,050) people are registered library patrons in total. The method used to choose the samples was stratified random sampling. The zone was first divided into distinct faculties using the stratified sampling technique. To guarantee that every faculty member was equally represented, a purposive sample technique was used to choose 40% of the universities. This summed up to a total of eight (8) tertiary Institutions. Thereafter, 10% of the library users were selected using an accidental sampling technique. This gives a total of five hundred and five (505) which formed the sample of the study. The instrument for data collection is the researchers' constructed instrument titled; Psycho-social variable and cybercrime among library users in tertiary institutions questionnaire (PSVCCALSTIQ).

To ascertain the validity of the research tool (questionnaire), a trial test was conducted with thirty non-participating library customers from the University of Uyo in Akwa Ibom State, Nigeria. The instrument's dependability estimate was ascertained through the utilization of a split-half reliability test. In this instance, the respondent just had to complete the instrument once from the researcher. However, two sets of scores (even and odd) were generated at the time of scoring. The Pearson Product Moment Correlation was used to correlate the scores obtained from the two sets, and the Spearman-Brown Prophecy Formula was used to adjust the results. The range of the dependability coefficient is 0.75 to 0.92. Reliability and high enough coefficients were found.

TABLE 1

Distribution of population and sample of the study

S.No	Institutions	Population
1	University of Calabar, Calabar	1,300
2	University of Cross River State	1,100
3	AuthurJavis University Akpabuyo	150
4	Federal College Education Obudu	800
5	Cross River State College of Education Akamkpa	700
6	Federal Polytechnic Ugep	90
7	College of Health Technology Calabar	900
8	Institute of Management Technology Ugep	10
9	Total	5050

4. Results and Discussion

4.1 Results:

Research question 1

To what extent does self-esteem influence the cybercrime of library users in tertiary institutions of Cross River state? To answer this research question, independent t-test analysis was used and the result obtained is presented in Table 2

Table 2

Independent t-test analysis showing the influence of self-esteem (high/low) on cybercrime of library users in tertiary institutions of Cross River State.

N=505

Variable	N	X	S.D	t-value	Sig.
Low self-concept	284	14.0634	2.60799	32.274	.000
High self-concept	221	7.7285	1.48280		

df = 503

The data was analyzed using an independent t-test, which is a statistical method commonly employed to compare the means of two groups. In this case, the two groups were categorized based on their self-esteem levels: those with high self-esteem and those with low self-esteem. The results, as presented in Table 2, indicate a significant difference between the two groups. The group characterized by low self-esteem (n=284, M=14.0634, SD=2.60799) demonstrated significantly higher levels of cybercrime tendencies

compared to the group with high self-esteem (n=221, M=7.7285, SD=1.48280). The t-value of 32.274 with a corresponding p-value of .000 indicates that this difference is statistically significant. The degrees of freedom (df) for this analysis were calculated as 503. The large sample size (N=505) adds robustness to the findings and increases confidence in the generalizability of the results. Overall, these findings suggest a notable relationship between self-esteem levels and cybercrime tendencies among library users in tertiary institutions in Cross River State. Specifically, individuals with lower levels of self-esteem appear to exhibit a greater propensity for engaging in cybercrime activities compared to those with higher self-esteem.

Research question 2

What relationship exists between Emotional intelligence and cybercrime of library users in tertiary institutions of Cross River state? To answer this research question, the Pearson product-moment correlation analysis was used and the result obtained is presented in Table 3

Table 3

Pearson product-moment correlation analysis showing the relationship between Emotional intelligence and cybercrime of library users in tertiary institutions of Cross River State.

(n=505)

Variables	X	S.D	R	Sig.
Emotional intelligence	8.2574	3.41871	.310	.000
Cybercrime	14.3663	4.00278		

The mean emotional intelligence score among the participants was found to be 8.2574, with a standard deviation of 3.41871. The mean score for cybercrime was 14.3663, with a standard deviation of 4.00278. The correlation coefficient (r) between emotional intelligence and cybercrime was calculated to be 0.310. This positive correlation suggests that there is a moderately positive relationship between emotional intelligence and cybercrime among library users in tertiary institutions of Cross River State. Furthermore, the p-value associated with the correlation coefficient was found to be less than 0.001 ($p < 0.001$), indicating that the correlation is statistically significant. This means that it is highly unlikely that the observed correlation occurred due to random chance. The analysis reveals that there is a statistically significant positive relationship between emotional intelligence and cybercrime among library users in tertiary institutions of Cross River State. This implies that

individuals with higher levels of emotional intelligence may be less likely to engage in cybercriminal activities.

Research question 3

How does gender influence the cybercrime of library users in tertiary institutions of Cross River State? To answer this research question, independent t-test analysis was used and the result obtained is presented in Table 1

Table 3

Independent t-test analysis showing the influence of gender (male/female) on cybercrime of library users in tertiary institutions of Cross River State. N=505

Variable	n	X	S.D	t-value	Sig.
Male	266	8.4248	2.54692	23.991	.000
Female	239	13.9749	2.64881		

df = 503

The independent t-test analysis was conducted to examine the influence of gender (male/female) on cybercrime among library users in tertiary institutions of Cross River State, with a total sample size of 505 individuals. The analysis revealed notable disparities between male and female respondents. Among male respondents (n=266), the mean cybercrime score was 8.4248, with a standard deviation of 2.54692. Conversely, female respondents (n=239) exhibited a significantly higher mean cybercrime score of 13.9749, with a slightly larger standard deviation of 2.64881. The t-value of 23.991 was obtained, indicating a substantial difference between the mean cybercrime scores of male and female participants. This disparity was statistically significant at $p < .001$, denoted by the significance level (Sig.) in the table. The degrees of freedom (df) for this analysis were calculated as 503, reflecting the sample size adjustment. The results suggest that gender indeed plays a significant role in influencing cybercrime among library users in tertiary institutions of Cross River State. Female respondents, on average, reported higher involvement in cybercrime compared to their male counterparts.

4.2 Discussion

The study findings are presented in Table 1. Demonstrate a significant relationship between self-esteem levels and cybercrime tendencies among

library users in tertiary institutions in Cross River State. Specifically, the group characterized by low self-esteem exhibited notably higher levels of cybercrime tendencies compared to those with high self-esteem. The results, as evidenced by a substantial t-value of 32.274 and a corresponding p-value of .000, indicate a statistically significant difference between the two groups. With a large sample size (N=505) and adequate degrees of freedom (df=503), these findings carry robustness and enhance the confidence in their generalizability. These results agree with previous research indicating a connection between low self-esteem and delinquent behaviors, including cybercrimes (Patchin & Hinduja, 2016; Ybarra & Mitchell, 2004). Individuals with lower self-esteem may resort to cybercrimes as a means of compensating for feelings of inadequacy or seeking validation through illicit online activities (Mitra, Sillick, & Schlaghecken, 2020)

Furthermore, those with poor self-esteem may feel even more empowered to commit cybercrimes due to the anonymity and seeming lack of consequences found in online environments (Holt & Bossler, 2016). The internet provides a forum where people can act without facing immediate consequences, which could exacerbate tendencies toward abnormal behavior in people whose self-esteem is already low (Higgins, 2018).

The study, which involved library users in Cross River State's educational institutions, uncovers a fascinating connection between cybercrime tendencies and emotional intelligence. The computed correlation coefficient (r) of 0.310 suggests that emotional intelligence and cybercrime have a somewhat favorable association. These results are consistent with earlier studies showing a relationship between emotional intelligence and a variety of deviant behaviors, such as cybercrimes (Ali & Hafiz, 2020). Higher emotional intelligence may prevent people from engaging in illegal internet activity because these people may have superior coping strategies, impulsive control, and conflict resolution abilities (Kumar & Dey, 2020). Additionally, empathy and the capacity for perspective-taking are made possible by emotional intelligence, which helps people see how their actions affect other people—including possible victims of cybercrimes—and how their actions affect them (Goleman, 1995). This heightened awareness and ethical consideration may serve as a deterrent against engaging in cybercriminal behaviors (Yasin, Razak, & Rasoolimanesh, (2019).

Significant differences in the propensity for cybercrime between male and female respondents were found by analyzing the study data. These results are consistent with the body of research on gender

disparities in cybercrime perpetration. Studies have regularly demonstrated differences between males' and females' online activities and involvement in cybercrime (Bossler & Holt, 2009; Holt et al., 2015). Women are frequently linked to relational violence and cyberbullying, although men are more likely to participate in overt cybercrimes such as hacking and online harassment (Holt & Bossler, 2016; Reyns, Henson, Fisher, & Fox, 2016).

The gender differences in cybercrime tendencies that have been discovered could be caused by several variables. Individuals' online actions can be influenced by societal norms and gender socialization processes, which can shape their risk of committing certain cybercrimes (Brennan, Craig, & Huitsing, 2012). Further contributing factors to variances in cybercrime involvement could be gender-specific differences in risk-taking propensity, coping methods, and motivations (Reyns et al., 2016). The establishment of focused initiatives and regulations meant to address gender-specific cybercrime tendencies is one area in which these findings have consequences. Reducing online delinquency may be accomplished by educational programs and awareness campaigns that are specific to the vulnerabilities and risk factors that male and female cybercrime perpetrators have in common (Holt et al., 2015). Furthermore, it is imperative to cultivate a gender-responsive approach in cybersecurity tactics and law enforcement procedures to successfully battle cybercrimes against a variety of demographic groups (Brennan et al., 2012).

5. Conclusion & Recommendation

Based on the study's findings, it is determined that among library users in Cross River State's tertiary institutions, there is a significant correlation between self-esteem levels and inclinations toward cybercrime. More specifically, people who are less confident in themselves seem to be more likely to commit cybercrimes than people who are more confident in themselves. Additionally, it was determined that among library users in Cross River State's higher institutions, there is a statistically significant positive association between emotional intelligence and cybercrime. This suggests that those who possess greater emotional intelligence could be less inclined to commit cybercrimes.

More so, it was concluded that gender indeed plays a significant role in influencing cybercrime among library users in tertiary institutions of Cross River State. Female respondents, on average, reported higher involvement in cybercrime compared to their male counterparts.

Recommendations

Based on the conclusions drawn from the study regarding the relationship between self-esteem, emotional intelligence, gender, and cybercrime tendencies among library users in tertiary institutions in Cross River State, here are three recommendations:

Establish Psychological Support Services: Post-secondary educational institutions are required to offer psychological support services because to the correlation between reduced self-esteem and increased propensity for cybercrime. These programs may consist of workshops, counseling sessions, and materials meant to boost pupils' self-esteem. Through the resolution of underlying difficulties related to self-esteem, institutions may be able to lessen the likelihood of participating in cybercrime.

Integrate Emotional Intelligence Training: Organizations ought to include emotional intelligence training in their extracurricular or academic courses in light of the strong positive correlation that has been observed between cybercrime inclinations and emotional intelligence. By improving students' emotional regulation, empathy, and moral decision-making skills, this kind of instruction can lower their risk of engaging in cybercrime. Regular workshops, seminars, and courses on the development of emotional intelligence could be held.

Encourage Gender-Sensitive Cyber security Efforts: It's critical to create gender-sensitive cyber security efforts in light of the part that gender plays in influencing cybercrime. These programs ought to address the particular difficulties and vulnerabilities that male and female students encounter. Higher education institutions in Cross River State should take proactive measures to reduce cybercrime among their library patrons and promote a safer and more secure online community by putting these ideas into practice.

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