

Gender Bias and Cybercrime Investigation: A Comparative Study of Female Involvement in Cybercrime among Undergraduate Students in Selected Universities in Ekiti State, Nigeria

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Abstract

Background to the Study: The study investigates the gender bias on female involvement in cybercrime among undergraduate students in selected universities in Ekiti State, Nigeria. **Objectives:** The study aims to determine the prevalence of female involvement in cybercrime, and to investigate the effectiveness of law enforcement agencies in controlling cybercrime. **Methods:** The study adopted a descriptive research design in which quantitative method was employed. The study was carried out in Ekiti State, and it include universities such as Ekiti State University, Ado-Ekiti, Federal University of Oye-Ekiti, and Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti. The study comprises of four hundred and eighty (480) undergraduate students from the three purposive selected universities in the State. Questionnaires were used to gather information and analysis was done with SPSS version 21. Results were presented in frequency, percentage and cross-tabulation. **Results:** Findings from the study showed that 50.2% are aware of female who involved in cybercrime, but 62.5% of them claimed not to have seen or known any female who engaged in cybercrime, 63.3% attested that female involving in cybercrime are not prevalent. 68.5% affirmed that law enforcement agencies controlled female cybercrime, but 52% confirmed that law enforcement agencies are aware of female involving in cybercrime. Also, the study shows the gender bias in controlling females involving in cybercrime and which include; lack of technical training (73.3%), inadequate legislation (71.4%), and anonymity (73.8%). **Conclusion:** Based on the findings, the study concluded that there is gender bias in investigating female involvement in cybercrime and other crimes. **Recommendations:** The study therefore recommends that law enforcement agencies should avoid the bias or assumption that male alone are involved in cybercrime while conducting investigation.

Keywords: Gender Bias, Cybercrime Investigation, Female Involvement, Law Enforcement Agencies, and Universities

Background to the Study

Controlling cybercrime has become a difficult task for law enforcement agencies in Nigeria and the world at large. This could be due to the prevalence of perpetration and the loss of money, properties and reputation recorded as a result of this menace. According to Petrosyan (2023), 39% of global internet users have experienced cybercrime in which India, (68%), United States (49%), and Australia (40%) were the highest victims as at 2022. However, cybercrime is not perpetrated by male criminals alone as the female were also involved in this menace. It was reported by Muncaster (2023) that female involvement in cybercrime is usually higher than all forms of crime, and as a result, the issue about possible gender bias in investigating cybercrime arose several debate. It is on this note that this study tends to investigate the prevalence of female involvement in cybercrime and control among undergraduate students in selected universities in Ekiti State, Nigeria. Abuse and misuse of the cyber technology is a worrisome menace in which millions of dollars were lost globally (Sarkar and Shukla, 2023). Since the number of internet users continue to increase rapidly, its abuse and misuse is equally increasing to the huge disadvantage of users. As people continue to venture into cyber realm and engage in their professional activities, vast opportunities for committing a crime begin to emerge. All these happened under the nose of the law enforcement agencies as the system is not yet foolproof to check its gross misuse. Nonetheless, the crimes driven through the cyber realm have become a significant global issue which result to loss to individuals, especially to genuine users. Today, cybercrimes have become a global issue as the number of victims continue to grow especially where financial, property and reputational losses are prevalent (Oluwadare and Igbekoyi, 2018). With millions of people globally affected by this menace, the growing acts of cybercrime have become one of the most threatening and challenging tasks for law enforcement agencies, the judicial system and the public at large (Sarkar and Shukla, 2023).

Female criminality is conceived as a hidden crime which is assumed that female commits just as much crime as men. But female crimes is more easily hidden because of the chivalry of law enforcement agencies in investigating female crimes (Olagunju, et al. 2024). Globally, about 30% female was recorded to be involved in the perpetration of cybercrime, and this is attributed to gender biases in which law enforcement agencies false assumption resulting to the inability of investigating female involvement in cybercrime (Fuentes, 2022). Sarkar and Shukla (2023) stressed that most perpetrators of cybercrime remain untraced, as it is widely known that most criminals are male. But over a period of time, female criminals also have been making their presence known, and cybercrime inclusive. It is believed that when a victim of cybercrime is scammed by a female cybercriminal, the victim often prefers not to discuss it with his family or other associates. Hardly a complaint is lodged against this segment of cybercriminals. This numbness of the victims has encouraged the expansion in the network of female cybercriminals and the trend is growing fast. Gender biases somehow undermine criminal investigation such as cybercrime which is usually believed to be perpetrated by male alone. According to Fuentes

(2022), which stressed that due to the anonymity in cybercrime, gender play a less important role and law enforcement agencies should be opened to this possibility from the start.

Statement of the Problem

Several studies have shown that male and female differ in criminal behaviors, as crimes committed by female are assumed to be non-violent (such as cybercrime) compared to male. The gender disparity on the access to internet affects how cyber users interacts with the internet and as a results, committing cybercrimes. According to the International Telecommunication Union in 2022, 62% of men compared to 57% of women are using the internet (Fuentes, 2022). Romance scams are considered the highest form of cybercrime perpetrated by the female. The Internet Crime Complaint Center received 24,299 victim's report in which more than \$956 million was lost to romance scam. This is 20 times higher to ransomware that was reported. According a study, 38% who dated someone online in the United Kingdom asked for money, while 57% of those who asked for money claimed they gave out money. The United State reported to have lost \$1.3 billion to romance scam in the last five years (Fuentes, 2022).

Gender bias investigation can occur in various stages of criminal justice process including policing, investigation, prosecution, and conviction. A voluminous body of scholars had pointed out the existence of unexpected investigation disparities between criminal cases including cybercrime involving male and female as envisaged by Bielen and Grajzl (2020). Females that are involve in the cybercrime in Nigeria is increasing rapidly. A report by the National Bureau of Statistics (2020) claimed a total of 2,505 females were involved in crimes, and 804 were cybercrime (Olawuni, 2021). Based on this report, this number of cybercrime by female is more than other criminalities by females. This trend increase from previous years. In 2017, about 118 females were involved in cybercrime, and in 2018, the number increased to 349, then later dropped to 337 in 2019, bringing the total to 804 as at 2020. Though, 32.1% was advanced fee fraud as stated by Olawuni (2021). To date, there is no or little studies on female participation on cybercrime and control especially in Nigeria where this study is relevant and germane to examine.

Methods

Study Design

The study adopted a descriptive research design because it enhances the explanation on the prevalence of female involvement in cybercrime and control among undergraduate students in selected tertiary institutions in Ekiti State, Nigeria. The study employed quantitative method in which four hundred and eighty (480) copies of questionnaire were used to gather data from respondents

Study Area: Ekiti State

Ekiti State is one of the States in the Southwestern geopolitical zones of Nigeria. It is primarily agrarian with a sizeable proportion of civil servants, public servants and students. It is a gateway from the Southwest to Abuja and other parts of Northern Nigeria. Ekiti State has three (3) senatorial districts with sixteen (16) Local Government Areas (LGAs). It has an estimated population around 3,270,800 (NBS, 2017). The major tribes in the State are Yorubas, which formed more than 90% of the population of the State. Other tribes include the Igbos, Hausas and the Ebiras. Ekiti State has several institutions including both public and Private tertiary institutions. Thus, there is an heterogeneity of cultures, traditions, behaviors in the state which may have an effect on how they choose to access internet services in the State.

Study Population and Sampling Techniques

The population for this study consists of both male and female undergraduate students across the three selected tertiary institutions in Ekiti State. The three selected institutions include; Ekiti State University, Ado-Ekiti (EKSU), Federal University of Oye-Ekiti (FUOYE), and Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti (BOUESTI). The justification of adopting these three institutions is to focus on public Universities in the State. Purposive sampling techniques was employed in selecting four hundred and eighty (480) respondents.

Data Collection

The method of data collection for this study is quantitative. The quantitative approach adopted a questionnaire in which four hundred and eighty (480) copies of questionnaire were distributed to respondents across the three purposively selected universities in the State.

Data Analysis

The study is a descriptive study, and as a result adopted descriptive statistics to analyze various data sources for this study, and this was presented in frequency, percentage, and cross-tabulation. Statistical Package for Social Science (SPSS) version 21 was used to analyze the data.

Results

Table 1: Percentage Distribution of Respondents on Socio-Demographic Characteristics

Variables	EKSU (N=200)	FUOYE (N=140)	BOUESTI (N=140)	Total (N=480)
Age	No. (%)	No. (%)	No. (%)	No. (%)
Less than 19 years	6 (3.0)	2 (1.4)	17 (12.1)	25 (5.2)
20-25	90 (45.0)	119 (85.1)	89 (63.6)	298 (62.1)
26-30	76 (38.0)	17 (12.1)	32 (22.9)	125 (26.0)
31 and above	28 (14.0)	2 (1.4)	2 (1.4)	32 (6.7)
Sex				
Male	95 (47.5)	83 (59.3)	85 (60.7)	263 (54.8)
Female	105 (52.5)	57 (40.7)	55 (39.3)	217 (45.2)
Ethnic group				
Hausa	12 (6.0)	8 (5.7)	14 (10.0)	34 (7.1)
Igbo	48 (24.0)	20 (14.3)	25 (17.9)	93 (19.4)
Yoruba	84 (42.0)	76 (54.3)	73 (52.1)	233 (48.5)
Others	56 (28.0)	36 (25.7)	28 (20.0)	120 (25.0)
Religion				
Traditional	23 (11.5)	4 (2.9)	13 (9.3)	40 (8.4)
Orthodox Church	37 (18.5)	14 (10.0)	24 (17.1)	75 (15.6)
Pentecostal Church	67 (33.5)	67 (47.8)	38 (27.1)	172 (35.8)
Aladura Church	41 (20.5)	7 (5.0)	23 (16.4)	71 (14.8)
Islam	32 (16.0)	48 (34.3)	42 (30.1)	122 (25.4)

Source: Field Research Survey, 2024

Table 1 above shows the socio-demographic characteristics of respondents. The data on the age of respondents across the three selected institutions stated that 5.2% were less than 19 years, 62.1% were between 20-25 years, 26.0% were between 26-30 years, and 6.7% were from 31 years and above. Therefore, a large proportion (62.1%) of respondents were between 20-25 years, which can be attributed to the age bracket expected to be in higher institution. The gender disparity shows that more female (52.5%) were represented in EKSU, but more male with 59.3% and 60.7% in FUOYE and BOUESTI respectively. From the total sampling, more male with 54.8% took active part in the study. The ethnicity of respondents was illustrated in Table 1. It shows across the three institutions in the State that 7.1% claimed to be Hausa, 19.4% respondents said they are Igbo people, 48.5% attested that they are Yoruba people, and 25.0% affirmed that they belong to other ethnic minority people. In other words, 48.5% respondents confirmed that they are Yoruba ethnic group, and this is attributed to the fact that the study area is predominantly Yoruba speaking area. The Table 1 also shows the religion affiliation of respondents. It stated that 8% claimed to be traditional worshipper, about 16% said they practice orthodox doctrine, about 36% affirmed they are Pentecostal worshipper, about 15% said they

Aladura white-garment worshippers, and 25% attested that they are Islamic worshippers. Therefore, majority with 35.8% respondents confirmed that they are Pentecostal worshippers.

Table 2: Percentage Distribution of Respondents on the Prevalence of Female Involvement in Cybercrime

Variables	EKSU (N=200)	FUOYE (N=140)	BOUESTI (N=140)	Total (N=480)
Have you Heard of Cybercrime	No. (%)	No. (%)	No. (%)	No. (%)
Yes	148 (74.0)	132 (94.3)	119 (85.0)	399 (83.1)
No	52 (26.0)	8 (5.7)	21 (15.0)	81 (16.9)
Heard of Female Involvement in Cybercrime				
Yes	70 (35.0)	79 (56.4)	92 (65.7)	241 (50.2)
No	130 (65.0)	61 (43.6)	48 (34.3)	239 (49.8)
How often do you Hear of Females Involved in Cybercrime				
Daily	48 (24.0)	7 (5.0)	42 (30.0)	97 (20.2)
Weekly	46 (23.0)	14 (10.0)	50 (35.7)	110 (22.9)
Monthly	60 (30.0)	23 (16.4)	22 (15.7)	105 (21.9)
Yearly	46 (23.0)	96 (68.6)	26 (18.6)	168 (35.0)
Have you Seen or Know any Female Involved in Cybercrime				
Yes	44 (22.0)	67 (47.9)	69 (49.3)	180 (37.5)
No	156 (78.0)	73 (52.1)	71 (50.7)	300 (62.5)
Is Female Involvement in Cybercrime Prevalent				
Yes	92 (46.0)	17 (12.1)	67 (47.9)	176 (36.7)
No	108 (54.0)	123 (87.9)	73 (52.1)	304 (63.3)

Source: Field Research Survey, 2024

In Table 2, data on the prevalence of female involvement in cybercrime was presented. Whether respondents have heard of cybercrime, the Table (2) shows that 83.1% respondents across the three institutions claimed to have heard of cybercrime, as against 16.9% who claimed otherwise. What this implies is that an overwhelming distribution (83.1%) of respondents affirmed that they have heard of cybercrimes. Also, the Table (2) illustrated if respondents have heard of females involvement in cybercrime. It therefore shows that 65% respondents in EKSU claimed they have not heard of females involvement in cybercrime, but 56.4% and 65.7% respondents in FUOYE and BOUESTI respectively attested that they have heard of females involvement in cybercrime. This report shows that female that are involved in cybercrime are not prevalent in EKSU but rampant at FUOYE and BOUESTI. Therefore, half of the total respondents with a slight difference (50.2%) shows that majority have heard of females involvement in cybercrime, while 49.8% claimed otherwise. How often do respondents hear of females involvement in cybercrime was further illustrated in Table 2. The data shows different view from the three institutions in the

State. In EKSU, 30.0% majority of the respondents claimed that it occurred on a monthly basis; in FUOYE, 68.6% respondents attested on a yearly basis; while in BOUESTI, 35.7% respondents affirmed on a weekly basis. This showed the prevalence of females who engage in cybercrime in the various institutions. Across the three institutions, it shows that 20% claimed daily, about 23% attested weekly, about 22% confirmed monthly, and 35% settled for yearly. The implication of this finding is that more than two-quarter (35%) affirmed that people often hear of females involvement in cybercrime yearly, and this can be attributed to the fact that female perpetrated cybercrime is not pronounced in Ekiti State, and possibly in Nigeria. Whether respondents have seen or known any female involved in cybercrime was explained in the Table (2). It stated that 62.5% respondents across the three institution attested that they have not seen or known any female involved in cybercrime, while 37.5% claimed otherwise. In other words, 62.5% respondents confirmed that they have not seen or known any female involved in cybercrime. This corroborated the earlier result which stated that cases of female cybercrime are reported on yearly basis. Lastly on the Table (2), data on if female involvement in cybercrime is prevalent. It stated across the institutions that 63.3% of the total respondents claimed females involvement in cybercrime is not prevalent, as against 36.7% respondents who said female involvement in cybercrime is prevalent. Therefore, what this implies is that a large distribution (63.3%) of respondents believed females that are involved in cybercrime is not prevalent among students, but they existed among students in Ekiti State.

Table 3: Cross-Tabulation on if Respondents have Heard of Females Involved in Cybercrime and Is Female Involved in Cybercrime Prevalent among Students in Public Tertiary Institutions in Ekiti State

Heard of female Involved in Cybercrime	Is Female Involved in Cybercrime Prevalent			OR (95% Confidence Interval)	P-Value
	Yes	No	Total		
Yes	143	256	399	0.796 (0.487-1.299)	0.000
No	34	47	81	0.869 (0.648-1.164)	0.000
Total	177	303	480	1.092 (0.896-1.331)	0.000

Source: Field Research Survey, 2024

The Table 3 above shows the multivariate analysis if respondents have heard of females involvement in cybercrime and if females that were involved in cybercrime is prevalent among students in public tertiary institutions in Ekiti State. This is to show cross tabulation, the odd ratio, confidence interval, and p-value of respondents. From the Table (3), 256 out of 399 respondents affirmed that they have heard of females involvement in cybercrime, but not prevalent. This further supported the odd ratio (OR=0.796, 95% CI=0.487-1.299), with a significant p-value (0.000) that there is no likelihood on the prevalent of female involvement in

cybercrime. The implication here is that majority of the respondents affirmed that there is no likelihood that females involvement in cybercrime is prevalent.

Table 4: Percentage Distribution of Respondents on the Control of Female Involvement in Cybercrime

Variables	EKSU (N=200)	FUOYE (N=140)	BOUESTI (N=140)	Total (N=480)
LEA Control Female Involve in Cybercrime	No. (%)	No. (%)	No. (%)	No. (%)
Strongly Agree	62 (31.0)	83 (59.3)	33 (23.6)	178 (37.1)
Agree	90 (45.0)	15 (10.7)	46 (32.8)	151 (31.4)
Disagree	34 (17.0)	23 (16.4)	13 (9.3)	70 (14.6)
Strongly Disagree	14 (7.0)	19 (13.6)	48 (34.3)	81 (16.9)
LEA usually Ignores Female Involved in Cybercrime				
Strongly Agree	67 (33.5)	22 (15.7)	25 (17.9)	114 (23.7)
Agree	76 (38.0)	24 (17.2)	38 (27.1)	138 (28.8)
Disagree	43 (21.5)	79 (56.4)	28 (20.0)	150 (31.2)
Strongly Disagree	14 (7.0)	15 (10.7)	49 (35.0)	78 (16.3)
LEA are not Aware of Female Involvement in Cybercrime				
Strongly Agree	56 (28.0)	10 (7.1)	13 (9.3)	79 (16.5)
Agree	94 (47.0)	15 (10.7)	42 (30.0)	151 (31.5)
Disagree	34 (17.0)	89 (63.6)	36 (25.7)	159 (33.1)
Strongly Disagree	16 (8.0)	26 (18.6)	49 (35.0)	91 (18.9)
LEA usually Apprehend Female Involved in Cybercrime				
Strongly Agree	62 (31.0)	87 (62.1)	22 (15.7)	171 (35.6)
Agree	92 (46.0)	25 (17.9)	42 (30.0)	159 (33.1)
Disagree	32 (16.0)	20 (14.3)	21 (15.0)	73 (15.3)
Strongly Disagree	14 (7.0)	8 (5.7)	55 (39.3)	77 (16.0)
LEA Lack Technical Training to Control Females Involved in Cybercrime				
Strongly Agree	52 (26.0)	99 (70.7)	21 (15.0)	172 (35.8)
Agree	100 (50.0)	35 (25.0)	45 (32.1)	180 (37.5)
Disagree	33 (16.5)	6 (4.3)	30 (21.4)	69 (14.4)
Strongly Disagree	15 (7.5)	0 (0.0)	44 (31.4)	59 (12.3)
Inadequate Legislation on Cybercrime Obstruct Effective Control				
Strongly Agree	55 (27.5)	98 (70.0)	17 (12.1)	170 (35.4)
Agree	99 (49.5)	29 (20.7)	45 (32.1)	173 (36.0)
Disagree	37 (18.5)	4 (2.9)	17 (12.1)	58 (12.1)
Strongly Disagree	9 (4.5)	9 (6.4)	61 (43.6)	79 (16.5)
Anonymity				
Strongly Agree	49 (24.5)	103 (73.5)	22 (15.7)	174 (36.3)
Agree	114 (57.0)	25 (17.9)	41 (29.3)	180 (37.5)
Disagree	28 (14.0)	4 (2.9)	20 (14.3)	52 (10.8)
Strongly Disagree	9 (4.5)	8 (5.7)	57 (40.7)	74 (15.4)
Godfatherism Obstruct Control of Female Involvement in Cybercrime				
Strongly Agree	59 (29.5)	102 (72.9)	22 (15.7)	183 (38.1)
Agree	103 (51.5)	23 (16.4)	54 (38.6)	180 (37.5)
Disagree	27 (13.5)	7 (5.0)	13 (9.3)	47 (9.8)
Strongly Disagree	11 (5.5)	8 (5.7)	51 (36.4)	70 (14.6)
EFCC Control Female Involved in Cybercrime than Police				
Strongly Agree	61 (30.5)	88 (62.9)	14 (10.0)	163 (34.0)
Agree	96 (48.0)	18 (12.9)	44 (31.4)	158 (32.9)
Disagree	34 (17.0)	24 (17.1)	26 (18.6)	84 (17.5)
Strongly Disagree	9 (4.5)	10 (7.1)	56 (40.0)	75 (15.6)
Government is Doing Enough to Control Cybercrime				
Strongly Agree	73 (36.5)	14 (10.0)	15 (10.7)	102 (21.2)
Agree	82 (41.0)	17 (12.1)	46 (32.9)	145 (30.2)
Disagree	30 (15.0)	77 (55.0)	22 (15.7)	129 (26.9)
Strongly Disagree	15 (7.5)	32 (22.9)	57 (40.7)	104 (21.7)

Source: Field Research Survey, 2024

Table 4 above illustrated the perception of respondents as regard law enforcement agencies in controlling female involvement in cybercrime among undergraduate students in Ekiti State. As regard if law enforcement agencies control females who engaged in cybercrime, it was shown

that 68.5% respondents agreed in both strong and mid-terms that law enforcement agencies control females involving in cybercrime, but 31.5% respondents claimed otherwise. The implication of this finding is that a large distribution (68.5%) of respondents confirmed that law enforcement control females who involved in cybercrime. The Table (4) present data on whether law enforcement usually ignores female who are involved in cybercrime. The data shows that only EKSU with 71.5% attested that law enforcement agencies usually ignores female involved in cybercrime, while FUOYE and BOUESTI with 67.1% and 55.0% respectively said otherwise. However, more than half (52.5%) of the total respondents confirmed that law enforcement agencies ignores female who engaged in cybercrime, as against 47.5% respondents that affirmed they do not ignore. This finding contradict the report that law enforcement agencies control females who are involved in cybercrime. With respect to whether law enforcement agencies are not aware of female involvement in cybercrime was explained in the Table (4). It shows that EKSU agreed with 75% in both strong and mid-terms that law enforcement agencies are not aware of females who engaged in cybercrime, but FUOYE with 82% and BOUESTI with about 61% disagreed in both terms that law enforcement agencies are not aware of females that engaged in cybercrime. Nonetheless, what this implies is that more than half (52%) of the total sampled population confirmed that law enforcement agencies are aware of females that are involved in cybercrime in the State. Whether law enforcement agencies usually apprehend female who engaged in cybercrime was presented, and it shows that both EKSU (77%) and FUOYE (80%) confirmed that law enforcement agencies do apprehend, while BOUESTI (54%) said otherwise. Based on this, about 69% from the total respondents agreed in both terms that law enforcement agencies do apprehend female that are involved in cybercrime, while 31% respondents disagree in both terms. What this implies is that a large percentage (69%) of respondents attested that law enforcement agencies usually apprehend female that engaged in cybercrime. Furthermore, the Table (4) presented data on if law enforcement agencies lack technical training in controlling female involvement in cybercrime. The data reported that EKSU with 76% and FUOYE with 96% claimed they lack technical training, while only BOUESTI with 53% affirmed that they have the technical training in controlling female engaging in cybercrime. Nonetheless, almost three-quarter (73%) from the total sampled population attested that law enforcement agencies lack technical training to combat female who engaged in cybercrime.

Table 4 further illustrates if inadequate legislation on cybercrime obstruct the effective control of female perpetrators. As a results, it shows that both EKSU and FUOYE with 77.0% and 90.7% respectively agreed that inadequate legislation obstruct its effectiveness, while 55.7% disagreed. The total sampled shows that 71.4% respondents agreed in both terms that inadequate legislation obstructs its effectiveness. As a result, the implication of this report is that an overwhelming distribution (71.4%) confirmed that inadequate legislation can pose a barrier to effectively control female perpetrator of cybercrime. In addition, the Table (4) present data on if anonymity hinders the effectiveness of law enforcement agencies in controlling female who perpetrated

cybercrime. It shows that in EKSU, 81.5% agreed in both terms, as against 18.5% that disagreed in both terms, and in FOUYE, 91.4% respondents agreed, while 8.6 respondents disagreed. For BOUESTI, 45.0% agreed in both terms while 55.0% disagreed. This shows that only BOUESTI disagreed that anonymity prevent law enforcement from being effective. However, from the total population, 73.8% agreed in both terms, while 26.2% disagreed in both terms. What this implies is that an overwhelming proportion of respondents affirmed that anonymity prevent law enforcement agencies from being effective in controlling female perpetrators of cybercrime in the State. Whether Godfatherism obstruct law enforcement agencies in controlling cybercrime perpetrated by female was presented in Table 4. It therefore shows that all three institution attesting that Godfatherism obstruct the control of cybercrime perpetrated by female. The implication here is that three-quarter (75.6%) of respondents from the three selected institutions confirmed that Godfatherism obstruct the effectiveness of law enforcement agencies in controlling cybercrime perpetrated by female in the State. Also, whether EFCC (Economic and Financial Crime Commission) control female perpetrated cybercrime more than police was illustrated in Table 4. It shows that both EKSU (78.5%) and FOUYE (75.8%) agreed that EFCC control more than the police, while 58.6% respondents from BOUESTI disagreed that EFCC control more than the police. In total, 66.9% respondents claimed that EFCC controls female involvement in cybercrime than the police, while 33.1% respondents said otherwise. Therefore, the implication of this results is that a large percentage (66.9%) of respondents affirmed that EFCC controls female involvement in cybercrime more than police. Lastly on the Table (4), whether Government are doing enough to curb cybercrime was explained. It shows that 77.5% respondents from EKSU agreed in both terms, while 77.9% respondents from FOUYE and 56.4% respondents from BOUESTI disagreed in both terms that Government is doing enough to control the menace. The total respondents shows that 51.4% agreed that Government is doing enough, while 48.6% disagreed. As a results, more than half of the total population attested that Government is doing enough to control the menace perpetrated by female students in the State.

Discussions

Several studies have shown that crime rates vary significantly across various age bracket, and age group is a reliable predictors of criminal behavior as averred by Thompson (2023). The study revealed data on the age of respondents across the three selected institutions which showed that a large proportion (62.1%) of respondents were between 20-25 years, which can be attributed to the age bracket expected to be in higher institution. This corroborate the findings of Ogadinma et al (2020) that about 65% age group involved in criminality are between 18-27 years in Nigeria. This report supported the point made by Ulmer and Steffensmeier (2024) that the proportion of population involved in crime tends to peak in adolescence and decline as they aged. According to the view of Thompson (2023), studies have consistently shows that crime rates and patterns differs between male and female. The study revealed the gender disparity of respondents which

shows that more male with 54.8% took active part in the study. In Nigeria, it was reported that men are more likely to be involved in crime than women, but female involvement in crime cannot be ignored. This is because criminality in Nigeria, and the globe is no longer perceived as a male phenomenon. Currently, male accounted for 97.8% inmates while female are up to 2.2% inmates of the total prison inmates in Nigeria (Okoh, 2024). Revealing from the study is that 48.5% respondents confirmed that they are Yoruba ethnic group, and this is attributed to the fact that the study area is predominantly Yoruba speaking area. Also revealing from the study is the religious affiliation which shows that majority with 35.8% respondents confirmed that they are Pentecostal worshipper

The study revealed that an overwhelming distribution (83.1%) of respondents affirmed that they have the knowledge of cybercrime. The awareness of cybercrime in Nigeria differs depending on the prevalence in each State. However, several studies have shown that it is generally increasing especially among young adults (Nzeakor et al 2024 and Sani et al. 2024). Also, the study revealed that 65% respondents in EKSU claimed they have not heard of female involvement in cybercrime, but 56.4% and 65.7% respondents in FUYOYE and BOUESTI respectively attested that they have heard of females who were involved in cybercrime. This report shows that female that are involved in cybercrime are not prevalent in EKSU but rampant at FUYOYE and BOUESTI. This report corroborates the assertion of Nzeakor et al (2024) that cybercrime awareness differs especially in the case of female involvement in different regions in Nigeria, as it is partial or strong in some places. Therefore revealing that 50.2% respondents from the total sampled population claimed that they have heard of female involvement in cybercrime, with a slight difference of 49.8% who attested otherwise. Revelation from the study also shows that more than two-quarter (35%) affirmed that people often hear of female involvement in cybercrime on a yearly basis, and this can be attributed to the fact that female who perpetrated cybercrime is not pronounced in Ekiti State, and in Nigeria or probably do not live a life of splendor unlike the males. Furthermore, the study revealed that 62.5% respondents confirmed that they have not seen or know any female that are involved in cybercrime. This corroborated the earlier result which stated that cases of female cybercrime are reported on a yearly basis. It is a general belief that female are the most victimized person when it comes to cybercrime. However, there is a growing concern about female engagement in cybercrime perpetration including online scam, identity theft, pornography and among others (Bhate, 2023). Nevertheless, the involvement of female in cybercrime cannot be ignored as male were not the only perpetrators, but several factors contributed to female involvement which include; poverty, peer pressure, access to technology, and lack of law enforcement agencies control (Ishola et al, 2024). Finding from the study revealed that a large distribution (63.3%) of respondents believed females that are involved in cybercrime is not prevalent among students, however, they existed among students in Ekiti State. In contrary to this report, females who are involved in cybercrime are roughly the same as the male, but are the most gender who have experienced or suffer victims of cybercrime, as 30% perpetrators of cybercrime were female (Mwiraria, et al. 2024). Findings from the study

revealed that majority of the respondents affirmed that there is no likelihood of females involvement in cybercrime is prevalent (OR=0.796, 95% CI=0.487-1.299), with a significant p-value (0.00).

The study showed data on the perception of respondents as regard law enforcement agencies if they are effective in controlling female involvement in cybercrime among undergraduate students in Ekiti State. Finding from the study revealed that a large distribution (68.5%) of respondents confirmed that law enforcement control females who are involved in cybercrime. Law enforcement agencies investigate female who are involved in cybercrime for a number of reasons such as abuse, socio-economic factors, social media, criminal community, and financial motivation. This is essential in curbing cybercrime as gender bias can obstruct law enforcement investigation. Law enforcement agencies can only improve their ability to control crimes in general by including women and jettison the idea that male are the major players of crime (Asyraf et al. 2015). The study shows that only EKSU with 71.5% attested that law enforcement agencies usually ignores female involvement in cybercrime, while FUOYE and BOUESTI with 67.1% and 55.0% respectively said otherwise. Therefore revealing that more than half (52.5%) of the total respondents confirmed that law enforcement agencies ignores female who engaged in cybercrime, as against 47.5% respondents that affirmed they do not ignore. According to the United Nations Office on Drugs and Crime (2019), several law enforcement agencies are male and were not trained to be gender sensitive in detecting, investigating, or prosecute females who engaged in cybercrime. This finding contradict the report that law enforcement agencies control females who are involved in cybercrime. However, finding has shown that gender bias is obvious which has crippled investigation. Controlling cybercrime is like trying to think like the threat actor, because if one thinks cybercrime is to be a male crime, it may bring with it unhelpful assumptions about the way they think an act that could frustrate investigation (Muncaster, 2023). Also revealing from the study that EKSU agreed with 75% in both strong and mid-terms that law enforcement agencies are not aware of females who engaged in cybercrime, but FUOYE with 82% and BOUESTI with about 61% disagreed in both terms that law enforcement agencies are not aware of females that engaged in cybercrime. Nonetheless, it shows that more than half (52%) confirmed that law enforcement agencies are aware of females that involved in cybercrime in the State. It is argued that law enforcement agencies are aware that female involved in crimes and they are working on addressing the issues. However, this does not include cybercrime detection and investigation as envisaged by UNODC (2019). Alhadidi et al. (2024) stressed further that gender bias is a factor that encourage the continuous perpetration of cybercrime. Furthermore, the study revealed that both EKSU (77%) AND FUOYE (80%) confirmed that law enforcement agencies do apprehend, while BOUESTI (54%) settled otherwise. As a result, revealing that a large percentage (69%) of respondents attested that law enforcement agencies usually apprehend female that engaged in cybercrime. This finding is in contradiction of the assertion of Vaia (2025), that law enforcement agencies arrest female who

commits crimes but not like the cybercrime. This is because gender is a just a factor that influence if someone commits a crime, and there are several female who do not commits crimes.

Law enforcement agencies do face several task in controlling cybercrime both in Nigeria and the globe at large, and these include; lack of resources (lack of trained personnel and logistic support), technical constraint (challenges in accessing information and risk of data loss), and complexity of digital evidence (anonymity of perpetrators and diverse location of perpetrator) as opined by European Union Agency for Law Enforcement Cooperation (2022). In Nigeria particularly, Ismail (2020) and Tijani (2023), stressed that law enforcement faced significant barriers in curbing cybercrime practice due to inadequate technology, limited training in cybercrime investigation, insufficient legal framework, and transnational nature of cybercrime, making it difficult to track internet fraudsters across borders. Revealing from the study shows that EKSU with 76% and FUOYE with 96% claimed they lack technical training, while only BOUESTI with 53% affirmed they have the technical training in controlling female engaging in cybercrime. It revealed that three-quarter (73%) attested that law enforcement agencies lack technical training to combat female who engaged in cybercrime. This supported the view of Vinay (2024) that insufficient awareness and training hinders the effectiveness of law enforcement agencies in controlling cybercrime especially among female. Cyber policing or investigation is said to be low in Nigeria, as law enforcement in Nigeria uses traditional methods to investigate cybercrime cases. Nonetheless, cybercrime detection, seizure of cyber evidence, investigation and prosecution are skilled intensive exercise (Ismail, 2020). Finding from the study shows that both EKSU and FUOYE with 77.0% and 90.7% respectively agreed that inadequate legislation obstruct its effectiveness, while 55.7% disagreed. Therefore, revealing that an overwhelming distribution (71.4%) confirmed that inadequate legislation can pose a barrier to effectively control female perpetrator of cybercrime. This can be attributed to the legal complexities in implementing cybercrime law. This is due to the ambiguities and limitation in the legislation, which makes it difficult to successfully prosecute cyber fraudsters (Atoyabi, 2024). In the context of cybercrime, preventive legislation like the Cybercrime Act (2015) seek to either prevent cybercrime menace at the very least or mitigate the damage (UNODC, 2019). In addition, the study revealed that in EKSU (81.5%) and FUOYE (91.4%) agreed in both terms. While, BOUESTI (55.0%) disagreed. However, the finding shows that an overwhelming proportion (73.8%) of respondents affirmed that anonymity prevent law enforcement agencies from being effective in controlling female perpetrators of cybercrime in the State. This finding support the study of Atoyabi (2024) that cybercriminal adopted various strategies in masking their IP addresses, using Virtual Private Network (VPN), and applying sophisticated encryption technologies to dodge and make detection difficult for law enforcement to track. Also revealing from the study is that three-quarter (75.6%) of respondents from the three selected institutions confirmed that Godfatherism obstruct the effectiveness of law enforcement agencies in controlling cybercrime perpetrated by female in the State. Finding from the study also revealed that both EKSU (78.5%) and FUOYE (75.8%) agreed that EFCC control more than the police,

while 58.6% respondents from BOUESTI disagreed that EFCC control more than the police. In total, the study revealed that a large percentage (66.9%) of respondents affirmed that EFCC control female involved cybercrime more than police. This result support the report of Oluwasanmi, et al. (2018) that 64% respondents affirmed that EFCC curb cybercrime more than the Police. This can be attributed to the fact that cybercrime falls under the purview of the EFCC, and not the Nigeria Police. The study revealed that EKSU (77.5%) agreed in both terms, while FUOYE (77.9%) and BOUESTI (56.4%) disagreed in both terms that Government is doing enough to control the menace. The study therefore revealed that more than half of the total population attested that Government is doing enough to control the menace perpetrated by female in the State. The study of Oluwasanmi et al (2018) also affirmed this study as 61.4% believed that government are not doing enough in controlling cybercrime.

Conclusion and Recommendations

The study revealed the challenges of curbing cybercrime in general which include female involvement in cybercrime. Apart from the challenges the law enforcement face in detecting, investigating, arresting, prosecuting and even convicting females that are involved in cybercrime, the assumption of perceiving cybercrime as male crime has encouraged gender bias investigation of female perpetration of cybercrime. Based on this, the study concluded that there is gender bias in investigating female involvement in cybercrime and other crimes. As a results of this, the study therefore recommends that law enforcement agencies should avoid the bias or assumption that male alone are involved in cybercrime while conducting investigation

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