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RESEARCH ARTICLE

FACTORS ASSOCIATED WITH CYBERBULLYING AND SOCIOECONOMIC IMPLICATIONS FOR CENTRAL SENATORIAL DISTRICT, KEBBI STATE

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ABSTRACT

Cyberbullying is a growing global social menace, characterized by the use of electronic communication to harass and threaten individuals, it is a trend increasingly common in Nigeria. This research specifically investigated the socio-economic implications of cyberbullying on citizens in the Kebbi Central Senatorial District. The study employed a survey descriptive research design, guided by the Space Transition Theory (STT). From a population of 255,000 across seven local government areas (LGAs), the researcher purposively selected three LGAs. Using a multi-stage sampling method that included simple random and purposive techniques, 1,600 structured questionnaires were distributed, with 1,500 validated for analysis. The research instrument, the 'Cyberbullying Attitude Questionnaire' (CAQ), was expert-validated and demonstrated a high reliability coefficient of .81 using Cronbach's Alpha. Data was analyzed using Excel and SPSS software. The findings identified severe socio-economic implications for victims, including economic loss, emotional trauma, and psychological and physiological threats. Based on these results, the study recommended several key actions: establishing community internet safety teams to monitor online activities, creating comprehensive bullying prevention policies that educate on rules and acceptable technology use, and founding a dedicated Cyberbullying Control and Prevention Center (CCPC) within the Kebbi Central Senatorial District to combat this issue effectively.

Keywords: Cybercrime, cyberspace, cyberbullying, socio-economic, Kebbi central senatorial district

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INTRODUCTION

Cyber-bullying begun since the inception of computers and the internet in 1950's. It was commercially exploited in the late 1980's. Internet has revolutionized the way in which we see the world. Also, many of the routine, mundane works have been made simple by the advancement of the Internet. Especially, e-commerce has changed the patterns of marketing and sales behaviour and the banking sector enabled its growth. In addition, emergence of social media has brought people together and it has cut the boundaries and jurisdictions. The internet has positively impacted our economic and social endeavors until recently, when unscrupulous persons started using it for criminal purposes. Notably, the founding fathers of the Internet did not envisage that it would become a medium of criminality or that it would create new forms of crime such as cyber-bullying. Although the Internet is an international space, it is governed by national laws (Jaishankar, 2011a).

Due to the affordable of personal computers and networks, traditional bullying was integrated to cyberspace in the 1990s. As the technology developed, bullying spread with the existence of the Internet, chat rooms soon appeared. Nowadays, everyone can unscrupulously conduct cyber-bullying due to the web's cryptonym provides a perfect protection for web users. States started to pass anti-bullying laws after a shooting incident happened at the Columbine School, US in 1999. A part from these laws that criminalized cyber-bullying, many laws do not Jaishankar (2018).

The cases of cyber-bullying are gradually spreading on a daily basis, like wildfire, especially in US and European countries. There is reported case of Jessica, who was 18 years of old committed suicide after her nude photo was shared by her boyfriend with other students in at least seven Ohio high schools, United States (US). Jasica then was being cyber-bullied by a stranger through social media "Myspace", by sending a bullied text message to other social space. There is also a nearly similar case that happened a year later in another higher school in Florida, where a 13-year-old girl killed herself after her nude photos were shared by her boyfriend to different people from almost six high schools in Florida. In 2010, a boy named Tyler Clementi committed suicide by jumping down from George Washington Bridges. The reason why Tyler jumped off the bridge is there is a video shared on Twitter, which captured by Tyler's roommate about portraying Tyler kissing a guy. The Federal Cyber-bullying Act was passed in 2012 named against Tyler's act (Australian Human Rights Commission, 2014).

In early 2010, another cyber-bullying case happened in Canada. Amanda Todd, committed suicide a month after she uploaded a video on YouTube entitled My Story: Struggling, bullying, suicide, self-harm. In that video, she talked about how she was persuaded by a trespasser to show her breasts on camera. The stranger kept the picture and used it on a fake account as her name. Canada started enacting legislation for national anti-bullying legislation, a week later she died (Arts and Humanities Research Council, 2014).

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In Africa, especially South African schools, have recently received media attention, and several media reports on this topic have consequently appeared (Rooi Rose, 2011). Studies on violence in the workplace and bullying in South Africa are limited (De Wet, 2011:66). Bullying in general leads to feelings of "incompetence, alienation, and depression" (Le Roux & Orleyn, 2010:51) in schools, it has been shown that cyberbullying may result in "low self-esteem, family problems, academic problems, school violence, delinquent behaviour and suicidal thoughts" (Goodno, 2011:645).

In the United States of America, several teenagers have committed suicide due to cyberbullying which led the legislature in various states to seek a uniform definition of cyberbullying, to investigate the prevalence and frequency of cyberbullying in schools. Prevalence rates differ due to numerous factors, such as "sample characteristics, the definitions used", and whether traditional bullying is also measured, (Kowalski & Lattanner, 2014:1108).

In Nigeria, bullying behaviour has moved from physical face to face confrontation in the school yard to a more psychologically damaging experience. According to Ada et al. (2016) this kind of bullying is a great monster in the Nigeria tertiary institutions, as it takes place indirectly via electronic media. George and Odgers (2015), noted that the use of swear words (indicating rage of seriousness), insults, jokes, mobility and fake names are techniques commonly used by cyber-bullies. In Nigerian as contemporary, cyber bullying can take many forms which includes; sending mean messages or threat to a person's email account or cell phone, spreading rumours online through texts, posting hurtful or threatening messages on social networking sites or web pages, stealing a person's account information to break into their account and send damaging messages, pretending to be someone else online to hurt another person, taking unflattering pictures of a person and spreading them through cell phones or the internet (George & Odgers, 2015).

Another significant point addressed in the emergence of cyberbullying is the gender differences in the perpetration of the act. For instance, Barlett et al. (2014b), reported that female students practice cyber bullying mostly by disclosing the secrets which they have been told, gossiping about individuals in the virtual environment, attacking the personality or sexual identity of the individual or labelling people as unreliable. Keith and Martins (2005) reported that females engage in a type of cyber bullying which is more of relational than the males. The reason for this may be culture and gender role expectations. For instance, in Nigeria, girls are not expected to have an open confrontation with people. They are brought up under close supervision, and are taught to be more self-conscious and more emphatic; unlike boys who behave in an aggressive manner to gain popularity among their peers. One can easily suggest that the supremacy of masculinity in Nigerian culture may require more overt aggression in order to attain greater social acceptance and higher self-esteem among young males.

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The internet has become a place where individual of all category discretely post inappropriate comments to one another. Cyber-bullying includes negative text messages or emails, rumors sent by email or posted on social networking sites, and embarrassing pictures, videos, websites, or fake profiles among others (Irabor & Monday, 2021). The pattern of cyber-bullying includes; harassment, threat, humiliation, financial request, death threat or a credible threat of serious bodily harm among others, usually inflicted on others through the use of computers, cell phones, and other technological or electronic devices that has a lot of emotional implications on teens academic life in particular and social relations in general (PACER's National Bullying Prevention Center, 2013). Nigeria youths are part of the numerous users of the cyberspace, whose engagement in cyber-bullying has become worrisome.

It is an undeniable fact that electronic-based communication has transformed our lives tremendously, but unfortunately, there is a dark side to this technological advancement. Cyberspace has become a potential site for violence, victimization and oppression (Faye, 2011). Cyber-bullies' carryout aggressive behaviour to a person without any prior provocation with the intention of causing harm. It also denotes that the harm is done repeatedly over time and there is a disparity in strength and power between the victims and cyber-bullying perpetrators. The detrimental implication of cyber-bullying has recently developed new trends that could affect the socio-economic development of any sovereign State. Cyber-bullies have always enjoyed embarrassing people and fooling around with them (Alanah & Madeline, 2016).

It is not known exactly when cyber-bullying started but the strategies of cyber-bullies have expanded greatly in correlation with the fast growth of Information and Communication Technology, Computer Science, Engineering and Applied Science. However, an empirical study was made by (Nasir et.al., 2023), titled "cybercrime and its implication in Central Senatorial, Kebbi State, Nigeria" the study inferred that, there is proliferation of cybercrimes and cyber-bullies among others. The study also revealed that, tertiary institutions were more prone to perpetrations of cybercrime.

The study added by mentioning the following institution with reports of cybercrime perpetrations thus, Waziri Umaru Federal Polytechnics, Federal University Birnin Kebbi, College of Health Science Jega, College of Nursing Birnin Kebbi and Abdullahi Fodiyo University of Science and Technology Aliero among others. Therefore, this study was designed to bridge the gap by checkmating the factors associated with cyber-bullying and socioeconomic implications for Central Senatorial District, Kebbi State, Nigeria, in which the above listed institution found within the scope of this study. The two major questions that are raised to guide this study are: (i) what are the factors or causes of cyber-bullying? (ii) What is the socio-economic implication of cyber-bullying?

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Objectives of the Study

The following are the research objectives

i. To identify the factors or causes of cyberbullying in Kebbi Central Senatorial Districts
ii. To examine the factor associated with socioeconomic implication of cyber-bullying in Kebbi Central Senatorial District

Hypothesis

The above questions were transcribed in to the following hypothesis

1. There is no significant relationship between the factors or causes of cyber-bullying based on location (LGAs), age, and gender.

2. There is no significant relationship between socio-economic and implications of cyber-bullying based on location, age and gender

LITERATURE REVIEW

Concept of Cyber-bullying

The concept of has been defined by many authors. According to Jaffer and Ataullahjan (2013) Cyber-bullying involves the use of electronic devices such as computers and cell phones to intimidate, embarrass, threaten or harass a person or group. Sometimes inappropriate and hurtful comments are posted on Internet sites, embarrassing photos or videos are emailed, or harassing texts are sent by cellphone" The anonymity permitted by certain forms of online social interaction gives the bullies a false impression that they can say anything they wish, no matter how hurtful, with little consequence for themselves or for the person they might have harmed. One of the consequences is cyber bullying, a situation whereby youths bully one another via electronic devices; and is currently being observed among students in schools including Nigeria (Ayas & Horzum, 2010; Olumide & Amodu, 2015). Cyber bullying was defined as a form of aggression that involves the use of information and communication technologies such as mobile phones, video cameras, email, and web pages to post or send harassing or embarrassing messages to another person (Olumide & Amodu, 2015).

Bergman and Baier (2018) sees cyber bullying as a type of psychological bullying by means of such electronic devices as mobile phones, blogs, websites and chat rooms. Although cyber-bullying is a relatively new concept and the definition is still evolving, most researchers agree that cyber-bullying is the use of electronic communication technologies to bully others (Kowalski & et al. 2014). It is recognised as a growing problem in many developed and developing countries like Nigeria (Fareo, 2015; Olumide, & Amodu, 2015, Odora & Matoti, 2015). Cyber-bullying was specified in legal dictionary as "activity that uses information and communication technologies to support deliberate, continuous, and aggressive conduct by an individual or a group of people that is intended

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harm someone, physically or emotionally (Chandrashekhar et al., 2016). Marcum et al., (2017) "cyber-bullying is intentional, aggressive behaviour that is performed through electronic means (i.e. computers, cell phones, PDAs)". Hinduja and Patchin (2014, p.2) posits that "it is the willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices".

Having reviewed the above concepts of cyber-bullying from various perspectives therefore, this study defines cyber-bullying as the use of technological and electronics devices to harass, threaten, humiliate, embarrass and cause harm to one another be it intentionally or unintentionally.

Causes of Cyber Bullying

A lot of factors have been associated with cyber-bullying, such as age, gender, educational level, duration of time spent online, proficiency of ICT uses and family characteristics. As regards to perpetrators, studies (Okoiye & Thompson, 2015; Akpan & Notar, 2016) pointed out various reasons such as: seeking revenge as the most perpetrators who engage in cyber bullying and many cyber bullies were themselves victims of bullying and/or cyber-bullying at some point. Some perpetrators cyber-bullied others as a joke. It is easier to engage in cyber bullying online because the fear of getting caught is lower than in traditional bullying. Research consistently identifies several individual characteristics that contribute to cyber-bullying perpetration, highlighting the interplay of personality traits, cognitive processes, and past experiences.

Personality factors such as low empathy, moral disengagement, and narcissistic tendencies have been linked to increased cyber-bullying behaviors. Longitudinal research demonstrating that adolescents with conduct problems and prior aggressive behaviors are at greater risk of engaging in cyber-bullying, reinforcing the notion that offline aggression often extends into digital spaces (Gámez-Guadix, et al., 2013). Beyond personality traits, cognitive and emotional mechanisms play a crucial role in cyber-bullying perpetration. The online disinhibition effect, originally conceptualized by Suler and further expanded by (Wachs et al., 2019) offers a theoretical framework to explain how the absence of face-to-face cues, perceived anonymity, and reduced accountability in online interactions lower behavioral constraints. This effect may encourage individuals to express aggression, hostility, or cruelty in ways they would not typically exhibit in offline settings.

Relatedly, the concept of moral disengagement explains how individuals justify harmful behaviors by minimizing personal responsibility or dehumanizing victims, making it easier to rationalize cyber-bullying actions (Van Cleemput, 2014; as cited in Lu L., 2025). Another critical factor in understanding cyber-bullying perpetration is the victim-to-perpetrator cycle, where individuals who have experienced victimization engage in aggressive behaviors as a maladaptive coping mechanism or form of retaliation. There is a strong relationship between

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prior victimization and subsequent cyber-bullying perpetration, emphasizing how exposure to online harassment may normalize aggressive responses (Kowalski et al., 2014). This cycle is particularly evident in adolescent populations, where repeated victimization can lead to heightened frustration, anger, and a desire to regain control or assert dominance in digital environments. In addition to these factors, 9recent studies highlight the role of emotional regulation difficulties and impulsivity in cyber-bullying perpetration. Individuals with poor impulse control and heightened emotional reactivity may struggle to regulate their online interactions, making them more prone to impulsive acts of cyber aggression (Desmet et al., 2018).

Theoretical Anchorage

Space Transition Theory (**STT**) was proposed and coined by Indian Criminologist Subrahmanyam Jaishankar in 2008. Jaishankar explains why individuals commit crimes in cyberspace that they would not in the physical world. The major proposition of the theory include: (i) Repressed Behavior in Physical Space**:** People with repressed criminal urges in the physical world may act on them in cyberspace; (ii) Anonymity & Lack of Deterrence**;** Identity flexibility and dissociative anonymity in cyberspace encourage offending; (iii)Behavior Import/Export**:** Criminal behavior can be imported into cyberspace and exported back to physical space; (iv) Dynamic Spatiotemporal Nature**:** The structure of cyberspace helps offenders escape detection; (v) New Criminal Alliances**:** Strangers can unite online to commit physical crimes, and physical associates can unite to commit cybercrimes; (vi) Closed Society Effect: Individuals from closed societies are more prone to commit cybercrimes (vii) Norm Conflicts**:** Conflicts between the values of physical space and cyberspace can lead to crime.

The major critiques of the Theory are: (i) empirical testability; some propositions are difficult to test empirically; (ii) variable applicability: the theory's explanatory power varies by crime type; it is more applicable to cyber-trespass, cyber-deception, and cyber-pornography than to cyber-violence and (ii) theoretical limitations; It was developed partly because traditional criminological theories were found inadequate to fully explain cybercrimes

Application of the theory with current research, a wide range of criminological theories has been used in the explanation of crime in the cyberspace, albeit with some limitations. Jaishankar's space transition theory of cybercrime is best match with this research. Because the research intended to explain factors associated with socioeconomic implication of cyber-bullying in Central, Senatorial District, Kebbi State, Nigeria. The theory intended to unveil the transition agent that tends to promote traditional crimes or physical crimes to cyber-bullying or cybercrimes. Jaishankar stated from the outset that his theory is intended to explain not only online crimes but also the relationship between traditional crimes and space-

crimes. Over a decade after its development, the theory has shown some promise in the explanation of criminal behavior in the cyberspace. However, more empirical studies are needed to be able to further test the efficacy of the theory in the explanation of cyber bullying or cybercrime.

METHODOLOGY

Design of the Study

The study design of this paper is descriptive survey approach. This design was considered appropriate for this study since the variables had already occurred and did not require the manipulation of such by the researchers. The instrument used for the study was a researcher developed questionnaire entitled "Cyberbullying Attitude Questionnaire" (**CAQ**), which contained four (4) dependent variables i.e. financial loss, psychological effects, physiological effects and emotional/mental health effects. Each variable consisted 5 items which were drawn from Likert 5-point rating scale i.e. Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD).

Validation of the instrument was carried out by an expert in the department of criminology and security studies. To ascertain the reliability of the instrument, the researchers carried out a trial test using thirty students who were drawn from the population of the study but were not part of the study but who were found to be equivalent in all respects to the sample of the study. The scores obtained from students' responses were subjected to Cronbach's Alpha statistical method of analysis and the result yielded a reliability coefficient of .81. The instruments were sorted based on variables and scores of 5, 4, 3, 2, and 1 were assigned to SA, A, N, D and SD respectively for all positively worded items and 1, 2, 3 4, and 5 were assigned to SA, N, A, D and SD respectively for all negatively worded items.

Population of the Study

The target population consisted of 255,000 individuals from seven (7) local government areas of Central Senatorial District, Kebbi State, (i.e. Birnin Kebbi, Kalgo, Aliero, Jega, Gwandu, Maiyama and Koko/besse) who have an age range between 12 years and above.

Sample Size and Sampling Procedure

One thousand six hundred questionnaires (1,600) were designed and distributed to 1, 600 participants. Only 1,500 questionnaires were valid and return. The researcher purposively selected three (3) local government areas out seven (7) i.e. (Birnin Kebbi, Kalgo and Aliero). A sample of five 500 individuals were randomly selected from each local government which bring the total of valid participants to 1,500 (100%). The participants were randomly selected from the following; tertiary institution Students, lecturers, teachers, security experts, public members, law enforcements and traditional rulers.

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PRESENTATION OF RESULTS AND DISCUSSION

Hypothesis Ho_1

Table 1: ANOVA Model of Factors/ Causes of Cyber-bullying based on Location

LGAs	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Birnin Kebbi	723	1.0871	.32765	.01219	1.0632	1.1111	1.00	4.00	
Kalgo	447	1.4273	.70136	.03317	1.3621	1.4925	1.00	4.00	
Aliero	330	1.1758	.38908	.02142	1.1336	1.2179	1.00	3.00	
Total	1500	1.2080	.50290	.01298	1.1825	1.2335	1.00	4.00	
Model			.48125	.01243	1.1836	1.2324			
Fixed Effects				.11240	.7244	1.6916			.03377
Random Effects									

ANOVA

Between Groups	32.401	2	16.200	69.950	.000
Within Groups	346.703	1497	.232		
Total	379.104	1499			

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
213.552	2	1497	.000

Statistics * Significant at $P < .05$ alpha level; N = 1500.

Table 1 shows that Kalgo local government has the highest mean score of 1.42, followed by Aliero local government with 1.20, and the least among them is Birnin Kebbi local government with 1.08, respectively. The table also, shows that the Kalgo LGA has the highest standard deviation of .70, followed by Aliero with .38 and Birnin Kebbi with .32, respectively. The Std. Error results revealed that Kalgo LGA has the highest Std. Error of .03, Aliero .02, and Birnin Kebbi .01.

The total variance between the components is .03. indicated the calculated Sig. is .000, which is equal to the critical Sig. of .000 at the 0.05 alpha level with 2 and 1497 degrees of freedom. Therefore, the null hypothesis, which stated that there is no significant relationship between factors/causes of cyberbullying in Kebbi Central Senatorial District based on location (LGAs) is rejected, and the alternative hypothesis is retained. This implies that, there is a significant relationship between factors/causes of cyberbullying in Kebbi Central Senatorial District based on location (LGAs). The sum of all squares is 32.40, and the F ratio is 69.950. The Test of Homogeneity of Variances was conducted using Levene's statistics with 213.552 points.

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Table 2: ANOVA Model of Factors/causes of Cyber-bullying Based on Age

Descriptive Mean Report

Age Groups	Mean	N	Std. Deviation	Std. Error of Mean	Variance
14-25	1.2538	997	.43538	.01379	.190
26-35	1.5221	249	.50052	.03172	.251
36-45	1.2874	87	.45515	.04880	.207
46-55	1.1000	20	.30779	.06882	.095
56-65	1.2619	84	.44231	.04826	.196
above 65	1.2540	63	.43878	.05528	.193
Total	1.2987	1500	.45783	.01182	**.210**

ANOVA

Age		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	15.480	5	3.096	15.484	.000
	Linearity	.083	1	.083	.413	.521
	Deviation from Linearity	15.397	4	3.849	19.252	.000
Within Groups		298.718	1494	.200		
Total		314.197	1499			

* Significant at *P* < .05 alpha level; N = 1500.

Table 2 revealed the number of respondents for each age group and means according to the groups. The results indicated that 26-35 (1.52), 36-45 (1.28), 56-65 (1.26), above 65 (1.25), 14-25 (1.25), and 46-55 (1.10), respectively. It is obvious that 14-25 (997) has the highest number of respondents, followed by 26-35 (249), 36-45 (87), 46-55 (20), 56-65 (82), and above 65 (63). The results also revealed the standard deviation of the groups, which indicated that 26-35 have (.50052), 36-45 (.45515), 56-65 (.44231), above 65 (.43878), 14-25 (.43538), and 46-55 (.30779), respectively. The Table also revealed the analysis of variance of age between the groups. The mean squares of age between the groups (combined) is 3.09, the degree of freedom is 5, and F is 15.484, while the Sig. is .000, which is less than 0.05 alpha, and the assumption is retained.

It is also being observed that the age between groups in linearity has a mean square of .083, a degree of freedom of 1, an F ratio of .413, and a Sig. of .521. The Sig. of .521 is > 0.05 alphas, which indicated the total rejection of the alternative hypothesis. It is obvious that the deviation from linearity has a mean square of 3.84, the F ratio is 19.25, and Sig is .000, which is less than 0.05 alpha. Therefore, the significant relation between the factors/causes of cyberbullying in Kebbi Central Senatorial District based on age groups is retained.

Table 3 revealed the results obtained from an independent samples test show that the mean score of 1.79 of female participants was higher than the mean score of 1.74 of male participants. The table also, reveals that the calculated t of .003, which is less than the critical t of .530 at the 0.05 alpha level of significance with 1498 degrees of freedom when equal variances are assumed.

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Table 3: Independent T-test Model of the factor of cyber-bullying based on gender

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	8.679	.003	-.628	1498	.530	-.04873	.07765	-.20105	.10358
Equal variances not assumed			-.656	936.832	.512	-.04873	.07424	-.19444	.09697

Group Statistics

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	1052	1.7414	1.41948	.04376
Female	448	1.7902	1.26939	.05997

* Significant at $P < .05$ alpha level; N = 1,500.

The result is not significant due to the fact that the significant tailed 2 is greater than the Sig. 0.05 Alpha. Therefore, the null hypothesis, which stated that there is no significant relationship between factors/causes of cyberbullying based on gender, is retained. The alternate hypothesis is rejected. This simply means that there is a significant relationship between the factors/causes of cyberbullying based on gender. The value of F is 8.67, and the standard deviation of 1.41 for males is greater than that of the female participants, which has 1.79 values, while the standard error. The mean of the female is .05, which is greater than the male standard error of .04.

Hypothesis Ho_2

Table 4 shows that Kalgo local government has the highest mean score of 2.15, followed by Aliero local government with 1.83, and the least among them is Birnin Kebbi local government with 1.46, respectively. The results also show that the Kalgo LGA has the highest Std. Deviation of 1.63, while Aliero has 1.37 and Birnin Kebbi has 1.10, respectively. The Std. Error results revealed that Aliero LGA has the highest Std. Error of .077, followed by Kalgo at .076 and Birnin Kebbi at .040. The total variance between the components is .02. indicated the calculated Sig. is .000, which is equal to the critical Sig. of .000 at the 0.05 alpha level with 2 and 1497 degrees of freedom.

Therefore, the null hypothesis, which stated that there is no significant relationship between factor associated with socioeconomic implication of cyberbullying Central Senatorial District, Kebbi State based on location, is rejected, and the alternative hypothesis is retained.

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The sum of all squares is 135.945, and the F ratio is 37.649. The Test of Homogeneity of Variances was conducted using Levene's statistics with 38.374 points.

Table 4: ANOVA Model of the Socioeconomic Implication of Cyberbullying based on locations

LGAs	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Birnin Kebbi	728	1.4698	1.10354	.04090	1.3895	1.5501	1.00	6.00	
Kalgo	459	2.1590	1.63970	.07653	2.0086	2.3094	1.00	6.00	
Aliero	313	1.8307	1.37051	.07747	1.6782	1.9831	1.00	6.00	
Total	1500	1.7560	1.37613	.03553	1.6863	1.8257	1.00	6.00	
Model			.48125	.01243	1.1836	1.2324			
Fixed Effects				.11240	.7244	1.6916			.02377
Random Effects									
					ANOVA				
Between Groups	32.401	2	16.200	69.950	.000				
Within Groups	346.703	1497	.232						
Total	379.104	1499							
Test of Homogeneity of Variances									
Levene Statistic	df1	df2	Sig.						
213.552	2	1497	.000						

Statistics * Significant at $P < .05$ alpha level; N = 1500.

Table 5 **r**eveals the number of respondents for each age group and means according to the groups. The results indicated that 26-35 (1.52), 36-45 (1.28), 56-65 (1.26), above 65 (1.25), 14-25 (1.25), and 46-55 (1.10), respectively. It is obvious that 14-25 (997) has the highest number of respondents, followed by 26-35 (249), 36-45 (87), 46-55 (20), 56-65 (82), and above 65 (63). The results also revealed the standard deviation of the groups, which indicated that 26-35 have (.50052), 36-45 (.45515), 56-65 (.44231), above 65 (.43878), and 14-25 (.43538). 46-55 (.30779), respectively. revealed the analysis of variance of age between the groups. The mean squares of age between the groups (combined) is 3.09, the degree of freedom is 5, and F is 15.484, while the Sig. is .000, which is less than 0.05 alpha, and the assumption is retained.

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Table 5: ANOVA Model of the Socioeconomic Implication of Cyberbullying Based on Age.

Descriptive Mean Report

Age Groups	Mean	N	Std. Deviation	Std. Error of Mean	Variance
14-25	1.2538	997	.43538	.01379	.190
26-35	1.5221	249	.50052	.03172	.251
36-45	1.2874	87	.45515	.04880	.207
46-55	1.1000	20	.30779	.06882	.095
56-65	1.2619	84	.44231	.04826	.196
above 65	1.2540	63	.43878	.05528	.193
Total	1.2987	1500	.45783	.01182	.210

ANOVA

Age		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	15.480	5	3.096	15.484	.000
	Linearity	.083	1	.083	.413	.521
	Deviation from Linearity	15.397	4	3.849	19.252	.000
Within Groups		298.718	1494	.200		
Total		314.197	1499			

* Significant at $P < .05$ alpha level; N = 1500.

It is also being observed that the age between groups in linearity has a mean square of .083, a degree of freedom of 1, an F ratio of .413, and a Sig. of .521. The Sig. of .521 is greater than 0.05 alphas, which indicated the total rejection of the alternative hypothesis. It is obvious that the deviation from linearity has a mean square of 3.84, the F ratio is 19.25, and Sig is .000, which is less than 0.05 alpha. Therefore, the significant relation between the socio-economic status of citizens of the Kebbi Central Senatorial District and cyberbullying based on age groups is retained.

In table 6, the results obtained from an independent samples test show that the mean score of 1.85 of female participants was higher than the mean score of 1.71 of male participants. The table also, reveals that the calculated t of .68, which is less than the critical t of .081 at the 0.05 alpha level of significance with 1498 degrees of freedom when equal variances are assumed.

The result is not significant due to the fact that the significant tailed 2 is greater than the Sig. 0.81 > 0.05 Alpha. Therefore, the null hypothesis, which stated that there is no significant relationship between the socio-economic status of citizens and cyberbullying based on gender, is retained the alternate hypothesis is rejected. The value of the F ratio is 3.341, and the standard deviation of 1.39 for males is greater than that of the female participants, which

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has a value of 1.31, while the standard error The mean of the female is .05, which is greater than the male Std. Error of .04.

Table 6: Results of independent samples t-test of the factors associated with socioeconomic implication of cyberbullying Central Senatorial District, Kebbi State based on gender.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	3.341	.068	-1.747	1498	.081	-.13623	.07799	-.28921	.01674
Equal variances not assumed			-1.791	867.448	.074	-.13623	.07607	-.28554	.01307

Group Statistics

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	1060	1.7160	1.39861	.04296
Female	440	1.8523	1.31696	.06278

* Significant at $P < .05$ alpha level; N = 1500.

Discussion

Location is Significant: The findings indicated that there is very strong, statistically significant relationship was found between local government area and both the *factors causing cyberbullying* and its *socio-economic implications*. Kalgo LGA consistently had the highest mean scores and variability. The Null Hypothesis Rejected: Therefore, there is a significant relationship between the causes of cyberbullying and socio-economic implications of cyberbullying based on location.

Age is Significant: A significant relationship was found between age groups and both the *factors of cyberbullying* and its *socio-economic impact*. The 26-35 age group had the highest mean score. While the relationship is significant, it is not a simple linear one. Null Hypothesis Rejected: There is a significant relationship based on age.

Gender is Not Significant: The analysis found no statistically significant difference between males and females regarding the *factors causing cyberbullying* or its *socio-economic implications*. Although female mean scores were slightly higher, the difference was not large enough to be considered significant. Null Hypothesis Retained: There is no significant relationship based on gender.

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CONCLUSION AND RECOMMENDATIONS

Conclusion

From the findings of the study it is concluded that there is an existential threat of cyberbullying in the region and the perpetrators of this menace are within the age range of twelve years and above. The finding also indicated that there is no significant difference in participation of cyberbullying among the gender. It is obvious that cyberbullying is prone to more civilised communities than hamlet areas. The finding revealed that, the major implications of cyberbullying are; financial lost (i.e. expenditure made by victims to recover and budget made by government and non-governmental to protect their facilities), Physiological threats (i.e. isolation), Psychological threats (i.e. provocation and annoyance) and emotional threats (i.e. discomfort to emotional feelings) among others.

Recommendation

This research has suggested the following recommendations:

i. Establishment of cyberbullying or cybercrime report centres in all Nigerian institutions, as such that it would be easier to lodge complain of any act or omission carried out by cybercriminals
ii. Adequate laws and enforcement of such laws should be implemented and violators of such laws should not go unpunished
iii. Government should create bullying prevention policies that includes; awareness and sensitization
iv. Provision of policy that will compel all public members including students, teachers and parents to sign an undertaking to report any cases of cyberbullying or cybercrime.
v. Government should setup a special team that includes Professionals, Expert in ICT, Encrypted Software's and Applications that can be used by government entity to monitor and control the occurrences of cyberbullying or cybercrimes
vi. Computer and mobile phone usage policies should be enforced consistently.
vii. Encourage students to participate in programs that teach cyber-crimes and internet responsibilities.

Competing Interest

The authors have declared that no conflicting interest exist in this manuscript.

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