

Empirical Assessment of Cyberbullying, Associated Factors and Behaviours among Internet Users in Abuja, Nigeria

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Abstract

Cyberbullying has become a critical social issue, which severely threatens children and adolescents' physical and psychological health. In this context, this study aimed to assess cyberbullying, associated factors and behaviours among internet users in Abuja, Nigeria. The study adopted a descriptive survey design approach which did not allow for the manipulation of the study variables, and stratified random sampling technique was used to select two hundred and fifty (250) participants consisting of 116 males (46.4%) and 134 females (53.6%), with age range of 20 -30, and a mean age of 25 and standard deviation (SD) of 10.36. A multiple regression analysis was used as the statistical tool to analyse the data. The results revealed that loneliness [$\beta = .208$, $t = 3.174$; $p < .01$], and social support [$\beta = -.409$, $t = -5.398$; $p < .001$] were significantly and independently predicted cyberbullying-behaviour; while emotional intelligence [$\beta = -.553$, $t = -7.643$; $p > .001$] is insignificant of cyberbullying-behaviour. On the joint prediction, the result revealed a significant combined prediction of (emotional intelligence, loneliness and social support) [$R = .832$ and $R^2 = .692$, $F(3, 102) = 8.237$; $p < .001$] of cyberbullying-behaviour among internet users. Also, result explicate no significant gender ($t(248) = .742$; $p > .05$) differences on cyberbullying-behaviour. Lastly, result shows that user's age ($F(2, 247) = 3.669$; $p < .05$) significantly influence cyberbullying-behaviour. Therefore, the study concluded that with exclusion of emotional intelligence, loneliness and social support statistically and significantly are predictors of cyberbullying-behaviour among internet users in Nigeria. The study recommended that family, friends, schools, and government to raise awareness about cyberbullying-behaviour and strengthening emotional intelligence, and provide social support to perpetrators, victims and witnesses so that the incident does not continue and immediately end.

Keywords: Cyberbullying Behaviour, Associated Factors, Internet Users, Abuja, Nigeria.

Introduction

Cyberbullying is an emerging societal issue that has drawn scholarly attention particularly the industrial and organisational psychology. This issue has also exposed children and adolescents to cyberbullying behaviours, which threaten the mental and physical health of children and adolescents, with victims experiencing harmful consequences such as psychosomatic symptoms (Patchin & Hinduja, 2006), anti-social behaviours (Olweus, 1995), and suicidal behaviours (Patchin & Hinduja, 2010; Kowalski & Limber, 2013). Recent report have it that 23,420 children and young people across Europe found that, although

the vast majority were never cyberbullied, 5% were being cyberbullied more than once a week, 4% once or twice a month and 10% less often (Coyne & Downey, 1991).

Emphasizing the forms cyberbullying could take, Ortega et al., (2009) explained that diverse forms of cyberbullying prompts different forms of emotional response, perhaps, being bullied online may induce a different emotional disturbance than being bullied via a cell phone. National Crime Prevention Council (2011) noted that cyberbullying-behaviour takes a number of forms, to include: sending rumours online or 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 and sexing or circulating sexually suggestive pictures or messages about a person (Livingstone et al., 2011; Wright, 2016; Almeida et al., 2020).

However, cyberbullying behaviour is regarded as aggressive, intentional act perpetrated by a group or individual, using electronics form of contact, repeatedly and over time against a victim who is indefensible (Smith et al., 2008; Srinandhini & Sheeba, 2015). It is also defined as "being cruel to others by sending or posting harmful material or engaging in other forms of social aggression using the internet or other digital technologies" (Willard, 2007). To the authors, cyberbullying is a form of bullying that occurs on media platforms, which can be through the use of instant messaging, online chat forums, texts, videos, and which threaten, or to harass another person, where such communication places another person in fear of death, violence or bodily harm or to another person. To this end, findings have shown that cyberbullying-behaviour causes emotional and physiological damage to defenceless victims (Akbulut & Eristi, 2011; Rodhin, 2011), as well as psychosocial difficulties including behaviour problems (Ybarra & Mitchell, 2007), drinking alcohol (Selkie et al., 2015; Abreu & Kenney, 2018), smoking (Lereya et al., 2013; Kurtyilmaz, 2011) and low commitment to academics (Hempill et al., 2012; Ybarra et al., 2022; Estévez et al., 2020). Studies have demonstrated that cyberbullying behaviour is linked with an increased risk for suicidal ideation and other negative behaviours such as depression, loneliness, low self-esteem, school phobias and social anxiety (Greene, 2003; Juvonen et al., 2021; Akcil, 2018). Given the above, emotional intelligence (EI) is one of the associated factors considered in this current study to play a crucial role in cyberbullying-behaviour. Emotional intelligence is the ability to express, perceive, understand and manage emotions (Salovey & Mayer, 1990). Mayer et al., (2008) sees emotional intelligence as the ability to accurately perceive, appraise, and express emotion; to access and generate feelings when they facilitate thought; to understand emotions and emotional knowledge; and to regulate emotions and promote emotional and intellectual growth. Meanwhile, emotional intelligence has shown growing evidence indicating its potential role as a buffer against negative effects of cyberbullying (Extremiera et al., 2018). Furthermore, it was revealed that adolescents with emotional intelligence are in the position of regulating and handling their emotions and others' negative emotions, and this leads to the improvement of their life, that is, happiness

and psychological wellbeing, and thus preventing them from leading a maladjusted psychological life (Rey et al., 2018). According to study, individuals with higher levels of emotional intelligence are less likely to be exposed to cyberbullying by peers and are likely to experience more positive social behaviours (Elpe et al., 2015). On the other hand, those who are victims of cyberbullying have a low level of emotional intelligence and victims of cybercrime victimization. Also, recent research on emotional intelligence using adolescent participants, Estévez et al., 2020; Gomez-Baya et al., 2017; Martins et al., 2010 have found that individuals high in EI are more likely to deal appropriately with negative events than their lower-EI peers who have higher ability to attend emotions and at the same time they have a lower ability to understand or regulate their emotions (Gianesini & Brighi, 2015).

Aside emotional intelligence, loneliness is also another associated factor to cyberbullying behaviour. There is a general consensus among researchers that loneliness is a subjective experience that varies across different people, is experienced under varying conditions, and has a multitude of causes and consequences (Aanes et al., 2010; Rokach, 2004; Segrin & Passalacqua, 2010). In this context, loneliness has been defined as an aversive psychological state that is experienced when there is a perceived discrepancy between the level of interpersonal relationships a person has and the level of interpersonal relationships that the person desires to have (Perlman & Peplau, 1981). Some authors have reported that when social quality declines, the original network of relationships (loss or loss of loved ones, relocation) or lack of social skills (personality factors) could lead to strong loneliness (Teunisse et al., 1999; Van et al., 2017). Hence, loneliness is a subjective feeling of unpleasant suffering caused by social defects (Liu, 1995), and long-term or severe loneliness may trigger certain behavioural disorders (Naama et al., 2019; Kurtyılmaz, 2011). Heiman et al., (2015) reported that those who are exposed to cyberbullying experienced greater feelings of emotional loneliness and a lower belief in their social self-efficacy. Nevertheless, individuals especially students who have close relationship with their parents are less likely to be a victim of cyberbullying (Accordino & Accordino, 2022)

Lastly, social support is also one of the protective factors for cyberbullying behaviour. It can be understood as the degree to which one's social needs (such as love, respect, and esteem) can be met from interpersonal relationships (Vaux et al., 1986). High social support reflects supportive relationships that making one felt cared for, involved, loved and respected; while low social support signifies absence of supportive relationships or even the presence of negative relationships (Coyne & Downey, 1991; Smith et al., 2004). This notion is confirmed by empirical studies which have revealed that lower social support is associated with both offence history (Egan & Bull, 2020), and emotional as well as cognitive components of aggression (Shen et al., 2019). A longitudinal study further reveals that lower level of social support can predict all forms of aggressive behaviours (Wright, 2019). Nevertheless, students who have close relationship with their parents are less likely to be cybervictims (Accordino & Accordino, 2022). In view of this emerging issue, hence, the study aimed to empirically assess cyberbullying, its associated factors and behaviours amongst internet users in Abuja, Nigeria

Statement of the Problem

The contribution of internet to the development of the nation has been marred by cybercrime activities; one of these is cyberbullying-behaviour. This has also become one of the most common social issues worldwide (Görzig & Frumkin, 2013). In the United States, approximately 30% of middle school students reported having experienced cyberbullying (Patchin & Hinduja, 2010). The National Children's Home of United Kingdom (NCH, 2005) found that 20% of the children aged between 7 and 11 years in the United Kingdom have been cyberbullied. Besides, Lwin et al. (2012) examined online harassment among 537 teenagers in Singapore and found that 51% of the respondents claimed to have been cyberbullied. Furthermore, the large number of cyberbullying incidents, coupled with the high severity of the incidents, have threatened the mental and physical health of children and adolescents, with victims experiencing harmful consequences such as psychosomatic symptoms (Kowalski et al., 2008; Patchin et al., 2006), anti-social behaviours (Low & Espelage, 2013), and suicidal behaviours (Hinduja et al., 2010).

In the light of the relevance of study, extant research has examined the prevalence and risk factors of cyberbullying-behaviour. However, due to variations in cyberbullying measurement and methodologies, no consistent conclusions have been drawn. Similarly, in Nigeria context, not much has been done to document the psychosocial factors of cyberbullying among Nigerian populations in spite of the fact they are vulnerable to internet misuse. Given this, some study results showed that over 50% of internet users particularly students were aware of incidents of cyberbullying within their cycles. Also, a range of 48%-57% undergraduates have been bullied through the various cyber media and 28.6%-40% have bullied others through these devices within couple of months (Accordino & Accordino, 2022). From the knowledge of the authors, there is dearth of empirical data in this area of study in Nigeria. As a result, this study aims to empirically examine cyberbullying, associated factors and behaviours among internet users in Abuja, Nigeria.

Objectives of the Study

The study seeks to empirically assess cyberbullying, associated factors and behaviours among internet users in Abuja, Nigeria. Specifically, the study objectives are:

1. To evaluate the significant joint and independent prediction of emotional intelligence, loneliness, social support, and cyberbullying-behaviour amongst internet users in Abuja, Nigeria.
2. To assess the gender difference on cyberbullying-behaviour amongst internet users in Abuja, Nigeria.
3. To examine the influence of age difference on cyberbullying-behaviour amongst internet users in Abuja, Nigeria.

Hypotheses

1. Emotional intelligence, loneliness, social support will jointly and independently predict cyberbullying-behaviour amongst internet users in Abuja, Nigeria.

2. There will be a significant gender difference on cyberbullying-behaviour amongst internet users in Abuja, Nigeria.
3. There will be significant influence of age difference on cyberbullying-behaviour amongst internet users in Abuja, Nigeria.

Significance of the Study

1. This study, which is primarily aimed at explaining an assessment of cyberbullying-behaviour and its associated factors among internet users in Abuja, Nigeria, will provide an insight into the predictions of emotional intelligence, loneliness, social support, and cyberbullying-behaviour
2. Also, the study would be of great benefit in the explanation of relationship between demographic factors and cyberbullying-behaviour.
3. Furthermore, this research finding would provide a unique contribution to the field of industrial and organisational psychology, as currently there are only a handful of studies which have investigated cyberbullying-behaviour and its associated factors.
4. It would be useful to the government and related stakeholders to enable them adequately understand factors responsible for and how to curb the continue spread of cyberbullying among Nigerians.
5. Lastly, the findings will be useful for researchers to further generate knowledge in this area of endeavour.

Literature Review

This section provides overview of key study variables, and their empirical relationships.

Emotional Intelligence and Cyberbullying Behaviour

Salovey & Mayer (1990) sees emotional intelligence as a kind of intelligence that involves emotions and excitement and consists of four components of emotional perception; using emotions to facilitate thought, understanding emotions and managing emotions associated with self and others. Bar-On (2005), sees it as non-cognitive abilities which includes components of interpersonal skills (self-awareness, courage, self-esteem, self-actualization, independence), interpersonal skills (interpersonal relationships, social commitment, empathy), adjustment (reality testing, problem solving, flexibility), stress management (ability to withstand stress, impulse control), general mood (happiness and optimism).

Study has linked emotional intelligence to cybercrime behaviour. For instance, people with higher levels of emotional intelligence are less likely to be exposed to cyberbullying by peers and are likely to experience more positive social behaviours (Elipé et al., 2015). On the other hand, those who are victims of cyberbullying have a higher ability to attend emotions and at the same time they have a lower ability to understand or regulate their emotions (Elipé et al. 2015). Additionally, it was revealed that adolescents with emotional intelligence are in the position of regulating and handling their emotions and others' negative emotions,

and this leads to the improvement of their life, that is, happiness and psychological wellbeing, and thus preventing them from living a maladjusted psychological life (Rey et al., 2018). Similarly, Chen et al., (2016) report that emotional management is negatively correlated with cyberbullying behaviour, meaning that a person tends to be a victim and perpetrator of cyberbullying. Lee & Shin (2017) found that the empathy variable cognitively refers to a person's ability to understand and process the emotions of others cognitively. This contributes to reducing the likelihood of cyberbullying. Hemphill et al., (2014) report that emotional control is a protective factor for victims of cyberbullying. This means that having the skills to control emotions in cyberspace may be very important considering the speed of information that can be given is the ability not to reply with anger, fear or sadness when bullied so that it can control one's emotions and reduce reinforcement in the perpetrators.

Victims of online attacks and crime can suffer emotional trauma which can lead to depression. There is also some evidence of limited symptoms of Acute Stress Disorder (ASD) in victims of crime in online virtual worlds, such as some anecdotal accounts of intrusive memories, emotional numbing and upset from victims of virtual sexual assault (Lynn, 2007). As an example, the impact of identity theft on a victim at an emotional level can lead the person becoming distressed and be left feeling violated, betrayed, vulnerable, angry and powerless (Kirwan & Power, 2011). Often, victimization can lead victims to feelings of outrage, anxiety, a preference for security over liberty, and little interest of adopting new technology due to loss of confidence in cyber. The victim can go into stages of grief, suffer from anger or rage. In some cases, victims may even blame themselves and develop a sense of shame; extortion is a good example of this given how it initially starts (Nurse, 2018).

Social Support and Cyberbullying Behaviour

Social support refers to the cognitive/functional qualitative aspects of human relationships, such as the content and availability of relationships with significant others, whereas social network refers to the quantitative and structural aspects of these relationships (Taylor, 2011; Cutrona & Russel, 1987). While online social support refers to individuals searching and exchanging information through the internet to gain the understanding, respect and support of others. It has greatly improved the shortcomings of real social support that is easily restricted by time and space, and is concealed and extensive, the information is more diverse. When the social support received in reality is high, the social support received in the network will also increase (Jing & Li, 2012; Wang, 2012). Online social support can be divided into four dimensions from the perspective of content (Liang & Wei, 2008): Information support refers to the promotion of problem solving by giving information (Leavy, 1983); Emotional support refers to support that gives encouragement, warmth, intimacy or a sense of belonging, including care, trust, and empathy (Tolsdorf, 1976; Leavy, 1983); Companion support refers to individuals engaged in certain activities with others, through this social process to meet needs, reduce stress, and promote development (Cohen

& Wills, 1985); Instrumental support refers to the provision of services or materials to help others solve practical problems (Jacobson, 1986).

Extensive studies on smartphone addiction have recently identified some psychosocial vulnerabilities in addicted users that might be related to a higher propensity to be victimized by cybercrime. Longitudinal (Herrero et al., 2019; Lapierre & Zhao, 2021) and correlational research findings (Al-Kandari, & Al-Sejari, 2020; Ranney & Troop-Gordon, 2020) have suggested that smartphone-addicted users may have problems with social relationships in their daily lives (e.g., poor social support) compared to non-addicted users. While both smartphone addiction and social support have been linked primarily to subjective well-being and health, their relationship to cybercrime victimization has also been found in different studies (Martínez-Ferrer et al., 2021; Oksanen, & Keipi, 2013; Xing, et al., 2020). It is therefore likely that the tendency of addicted users to show poor social support or social isolation (Busch & McCarthy, 2020; Elhai, et al., 2017) could increase their potential to be bullied by cybercriminals (Alhaboby, et al., 2019; Buchanan & Whitty 2014). Another empirical evidence that social connectedness problems, such as low social support, could be an antecedent of crime victimization (Spano & Nagy, 2005; Yap & Devilly, 2004), probably because isolated people might be seen by offenders as easy targets (Alves & Wilson, 2008; Matthews et al., 2020) and be more at risk of fraud victimization (Xing et al., 2020). When transferred to the study of cyberfraud, however, social isolation is unlikely to be a visible characteristic of potential victims.

Loneliness and Cyberbullying Behaviour

Loneliness is a subjective experience of distress occurring when one's social relationships are perceived to be less than desired (Hawkley & Cacioppo, 2010). Although loneliness may be related to both the quantity and quality of relationships with others, research suggests that lonely people often feel misunderstood and that their relationships lack meaning (Lim et al., 2016). Weiss (1973) conceptualized loneliness as resulting from unmet needs for attachment, social isolation, nurturance, a reassurance of worth, a sense of reliable alliance, and guidance in stressful situations. His model (more recently expanded upon by others) differentiated between emotional, relational, and collective dimensions of loneliness. Emotional or intimate loneliness refers to the perceived lack of a significant other or others to depend on for emotional support (Dunbar, 2014; Weiss, 1973). Relational loneliness refers to the perceived absence of family or friend connections on whom to count for instrumental support e.g., advice, assistance with projects, and loans (Buys & Larson, 1979; Dunbar, 2014). Finally, collective loneliness refers to one's lack of sense of inclusion in a network of others with common interests or values e.g., clubs, hobbies, recreational pursuits (Granovetter, 1973; Hawkley et al., 2005). Study by Brighi et al., (2012) reported men and women feeling high loneliness with friends and friends. This means that loneliness is an internal representation of social acceptance and rejection expressed by individuals. Meanwhile, Kowalski et al., (2014) reported that perpetrators and victims had a positive relationship to cyberbullying behavior, meaning that the higher the level of loneliness

would involve teenagers being perpetrators and victims of cyberbullying. Furthermore, Heiman et al., (2015) reported that those who are exposed to cyberbullying experienced greater feelings of emotional loneliness and a lower belief in their social self-efficacy. Also, students who have close relationship with their parents are less likely to be cyber victims (Accordino & Accordino, 2019).

Demographic Factors and Cyberbullying Behaviour

Individual factors and cybercrimes abound in literature. On this account, gender research differences in cyberbullying present inconsistent findings (Tokunaga, 2010). Also, reports of cyberbullying slightly varied among men and women, with women overall reporting slightly greater levels of having ever experienced cyberbullying than men. Similarly, other opinions reported that there were no gender differences (male and female) among perpetrators of cyberbullying. However, it was differently reported by (Hemphill et al., 2014; Kowalski et al, 2014; Guo, 2016; Chen et al., 2016) that boys tend to be perpetrators, but girls are more vulnerable to becoming victims and involved in cyberbullying. While, Brighi et al., (2012) report boys are more likely to be victims of direct bullying, whereas in girls more likely to be victims of indirect bullying or cyberbullying. Lee & Shin (2017) also reported that there are no gender differences in the form of cyberbullying behavior, namely that boys use chat services, online games, and more photos or videos than girls. Likewise, girls tend to use exclusion strategies more than boys, for example isolating planned victims from online groups of friends or chatting, which is one of the most common types of cyber oppression among girls. Specifically, boys (16.1%) experienced more oppression on online gaming platforms than girls (3.3%), while girls (9.3%) became more victims by being rejected by friendship. Adams (2010) found adolescent girls are more likely to have experienced cyberbullying than boys: 25.8% versus 16%, respectively. Girls are more likely to spread rumors while boys are more likely to post hurtful pictures or videos. Girls are more likely to become victims of cyberbullying, whereas boys are more inclined to engage in electronic bullying. Other studies found no significant gender differences for cyberbullying among both college students and adolescents when personal experiences with the internet were controlled (Hinduja & Patchin, 2008).

Regarding age, cross-ages are the speed of several experts in predicting cyberbullying behavior such as Chen & Lwin (2016); and Guo (2016) they report that early adolescents or adults tend to be perpetrators rather than victims. They speculate, that it makes sense that adults are better able to manage online behavior and protect themselves when using technology compared to children. Kowalski et al, (2014) reported age groups in junior high school students (seventh and eighth grade) and high school students (grades nine and ten) when students reach peak age or maximum shows that teenagers tend to be victims of cyberbullying. Lee and Shin (2017) reported that the 10th grade students had the highest level of cyber actors (7.4%) and in the 11th grade had the highest rate of casualties (18.2%), while students who played the role of both (actors and victims) were found at most in class 8.

The results of a meta-analysis also suggest that there may be higher rates of bully-victims with an increasing age (Zych et al., 2017). Furthermore, specific behaviours appear to be more frequent at different ages. For example, physical bullying rates are the most affected by age, and it is often replaced by more indirect or subtle forms as adolescents grow older (Lereya, 2015), while other studies have found no difference for age between physical, verbal, and relational victimization (Jimenez, 2019). The contexts in which cyberbullying takes place can also vary, with preadolescents mainly using chat rooms, and 13–14-year-olds mainly using instant messaging, social media or sharing platforms (Jiménez, 2019).

Methodology

Design

The study adopted a descriptive cross-sectional survey design utilizing a convenient sampling method. The descriptive survey was cross-sectional, that is, information was elicited from the respondents at a single point in time, with the respondents having different socio-demographic characteristics. The study independent variables are: loneliness, social support, and emotional intelligence, while, cyberbullying-behaviour is the dependent variable.

Setting

This study was conducted in Federal Capital Territory (FCT), Abuja. This setting was most suitable for this type of study simply because it is the Federal Capital of the country, Nigeria. More importantly, ICT infrastructure abounds of which dwellers are endowed with multiple smartphones and who may have cyberbullying experience.

Participants, Sample and Sampling Technique

The participants were randomly selected purposively during questionnaire administration. A total of two hundred and forty-seven (247) participants were randomly selected among the population of internet users across various computer centres in FCT, Abuja, Nigeria. A multistage sampling technique was adopted to select the Fifteen (15) major computer centres that were chosen for the study. The age range was between 23 and 30 years old. 52.4% of the respondents were between 20-23 years of age, 35.6% were between 24-27 years of age, and 12.0 % of the respondents were between 28-30 years. Regarding gender: 116 (46.4%) were males, and 134(53.6%) were females.

Sampling Procedure

The sampling technique employed was purposive sampling technique which involves the selection of participants in such a way that follow the purpose of the study strictly by considering only the adult internet users who might have been bullied in the course of using internet.

Instruments

A structured questionnaire which consists of 5 sections was used for data collection.

Section A tapped the demographic information such as age, gender, academic qualifications, marital status, and religion.

Section B was Loneliness Scale, developed by Russell et al. (1978) was used to measure the loneliness levels of the participants. The UCLA Loneliness Scale consists of 20 items. The scale is in the form of a 4-point Likert (1 = never to 4 = often). The lowest score that can be obtained from the scale is 20, and the highest score is 80. The higher the score obtained from the scale means the level of loneliness is higher. Some of the sample items in the scale are as follows: "I feel in harmony with the people around me", "I feel like a part of a group of friends", "I am no longer intimate with anyone". Within the scope of the research, the reliability of the scale was reassessed and it was found to be high (Cronbach's $\alpha=.87$).

Section C was the emotional intelligence scale developed by Schutte & Malouff (1999). The measures used in this study consist of 33 items. Samples are: I know when to speak about my problem to others; I am aware of my emotions as I experience them (appraisal and expression of emotion); I present myself in a way that makes a good impression on others; and I have control over my emotions (regulation of emotion); when I feel a change in emotions, I tend to come up with new ideas, and I use good moods to help myself keep trying in the face of obstacles (utilization). The measure was assessed on a five-point scale (ranging from 1 = strongly disagree to 5 = strongly agree. The Cronbach's alpha value for this scale was 0.90; for the present study, the researcher reported Cronbach reliability coefficient of 0.89.

With respect to **section D**, the Cyber Victimization Experiences scale developed by (Betts and Spenser, 2017), was used to measure cyberbullying. This scale comprises 15-items across three subscales: threats (6 items), sharing images (5 items), and personal attack (4 items). Participants responded to the items using a six-point scale ranging from 1 (Never) to 6 (Everyday) the extent to which they had experienced the behaviour described in the item over the last three months. High scores indicated great cyber victimization experiences. The coefficient of internal consistency of the total scale was found to be 0.85. The test-retest reliability value was 0.75.

Section E was the Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet et al., 1988. It is a 7-point Likert- Type Scale. It consisted of 12 items comprising three factors, namely family (Fam), friends (Fri) and significant other (SO). The scale ranged from very strongly disagree (1), to very strongly agree (7). Internal Reliability Estimates were: 0.90 for family factor, 0.89 for friends, 0.83 for significant other, and 0.92 for total scale.

Procedure

In the various computer centres, the researchers introduced themselves to the potential participants and explained the purpose and objective of the study. Thereafter, the issue of informed consent was conscientiously and clearly observed by collecting information from

the participants who willingly indicate interest to participate in the study. In the process of briefing the participants, there was an assurance of ethical standard and confidentiality. The purpose of the study was explained to the participants and informed consent was sought. Only participants who consented were given a questionnaire to complete. Similarly, the participants were requested not to indicate their identifying information on the questionnaire which guarantees anonymity and confidentiality. In all the computer centres, the participants took between 10-15 minutes to fill the questionnaire, as the research assistants were of good assistance in this exercise.

Data Analysis

Both descriptive and inferential statistics were used in the analysis of the data collected. The descriptive statistics presents the frequencies, percentages, mean, and standard deviation. For inferential statistics, multiple regression, analysis of variance (ANOVA), and independent sample t-test were used to test the three (3) formulated hypotheses.

Results

Table 1: Showing the frequency distribution of the demographic characteristics

Variables	Category	Frequency	Percentages
Age	20-23 years	131	52.4
	24-27 years	89	35.6
	28-30 years	30	12.0
	Total	250	100.0
Gender	Male	116	46.4
	Female	134	53.6
	Total	250	100.0
Marital status	Single	210	84.0
	Married	37	14.8
	Divorce	3	1.2
	Total	250	100.0
Ethnic group	Hausa	103	41.2
	Yoruba	75	30.0
	Igbo	17	6.8
	Others	55	22.0
	Total	250	100.0

Source: Authors' Fieldwork (2023)

Hypothesis Testing

Hypothesis 1

This hypothesis stated that there will be a significant positive joint and independent effect of emotional intelligence, loneliness, social support, on cyberbullying among internet users

in Abuja, Nigeria. This hypothesis was tested using multiple correlations and the result is presented in table 2.

Table 2: Summary of multiple regression analysis showing joint and independent prediction of emotional intelligence, loneliness, and social support on cybercrime behaviour

DV	Predictor(s)	β	t	p	R	R ²	F	df	p
Cyberbullying behaviour		-	-						
	El	.553	7.643	<.001					
	Loneliness	.208	3.174	<.01	.832	.692	8.237	3, 102	<.001
		-	-						
	Social support	.409	5.398	<.001					

Source: Authors' Field Work (2023)

The result of multiple regression shows that independently, emotional intelligence [$\beta = -.553$, $t = -7.643$; $p > .001$] did not predict cyberbullying. While, loneliness [$\beta = .208$, $t = 3.174$; $p < .01$] and social support [$\beta = -.409$, $t = -5.398$; $p < .001$] significantly and independently predicted cyberbullying among internet users. On the joint prediction, the three predictor variables (emotional intelligence, loneliness and social support) combined to predict cyberbullying [$R = .832$ and $R^2 = .692$, $F(3, 102) = 8.237$; $p < .001$]. Further, observation of coefficient of determination [$R^2 = .692$] shows that the three predictor variables (emotional intelligence, loneliness, and social support) accounted for 69.2% of the total variance observed in cyberbullying-behaviour among internet users. Based on this result, the hypothesis was therefore accepted.

Hypothesis Two

This hypothesis stated that, there will be a significant and positive gender difference on cyberbullying among internet users in Abuja, Nigeria. This hypothesis was tested using independent t-test and the result is presented in table 3.

Table 3: Summary of independent sample t-test showing Gender difference on Cyberbullying-behaviour among internet users in Abuja, Nigeria

DV	Groups	N	Mean	SD	SE	t	df	P
Cyberbullying-behaviour	Male	116	49.84	7.96	1.39			
						.742	248	$p > .05$
	Female	134	49.11	7.30	1.65			

Source: Authors' Field Work (2023)

The result of independent t-test reveals no statistically significant difference in the mean scores of males and females scores on cyberbullying-behaviour among internet users in Abuja, Nigeria [$t(248) = .742; p > .05$]. Observation of mean difference shows that, male users (Mean = 49.84; SD = 7.96) significantly scored higher on cyberbullying compared to their female counterparts (Mean = 49.11; SD = 7.30). Based on this result, hypothesis two which stated that 'there will be significant and positive gender difference on cyberbullying among internet users in Abuja, Nigeria' was therefore rejected.

Hypothesis Three

This hypothesis stated that, age difference will significantly and positively influence cyberbullying among internet users in Abuja, Nigeria. This hypothesis was tested using one way analysis of variance and the result is presented in table 4.

Table 4: Summary of One-way Analysis of Variance Showing the Influence of Age on cyberbullying- behaviour

Source of Variation	Sum of Squares	df	Mean Square	F	Sig
Between Groups	235.638	2	117.819	3.669	.015
Within Groups	11703.395	100	117.034		
Total	12991.529	103			

Source: Authors' Field Work (2023)

Result in table 4 shows that, there was a significant age influence on cyberbullying among selected internet users in Abuja, Nigeria ($F(2, 247) = 3.669; p < .05$). Based on this result, hypothesis three which stated that 'users' age will significantly and positively influence cyberbullying among selected internet users' in Abuja, Nigeria' was therefore accepted.

Discussion

The study aims to empirically assess cybercrime, its associated factors and behaviours amongst internet users in Abuja, Nigeria. The first hypothesis stated that there will be a significant joint and independent prediction of emotional intelligence, loneliness, social support on cyberbullying-behaviour was confirmed. In this view, the result showed that all the predictor variables (loneliness, social support, and emotional intelligence) combined to predict cyberbully-behaviour, and their combination accounted for 69.2% of the total variance observed in cyberbullying-behaviour. The plausible reason could be that mental health could be risk factors or consequences of cyberbullying or both. This finding was supported by (Srabstein & Piazza, 2008) who found that cyberbullists are people who are looking for social support, have unhappy feelings and drug users. Logically, those who feel lonely would express their feelings and emotions through social media as they found social media as a tool for them to share everything. These findings also agreed with their findings that social connectedness problems, such as low social support, could be an antecedent of crime victimization (Spano & Nagy, 2005; Yap & Devilly, 2004). The findings of this study

are also in agreement with those of (Kowalski et al., 2014) who found and reported that the higher the level of loneliness the higher the involvement of teenagers being perpetrators and victims of cyberbullying. Furthermore, the result corroborates (Heiman et al., (2015) who reported that those who are exposed to cyberbullying experienced have greater feelings of emotional loneliness and a lower belief in their social self-efficacy. The study therefore infers that emotional intelligence can be an important protective factor against cyberbullying victimization and its negative consequences.

Hypothesis two which specified that there will be a significant gender difference on cyberbullying was not accepted. The probable reason could be due to the fact gender research differences in cyberbullying present inconsistent findings. On this note, the result seems to be consistent with other findings. For instance, Lee & Shin (2017) reported that there was no gender differences in the form of cyberbullying behavior, namely that boys use chat services, online games, and more photos or videos than girls. Likewise, girls tend to use exclusion strategies more than boys, for example isolating planned victims from online groups of friends or chatting, which is one of the most common types of cyber oppression among girls. Similarly, the result also in line with (Hinduja et al., 2008) who found no significant gender differences for cyberbullying among both college students and adolescents when personal experiences with the internet were controlled. In addition, finding is consistent with (Pettalia & Pozzulo, 2015) who espoused that male and female participant did not differ significantly on their assignment of criminal guilt to the cyberbully. However, the findings of the present study are at variance with the study of (Adams, 2010) who found that adolescent girls are more likely to have experienced cyberbullying than boys.

Lastly, the third hypothesis which states that age will significantly influence cyberbullying was accepted. This implies that users, age were a strong influence of cyberbullying-behaviour in Nigeria. The reason could be due to the fact that age is a good determinant factor on irrespective criminal tendencies. For example, specific behaviours appear to be more frequent at different ages. This agreed with some relevant opinions that physical bullying rates are the most affected by age, and it is often replaced by more indirect or subtle forms as adolescents grow older (Lereya, 2015). Similarly, result agrees with (Zych et al., 2017), who further informed that there may be higher rates of bully-victims with an increasing age. In contrary, this finding negates other research studies who have found no difference for age between physical, verbal, and relational victimization.

Conclusion

Considering the current severe situation and prevention bottlenecks of cybercrimes in Nigeria, particularly among the internet users, this study investigated cybercrime-behaviour and its associated factors in Nigeria. In the light of this, the study concluded thus: emotional intelligence, social support, and loneliness have significant joint prediction of cybercrime-behaviour. While independently, with the exception of emotional intelligence that revealed no significant independent prediction on cybercrime-behaviour. Additionally,

result shows no significant gender difference regarding cybercrime-behaviour. This informs that male and female participants have equal experience of cyberbullied-behaviour. Finally, it was revealed that there was a significant age influence on cybercrime-behaviour.

Recommendations

Based on the significant of the findings, therefore, the following recommendations are made:

1. A social support system could be established to provide effective social support for online fraud victims and potential victims to reduce the risk of victimization and repeat victimization of online fraud.
2. Policy makers are invited to combat cyberbullying among stakeholders. This can be through teaching stakeholders particularly youths about emotional intelligence and inviting parents to inform them about how loneliness influences cybercrime tendency to perpetrate cyberbullying.
3. It is even hoped that there will be cooperation from various parties ranging from family, friends, schools, and government to raise awareness about cyberbullying and provide positive social support to perpetrators, victims and witnesses so that the incident does not continue and reduce to the barest minimum.
4. Future research could consider experimental or behavioral methods to investigate the risk factors for cybercrime in order to obtain more objective data.

Limitations

In view of relevance of this study, however, the following limitations are highlighted:

1. The lack of sample representativity and generalizability caused by the sampling method in this study is one of the limitations. Future research need to adopt more appropriate sampling methods and further expand the sample size.
2. In addition, the current study is also limited by the self-report measure, which may be affected by the participants' interpretation of questions, the perception of their own behaviors, social expectations, and the likes.
3. Besides, there may be a small part of non-victims who do not know that they have been deceived, so they are misclassified in the questionnaire which may affect the results.

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