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## INFLUENCE OF CYBER-BULLYING ON ACADEMIC ACHIEVEMENT OF IN-SCHOOL ADOLESCENTS IN ANAMBRA STATE, NIGERIA

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### ABSTRACT

Digital technologies have given youth an unprecedented opportunity to communicate with their peers inside and outside of their face-to-face social networks. In their online exploration, students are often caught in the web of cyber-bullying. A blind eye must not be cast on the fact that the emotional injuries arising from cyber-bullying could lead to school related problems like poor school engagement and skipping of classes. The purpose of the study was to ascertain the influence of cyber-bullying on academic achievement of in-school adolescents in Anambra State. Two research questions were raised for the study while one hypothesis was tested at 0.05 level of significance. Survey research design was adopted for the study. The population of the study consisted of 11, 023 Senior Secondary School II (SS2) students in the 257 public secondary schools in Anambra State. The sample for the study comprised 600 Senior Secondary School II (SSS2) students obtained through multi-stage sampling procedure. A researcher constructed identification questionnaire titled 'IQCACB' and students' academic achievement were the instrument used for the study. IQCACB was validated by three experts in the Department of Educational Foundations, Nnamdi Azikiwe University, Awka. The reliability of the questionnaire was established using Cronbach alpha method and reliability indices obtained was 0.84. Statistical measure that was used to analyze the data collected was mean and standard deviation. The findings of the study revealed that there is no significant difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies. The study further revealed that indulging in cyber-bullying did not greatly affect the academic achievement of in-school adolescents. Based on the findings of the study, it was recommended among others that Federal Government should provide support to secondary school administration to obtain the desired educational facilities necessary for effective school running such as employment of qualified teachers and the provision of adequate classrooms. Such steps could improve students' academic performance albeit the distraction of cyber-bullying.

### KEYWORDS

Cyber-bullying, academic achievement, School adolescents, Anambra State.



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## INTRODUCTION

The recent advancement in scientific discoveries has made the world a global village and the drive for more information within the shortest period of time has led to the development of modern technologies. That is to say that the 21st century has witnessed the advancement of learning technologies in a mode that accommodates everyone (Smith, Mahdavi, Carvalho, Fisher, Russell & Tippett, 2008). Students living and learning in the 21st century are not accustomed to a world without internet access or digital devices. With little or no structure or guidance on how to best maximize these devices, many students can browse, text and tweet without limitations.

The online world has become such a draw for adolescents that some of them have developed what researchers call “pathological technology use (PTU)” (Gentile, Coyne and Bricolo 2013). According to Kowalski, Guumetti, Schroeder and Lattanner (2014), this obsessive behaviour describes an individual who exhibits “addictive behaviourism response to technological media, such as the Internet or games”. Kowalski et. al further observed that individuals with this level of technological dependency exhibit characteristics similar to that of a person who is addicted to alcohol or drugs. Micheal (2015) suggests that youths and adolescents feel they must remain “always on” or “connected” to their Information and Communication Technologies (ICT) even when participating in offline activities. For many adolescents, being online has become a huge part of their personal identity. To some of them, it has become an important means of establishing and maintaining their social status. It is in this module that adolescents are exposed to cyber-bullying.

Cyber-bullying refers to the intentional harassment through the use of electronic means to harm someone. Cyber-bullying is thus an aggressive intentional harassment or mistreatment carried out by an offender using the electronic form of contact repeatedly and overtime against a victim who cannot easily defend him or herself. It is a behaviour carried out by an individual, or group, which is repeated over time in order to hurt, threaten or frighten another individual with the intention to cause distress. This explains why Wong-lo and Bullock, (2011) defined cyber-bullying as a category of bullying that occurs in the digital realm/medium of electronic text. In its nature cyber-bullying does not involve personal contact between the bullies and bullied but it remains psychologically and could be emotionally damaging. Smith, Mahdavi, Carvalho, Fisher, Russell and Tippett (2008) were more precise when they defined cyber-bullying as an intentional act or behaviour that is carried out repeatedly using electronic forms of communication (e.g. email, blogs, instant messages, text messages) against a person who cannot easily defend him or herself.

In real life contexts, the cyber-bullies of these acts are mainly classmates, friends or schoolmates. Although some adolescents meet people online who they only know through friends or acquaintance, cyber-bullies are usually peers they know in real life. They often fall into two categories: the cyber-bullied and the cyber-bullies. While the cyber-bullied are those who are bullied who would become cyber-bullies. Non-bullies are those who are neither cyber-bullies nor cyber-bullied. Willard (2006), Patchin and Hinduja (2008) had linked cyber-bullying to serious effects such as low- esteem, family problems, school violence, delinquent behaviours and academic achievement problems.

Students’ academic achievement is defined according to how well a student performs in test and examinations in the school setting (Rotgans & Schmidt, 2017). These tests and examinations may be teacher-made tests and/or standardized tests. Hence, research upholds academic achievement as determination of the degrees of attainment of the individual students in tasks, courses and programmes to which the individual student have been sufficiently exposed and measured using civic achievement test. The major advantage of academic achievement test scores of learners is that apart from estimating the relative effectiveness of a teaching technique, it also identifies the areas of students’ weakness.

To the understanding of the researcher in Anambra State, in-school adolescents often neglect school work and accept poor grades in school work just to stay connected with their peers, bully others or gain access to information. To risk one’s education, health and overall well-being in order to stay connected or bully others

is unnecessary and entirely avoidable but to those who are entrenched in the adolescent world, it appears to be a necessity to them to maintain their status quo (Agatston, Kowalski, and Limber, 2007; Tokunaga, 2010).

The complexity and magnetic nature of online world has made it somewhat of a moving target for inflicting psychologically and emotionally damage like Cyber-bullying. Despite the social, cross-cultural and educational benefits of these cyber interactions, many adolescents are choosing to use digital technologies inappropriately in their efforts to harass, extort, intimidate, threaten, and intentionally exclude one another. Mishna, Cook, Gadalla, Daciuk and Solomon (2010) affirmed that many youth suffer severe health issues such as feelings of vulnerability, sadness, anxiety and fear which could be affecting their ability to concentrate in class work. According to Okoye, Nwogu and Onuh (2015), cyber-bullying is gaining momentum in Nigeria with an unimaginable psychological effect on the well-being of adolescents. Against this backdrop, the researcher seeks to investigate the effect of cyber-bullying on academic achievement of adolescents, cyber-bullied and cyber-bullies alike. Specifically, the study sought to ascertain:

1. The mean academic achievement scores of adolescents who have been cyber-bullied.
2. The mean academic achievement scores of adolescents who are cyber-bullies.

### Research Questions

The following research questions guided the study:

1. What is the mean academic achievement scores of adolescents who have been cyber-bullied?
2. What is the mean academic achievement scores of adolescents who are cyber-bullies?

### Hypotheses

The following hypothesis was tested at 0.05 level of significance

1. There is no significant difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies.

### Literature Review

#### Theoretical Framework

##### General Strain Theory by Agnew

General Strain theory was propounded by Robert Agnew in 1992. Agnew's (1992) General Strain Theory (GST) is used as a guiding framework to help recognize how strainful act not only leads individuals into retaliatory criminal and deviant acts but also significantly contributes to a list of negative academic, social and emotional consequences. GST recognizes strain from more than just socio-economic deprivation perspective. Strain can be generated with any relationship or event where an individual feels mistreated or when the outcome of experiences is undesired or unanticipated. Agnew (1992) considers alternative sources of strain such as the: failure to achieve positively valued goals (monetary strain), the removal of positively valued stimuli (e.g. the loss of a mother or family member through death or family conflict) and the confrontation of negative stimuli (e.g. repeated academic failure or the onset of emotional problems). According to the theory, negative emotions arise to become a source of strain between people. As a result of different sources of strain, the individual's response is defective and guided by focused attempts to prevent the loss, retrieve what was lost or in the case of bullying/cyber-bullying, seek revenge on those who have removed the positive stimuli. Strain makes people feel angry, frustrated, depressed, and anxious and essentially creates pressure for corrective action on the part of the victim. This theory is related to the present work because most adolescents who engage in cyber-bullying do experience strain. The anger and revenge of continuous bullying lead some cyber-bullied to alleviate the strain by entering into socially unacceptable behaviours or to seek revenge against the cyber-bullies, as a way to mitigate strain or else as a manner for revenge. Strain leads some adolescents in turn to cyber bullying others. All these could possibly lead to poor academic achievement.

## Issues Surrounding Adolescents and Cyber-bullying

A typical secondary school living and learning environment is one entrenched in peer-pressure, gossip, teasing and rumours in order to assert power over each other. The volatility of the on-campus, face-to-face environment contributes to a lengthy list of social and emotional problems. However, with the advent of modern technology adolescents have 24 hours a day access to their friends, forums and online contacts. This level of accessibility from a cyber-bullying perspective translates to adolescents not being able to escape the wrath and repercussions of online harassment. At the same time, this level of accessibility has fuelled a need for many adolescents to stay connected to the online world. Adolescents look at modern technology as an extension of their personal and social lives. Without digital access, many youths have a fear of missing out and run the risk of missing an important social interaction or event. This type of need brought on by more convenient, more mobile forms of technology has created an overarching dependency on technological devices. The repercussions of use are seen not only in the addictive personalities that exist around technology use but in the peer interactions and clinical disorders that are created with this level of use.

Admittedly many adolescents cannot go anywhere without their mobile devices. This level of use and dependency has brought about clinical diagnoses such as "Pathological Technology Use" (PTU) (Sim, Gentile, Brico, Sepelloni, and Gulamoydeen, 2012), "Compulsive Internet Use" (CIU) (Gámez-Guadix, Orue, Smith and Calvet, 2013) and "Cyber Relationship Addiction" (Griffiths and Szabo, 2014). Research suggests that Internet addictions are subsets for broader addiction issues and are a contributing factor in one's exposure to cyber-bullying acts. Feinberg and Robey(2009) found that those individuals who use the internet on a more frequent basis are more likely than non-users to be exposed to acts of cyber-bullying. Gibson (2015) found that with an even greater percentage of the adolescent population using the internet on a more frequent basis, the increase has only translated to an increase in the frequency and occurrence of cyber-bullying acts.

The ability to stay connected with peers in the 21st century has been made even more convenient with the invention of modern technology. Specifically, various social media programs and text messaging services have notification software's embedded within them which allow users to see if messages have been delivered, read or if a recipient is responding. Micheal (2015) also found that the instantaneous nature of these interactions has led some users to become dependent on immediate feedback, and the pressure to respond to messages or texts soon after they have been delivered has contributed to youth becoming detached from life in the offline world. He said that often youth can be heard saying that they have to respond to a text or message so that the sender knows that everything is okay or that if they do not respond to the sender in a timely manner they might offend them. Micheal (2015) added that when youths and adolescents with predisposed self-esteem, self-confidence or depression issues are left waiting for a response they will often internalize their sender's response time and this can often further perpetuate these problems. This shows that a lack of emotional connection or understanding generated by online interactions also contributes to these problems.

Research seemed to suggest that the emotional trauma students face as a consequence of being cyber-bullied could impact their academic performance (Brown, 2010; Faryadi, 2011; Young-Jones., Fursa, Byrket and Sly, 2015). Smith et al., (2008) found that the rate and frequency of cyber-bullying attacks on individuals directly contribute to a student's ability to achieve academically. Li (2007a) suggest that by limiting acts of cyber-bullying notable improvements can be observed in student achievement. Hinduja and Patchin (2013) further averred that the stress and strain generated by cyber-bullying act often overwhelm or preoccupy the mind and results in a students' inability to concentrate on a simple to more complex academic tasks. This was further affirmed by Micheal (2015) who averred that peer perception plays an important role in adolescent development given that when adolescents perceive themselves as unwanted or undesirable, their confidence, self-esteem, and self-efficacy are greatly impacted. In the thoughts of Mishna, Khoury-kassabri, Gadalla and Daciuk(2011), students who are cyber-bullied or participate in cyber-bullying acts are more likely to misbehave in class, skip school (Ybarra and Mitchell, 2007) exhibit violent behaviour (Litwiller and Brausch, 2013) and are even more inclined to bring a weapon to school (Brown, 2010; Mitchell, Ybarra, and Finkelhor, 2007). As a result of these behaviours, Bhat (2008); Kowalski and Limber (2013); Mishna, Saini and Solomon (2009) observed that those impacted by cyber-bullying are more likely to receive detentions, suspensions, and expulsions from school.

Seen from another lens, youths and adolescents are very much a product of their upbringing. When they grow accustomed to an unstructured and unsupportive home environment this often translates to them growing resistant to rules and expectations. To this end, how families support and reinforce expectations for online use becomes the standard for how adolescents will behave in the online world. Little wonderValcke, Bonte, De Wever, and Rots (2010) found out that youths and adolescents who have grown up in an environment where parents are more familiar with the online world, where specific rules and expectations have been created, and where effective supervision is present, acts of cyber-bullying are less frequent also that the more structure and guidance provided to youth within the online environment encourages them to think about the repercussions of their actions before they act. This indicates that parenting behaviours play an important role in preventing cyber-bullying participation. This probably prompted the assertion ofShapka and Law (2013) that the higher levels of parental control and lower levels of parental solicitation were linked to lower levels of cyber-aggression. As a result, youth who are given greater freedom within the online world is more likely to experiment and indulge in more offensive and potentially harmful behaviours (Willard, 2006). Campbell, Slee, Spears, Butler and Kift (2013a) suggests that youths and adolescents who own or have access to their own mobile phones are at an even greater risk of being impacted by cyber-bullying acts. This implies that the freedom that the mobile devices afford also make supervision and regulation of use that much more difficult. The above contributions show that addictive technology behaviour, peer pressure influence, school-based behaviours/performance, and family dynamic are the contributors for cyber-bullying that lead to these social and emotional problems of the victims of cyber-bullying.

### **Cyber-bullying and Adolescents' Academic Achievement**

Academic performance which is measured by the examination results is one of the major goals of a school. Academic performance is the outcome of education, to the extent at which a student, teacher or institution have achieved their educational goals. Jack (2017) described academic achievement as gain in knowledge of students as a result of taking part in a learning programme; also, as students' performance on a standardized measure such as performance tests, skill texts and analytical thinking tests. The measurement of academic performance is usually done using assignments, projects, tests and examinations. In this digital age, students' academic achievement is influenced by various factors notably modern technology.

Modern technology according to Michel and Heirman (2011) is like a double-edged sword. On one hand, it brings connectivity, on the other hands, it increases emotional stress. In the realm of modern technology is the constant issue of cyber-bullying.As a consequence of cyber-bullying, unfortunate young internet users, including adolescents are mostly at the mercy of cyber-bullies. The cyber-bullied, under great emotional stress, could be battling withstudy concentration, and thus their academic progress is adversely affected (Juliana, 2010). The depressive effect of cyber-bullying prevents students from excelling in their studies (Lauren and Ratliffe, 2011).

According to Caputo (2014), low achievement in school cannot be addressed while ignoring cyberbullying, because the two are frequently linked. Students who are repeatedly bullied, he stated, receive poorer grades and participate less in class discussion. Teachers can misinterpret their silence, thinking that the students are not motivated to learn. Juvonen and Gross (2008) found that students who get bullied run the risk of not coming to school, not liking school, perceiving school more negatively and doing less well academically.

The depressive effect of cyber-bullying prevents students from excelling in their studies. As averred by Lam, Cheng, and Liu (2013), students who are bullied repeatedly do substantially worse in school. Li (2010) had earlier said that instruction cannot be effective without the students being ready to learn, and that includes academically low-performing students who are at higher risk of getting bullied. Watkins, Sharma, Lawrence, Rudder, Nakamura, Lenhart and Akdeniz (2010) states that bullying in schools is causing unimaginable problems to students, parents and to educational institutions. Unfortunately, little has been done to help those cyber-bullied who are continuously trapped in the name of modernization and digitalization. Many students who are cyber-bullied suffer silently. They are reluctant to complain to the authorities or their parents owing to the social stigma attached to being cyber-bullied (Susan, Butler, and Emmission, 2011). In the thoughts of Tippet and Kwak(2012), cyber-bullying makes the cyber-bullied to suffer from emotional and psychological stress, which could invariably deteriorate the academic grade of the cyber-bullied.

## METHOD

The present study adopted ex-post- facto research design. The population of the study consisted of 11, 023 Senior Secondary School II (SSS2) students in the 257 public secondary schools in Anambra State. The sample for the study comprised 600 Senior Secondary School II (SSS2) students obtained through multi-stage sampling procedure. The instruments that were used for data collection included a researcher constructed questionnaire and students' academic achievement. The questionnaire was titled 'Identification Questionnaire for Categorization of Adolescents' Cyber Bullying (IQCACB)'. IQCACB was designed in a modified Likert type scale, and contains 20 items. IQCACB was divided into two sections A and B. Section A addressed the demographic characteristics of the respondents while Section B was broken into two clusters, 1 and 2. Cluster 1 with 20 items focused on identification of the cyber-bullied and constructed in a way that the respondents responded in the mode of four-point rating scale of: Several Times (ST), Sometimes (S), Barely at All (BA), and Not at All (NA). On the other hand, Cluster 2 dealt with identification of the cyber-bullies and constructed in a way that the respondents will respond in the mode of four-point rating scale of: Several Times (ST), Sometimes (S), Barely at All (BA), and Not at All (NA). The questionnaire was validated by two experts in the Department of Educational Foundations, NnamdiAzikiwe University, Awka. The reliability of the questionnaire was established using Cronbach alpha method and reliability indices obtained was 0.84. A total of 439 questionnaires were retrieved and used for data analysis.

On the other hand, academic records of students in English and Mathematics used in the study were obtained from their various school teachers in these secondary schools. To guarantee confidentiality, details such as students' names and registration numbers were expunged from the raw score sheets. The questionnaire is administered to the sample, one is identified as cyber-bullied (victim) when the persons' grand mean score in the 'cyber-bullied' questionnaire is higher than his score in the 'cyber-bullies' questionnaire and vice versa. The students' data is then matched against his achievement to ascertain influence. The IQCACB was coded so as to identify the students and match their mean score responses with their academic achievement. Statistical measure that was used to analyze the data collected was mean and standard deviation while t-test was used to test the hypotheses at 0.5 level of significance.

## RESULTS

**Table 1 Mean achievement scores of adolescents who have been cyber-bullied**

N	English		Mathematics	
	Mean	SD	Mean	SD
439	55.01	10.81	52.77	11.07

The analysis in Table 1 shows the mean achievement scores of adolescents in English and Mathematics. Adolescents who have been cyber-bullied had 55.01 and 52.27 as their mean achievement score in English and Mathematics.

**Table 2 Mean achievement scores of adolescents who are cyber-bullies**

N	English		Mathematics	
	Mean	SD	Mean	SD
144	56.51	12.00	54.31	10.25

The analysis displayed in Table 2 indicates that in English and Mathematics, adolescent who are cyber-bullies had 56.51 and 54.31 as their mean achievement scores.

**Table 3** *T-test of difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies*

	N	Cyberbullied		Cyberbullies			df	t-cal	P-value	Remark
		Mean	SD	N	Mean	SD				
<b>English</b>	439	55.01	10.81	144	56.51	11.10	581	1.44	.15	Not-Sig
<b>Mathematics</b>	439	52.77	11.07	144	54.31	10.25	581	1.48	.14	Not-Sig

The result in Table 3 shows that the calculated t-values for English and Mathematics to be 1.44 and 1.48. The corresponding P-values (.15 and .14) were greater than the stipulated 0.05 level of significance indicating that there is no significant difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies. The null hypothesis was therefore not rejected.

### Discussion

In table 1 and 2, the findings of the study revealed that adolescents who have been cyber-bullied had 55.01 and 52.27 as their mean achievement score in English and Mathematics. On the other hand, adolescents who are cyber-bullies had 56.51 and 54.31 as their mean achievement scores in English and Mathematics respectively. The finding of the study contradicts the position of Caputo (2014), who averred that low achievement in school cannot be addressed while ignoring cyber-bullying, because the two are frequently linked. Students who are repeatedly bullied, Caputo added, receive poorer grades and participate less in class discussion. The findings of the study also contradict the position of Lauren and Ratliffe (2011) who opined that the depressive effect of cyber-bullying prevents students from excelling in their studies. This contradiction could be as a result of environmental differences that exist between this current study and the reviewed studies.

In table 3, the tests of hypothesis for the significant difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies showed the calculated t-values for English and Mathematics to be 1.44 and 1.48. The corresponding P-values (.15 and .14) were greater than the stipulated 0.05 level of significance indicating that there is no significant difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies. The null hypothesis was therefore not rejected. This seems to be a shift from what has been as fingers have been pointed on the influence of cyber-bullying on students' academic achievement. Michael (2015) found out that youths who reported lower school performance and low school attachment were also more likely to be victimized with cyber-bullying. Students who received mostly Ds and Fs were twice as likely to be cyber-bullies when compared with students who received cyber-bullying (11.3% vs 5.2%). As earlier indicated, environmental difference could be one of the major reasons responsible for this outcome.

### Conclusion

The complexity and magnetic nature of online world has made it somewhat of a moving target for inflicting psychologically and emotionally damage like Cyber-bullying. In the light of this, ascertaining the influence of cyber-bullying on the academic achievement of students became a necessity. Based on the analysis of data, it was concluded that there is no significant difference in the mean academic achievement scores of adolescents who have been cyber-bullied and those who are cyber-bullies. The implication as revealed by the hypothesis testing is that adolescents who are cyber-bullies or who have been cyber-bullied did not differ significantly in their mean academic achievement scores. This gives the impression that cyber-bullying as much

as it is a factor, may not be a major influencing factor in students' academic achievement in this part of the world.

### **Recommendations**

Based on the findings of the study, the following recommendations were made:

1. Federal Government should provide support to secondary school administration to obtain the desired educational facilities necessary for effective school running such as employment of qualified teachers and the provision of adequate classrooms. Such steps could improve students' academic performance albeit the distraction of cyber-bullying.
2. Federal Government should ensure the employment and deployment of counsellors and psychologists to secondary schools of the federation. This will help to satisfy the psychological needs of the students by providing them with the forum to express themselves on the influence of cyber-bullying on their academic achievement.
3. Secondary school administrators should advise students during orientation of the loss of concentration involved in cyber-bullying. This will help the students to navigate the influence cyber-bullying could have on students' academic performance.
4. Parents should help their ward by guiding them to imbibe spending less time on social media. This will help forestall the influence of cyber-bullying on their academic achievement.



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