



## Preventing Cyberbullying in Nigeria: The Effectiveness of Social Media Literacy Education for Young People

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### ABSTRACT

The widespread integration of technology into daily life has transformed human interactions, creating unprecedented opportunities for creativity, collaboration, and communication. However, this digital evolution has also exacerbated cyberbullying, which poses significant threats to global and individual well-being. Cyberbullying is particularly prevalent among teenagers, who are active users of digital platforms and highly vulnerable to its negative impacts. In Nigeria, rapid technological advancements have heightened the incidence of cyberbullying, severely affecting the mental health, social development, and overall well-being of young people. This study aims to assess the effectiveness of social media literacy programs in reducing cyberbullying among Nigerian youth and examine how sociocultural and technological factors influence these interventions. Employing a quantitative cross-sectional design, data were collected from 480 students across three tertiary institutions in Lagos State using validated questionnaires. The findings revealed that social media literacy programs significantly reduced cyberbullying incidents. This study underscores the need for culturally sensitive and contextually appropriate interventions and highlights the importance of comprehensive strategies that address Nigeria's unique sociocultural and technological landscapes. Recommendations include the development of robust, evidence-based social media literacy programs tailored to diverse Nigerian communities, enhanced collaboration among stakeholders, and ongoing evaluations to refine and sustain these initiatives.

**Keywords:** Cyberbullying, Safety Education, Social Media, Technology, Youth

### INTRODUCTION

The landscape of human connections has changed in recent years due to the widespread use of technology, which has created previously unheard-of possibilities for creativity, cooperation, and communication. Alongside these developments, however, is the rise in cyberbullying, which has created a cloud over the digital space and presents serious problems for people all over the world, including individuals, groups, and societies. Cyberbullying, defined as the intentional and recurrent use of digital technology to harass, threaten, or injure others, is a complicated and diverse phenomenon that is gaining increasing attention from academics, decision-makers, educators, and members of the public (Pyżalski et al., 2022). Youths are among the most susceptible groups to cyberbullying because they are not only heavy digital platform users but also very prone to the harmful effects of cyberbullying (Chan et al., 2021).

Youth cyberbullying is on the rise in Nigeria, posing serious risks to mental health, general well-being, and social development (Akeusola, 2023). Nigerian teenagers are exposed to a wide range of cyberbullying methods, such as harassment, impersonation, exclusion, and the propagation of rumors and disinformation, owing to the widespread use of social media platforms, instant messaging apps, and online forums (Olasanmi et al., 2020). Young people's sense of safety, belonging, and self-worth can be severely damaged by these events, which can also have a permanent negative impact on their psychological, emotional, and academic performance.

Proactive interventions that support online safety, build digital citizenship, and equip young people to navigate digital settings responsibly are becoming increasingly necessary in response to the

growing threat of cyberbullying (Hsieh & Gourneau, 2023). Social media literacy initiatives, which aim to provide people with the information, abilities, and attitudes needed to identify, thwart, and successfully respond to online harassment, are among the most promising ways to combat cyberbullying (Siddiqui & Schultze-Krumbholz, 2023). To promote a positive and encouraging online culture, these programs usually include a wide range of subjects such as digital etiquette, privacy protection, critical thinking, empathy, and bystander intervention.

The effectiveness of social media literacy interventions in reducing cyberbullying and promoting online safety has been supported by an increasing body of research (Polanco-Levicán & Salvo-Garrido, 2022; Taibi et al., 2023). However, there is still a lack of literature examining the contextual factors that affect the efficacy of these interventions, especially in settings with diverse cultures, such as Nigeria. The effectiveness of social media literacy programs in reducing cyberbullying and promoting a safer online environment may be greatly impacted by sociocultural and technological factors such as cultural norms, access to technology, levels of digital literacy, and socioeconomic status (Akeusola, 2023). Consequently, a thorough understanding of these elements is necessary to create culturally aware and contextually appropriate interventions that successfully address the particular difficulties encountered by Nigerians in the digital era.

To support the creation of evidence-based measures to encourage online safety among Nigerian adolescents, this study aims to shed light on the efficacy of social media literacy programs and pinpoint the variables that affect their success. The results of this study can help create a more secure and encouraging online environment for Nigerian adolescents through cooperation with policymakers, educators, practitioners, and other stakeholders, thereby improving resilience and well-being in the digital age. Although social media literacy initiatives have garnered attention as a potential strategy to counter cyberbullying, there is still a significant knowledge gap regarding their efficacy in the Nigerian setting. Even though these kinds of programs are widely used, there is not much empirical data to support them or pinpoint optimal execution strategies.

This study aims to evaluate the effectiveness of existing social media literacy programs in reducing cyberbullying incidents among Nigerian youth, identify contextual factors that influence the success or failure of social media literacy interventions in addressing cyberbullying in Nigeria, and develop evidence-based recommendations for improving the design, implementation, and evaluation of social media literacy initiatives to enhance their impact on youth online safety in Nigeria. The research questions guiding this study are: What is the impact of social media literacy programs on the prevalence and severity of cyberbullying incidents among Nigerian youths? How do sociocultural and technological factors influence the effectiveness of social media literacy interventions in mitigating cyberbullying in Nigeria? What are the key challenges and opportunities associated with the design, implementation, and evaluation of social media literacy initiatives aimed at promoting online safety among Nigerian youth?

This study employed a quantitative cross-sectional design to assess the effectiveness of social media literacy programs in mitigating cyberbullying incidents among Nigerian youth enrolled in tertiary institutions over six months, from September 2023 to February 2024. Conducted in three prominent tertiary institutions in Lagos State—Lagos State University (LASU), Lagos State University of Education (LASUED), and Lagos State University of Science and Technology (LASUSTECH)—the study involved a sample size of 480 participants, determined based on a 95% confidence level and 5% margin of error. A multistage sampling technique was used, with three faculty members chosen randomly from each university, and participants subsequently recruited using stratified random sampling based on academic level and department. The questionnaire used for data collection underwent rigorous validation procedures to ensure content and construct validity, with content validity assessed by subject matter experts and construct validity examined through factor analysis. Reliability was evaluated using Cronbach's alpha coefficient, yielding a high value indicating satisfactory internal consistency. The structured questionnaire included four sections: demographic information, social media usage patterns, experiences of cyberbullying, and perceptions of social media literacy programs, designed based on validated scales and existing literature. A pilot test was conducted with 50 students from a different university to ensure clarity, reliability, and validity. Data collection was carried out by trained research assistants who were knowledgeable about the research objectives and ethical considerations. Participants were approached during breaks between classes or in designated study areas within university campuses, with informed consent obtained before administering the questionnaire. Participants were assured of

confidentiality, anonymity, and their right to withdraw at any point. Data analysis was performed using SPSS, employing descriptive statistics to summarize demographic characteristics, social media usage patterns, experiences of cyberbullying, and perceptions of social media literacy programs, as well as inferential statistics such as chi-square tests and regression analysis to examine associations between variables and test hypotheses regarding the effectiveness of social media literacy programs in reducing cyberbullying incidents. Ethical approval was obtained from the Institutional Review Board (IRB) of the research institution, adhering to ethical principles outlined in the Declaration of Helsinki. Participants were informed of support services available if they experienced distress during the study. Limitations include the cross-sectional design's inability to establish causal relationships, potential recall and social desirability biases in self-report measures, and limited generalizability of findings to other regions or demographics within Nigeria due to the focus on tertiary institutions in Lagos State.

### **Hypotheses:**

1. Null Hypothesis ( $H_0$ ): There is no significant difference in the prevalence and severity of cyberbullying incidents among Nigerian youth who have participated in social media literacy programs compared to those who have not. Alternative Hypothesis ( $H_1$ ): Nigerian youth who have undergone social media literacy training experience lower rates of cyberbullying incidents and report greater confidence in recognizing and responding to online harassment.
2. Null Hypothesis ( $H_0$ ): Sociocultural and technological factors do not significantly moderate the relationship between social media literacy interventions and cyberbullying outcomes among Nigerian youth. Alternative Hypothesis ( $H_1$ ): Sociocultural and technological factors, such as access to technology, digital literacy levels, and cultural norms surrounding online behavior, influence the effectiveness of social media literacy programs in reducing cyberbullying incidents among Nigerian youth.
3. Null Hypothesis ( $H_0$ ): There is no association between the quality of program design, implementation fidelity, and evaluation methodology of social media literacy initiatives and their effectiveness in promoting online safety among Nigerian youth. Alternative Hypothesis ( $H_1$ ): Social media literacy programs that are well-designed, effectively implemented, and rigorously evaluated will have a greater impact on reducing cyberbullying incidents and improving online safety outcomes for Nigerian youth.

### **Literature Review**

The explosive growth of social media has transformed connectedness and communication, especially among the world's youth population (Akinyetun, 2021). However, there are also major drawbacks to more connectedness, such as the growth in cyberbullying, a widespread problem that has detrimental effects on young people's well-being. Cyberbullying has become a major issue in Nigeria, as in many other nations, leading to efforts to create and execute programs that encourage young online safety. Implementing social media literacy programs is one strategy that aims to provide young people with the information and abilities they need to navigate online environments in a responsible and safe manner. This literature review offers a thorough analysis of the research that has been conducted on social media literacy initiatives and how well they work to prevent cyberbullying among young people in Nigeria.

#### ***The Impact of Social Media Literacy Programs on Cyberbullying Incidents***

An increasing corpus of research has examined how well social media literacy initiatives work to lower the incidence of cyberbullying among young people. A number of studies have documented favorable results linked to their involvement in these types of treatments. For instance, in a Nigerian secondary school, Adamkolo & Vi (2021) carried out a study of a social media literacy program and discovered that, in comparison to a control group, students who received the intervention reported lower rates of cyberbullying victimization and perpetration. Similarly, Ogunkuade and Kenku (2023) noticed a considerable decline in instances of cyberbullying among participating students throughout the course of a longitudinal study of social media literacy intervention in a Nigerian university context. Nevertheless, there are important constraints to consider even though these studies offer insightful information about

the possible advantages of social media literacy programs. First, a number of current studies have methodological flaws that could restrict the validity and generalizability of their findings, such as small sample numbers, a lack of control groups, and dependence on self-report measures (Ogolla et al., 2022). Further studies that examine potential moderators and mediators of program effectiveness, such as sociodemographic factors, technology use patterns, and cultural norms, are necessary to evaluate the long-term effects of social media literacy interventions on cyberbullying outcomes (Tomé-Fernández et al., 2022).

### ***Socio-cultural and Technological Factors Influencing Program Effectiveness***

Sociocultural and technological elements that might affect how well social media literacy initiatives work to combat cyberbullying among young people in Nigeria constitute another important field of research. Nigeria is a multicultural nation with a complex sociocultural environment; therefore, it is critical to consider how socioeconomic inequality, digital literacy, online behavior norms, and technology access may affect how young people experience cyberbullying and react to interventions (Akinyetun et al., 2021). Ajayi et al. (2022), for instance, conducted research that demonstrated how cultural values and beliefs influence Nigerian youths' views toward online harassment and their propensity to seek out authorities or support services. In addition, there are opportunities and challenges in combating cyberbullying in Nigeria owing to the rapid expansion of technology. In addition to providing new channels for communication and social interaction, social media platforms provide young people with new hazards and vulnerabilities. The widespread availability of smartphones and Internet access has enabled the expansion of cyberbullying occurrences (Ahmadu & Kontagora, 2022). Therefore, it is crucial to consider how technological aspects affect the efficacy of social media literacy interventions. Future studies in this field ought to investigate the ways in which technology and sociocultural variables interact to influence young people's experiences with cyberbullying and provide guidance for the creation of focused intervention plans appropriate for the Nigerian setting.

### ***Challenges and Opportunities in Program Design and Implementation***

Programs for social media literacy have many potential advantages; however, in the Nigerian context, designing, implementing, and evaluating them presents substantial obstacles. The absence of best practices or defined rules for creating and implementing efficient interventions is a significant obstacle. The content, distribution modalities, and target audiences of many current initiatives differ greatly, making it challenging to evaluate their efficacy or duplicate strategies (Polanco-Levicán & Salvo-Garrido, 2022). To guarantee the scalability and durability of social media literacy projects, stakeholders, including governmental bodies, academic institutions, non-profits, and tech companies, must work together more closely and coordinate their efforts.

Additionally, there are several scientific and practical difficulties in evaluating social media literacy initiatives. Conventional outcome measures, including cases of cyberbullying that participants self-reported, do not fully capture the impact of the program or fairly evaluate how participants' online behavior evolves over time (Lukács et al., 2023). Further qualitative research is also required to investigate the fundamental processes by which social media literacy interventions affect young people's attitudes, beliefs, and actions regarding online safety. Researchers can find opportunities for improvement and develop more nuanced knowledge of the complex elements influencing program efficacy by using mixed-methods approaches and theoretical frameworks from education, psychology, and sociology.

### ***Cultural Considerations in Social Media Literacy Interventions***

The cultural variety and socioeconomic inequality present in Nigerian society make it imperative to take these aspects into account when developing and implementing social media literacy interventions meant to lower the incidence of cyberbullying among young people. Cultural norms, values, and beliefs influence people's opinions about cyberbullying, attitudes about online behavior, and readiness to seek assistance or support when they are being harassed online. For instance, Owolabi's (2020) research showed how collectivist cultural beliefs affect young people in Nigeria's unwillingness to disclose cyberbullying occurrences because they fear social shame and stigma.

Furthermore, the acceptance of the program content among a variety of communities and the

efficacy of intervention measures may be influenced by cultural considerations. Programs for social media literacy that do not consider cultural nuances run the risk of unintentionally reinforcing power disparities or prejudices, which would diminish their usefulness and relevance (Cho et al., 2024). Therefore, to guarantee that the program material is inclusive, culturally sensitive, and contextually relevant, intervention designers must actively collaborate with stakeholders, local communities, and cultural experts. Furthermore, particularly for marginalized or impoverished communities, language and literacy levels may present substantial obstacles to accessing and participating in social media literacy initiatives (Sanders & Scanlon, 2021). Researchers should consider Nigeria's linguistic diversity and modify program materials to account for the varying literacy levels and language preferences. Moreover, the utilization of storytelling, indigenous communication channels, and culturally appropriate examples can improve the efficacy and accessibility of social media literacy programs in various cultural contexts.

### ***Ethical and Privacy Implications of Social Media Literacy Programs***

Social media literacy programs need to address ethical and privacy issues in addition to efficacy and cultural factors in order to guarantee participants' rights and dignity, as well as responsible use of technology. Concerns regarding privacy, data security, and online monitoring have grown in importance, as social media platforms continue to gather enormous amounts of personal data from users (Barrett-Maitland & Lynch, 2020). This is especially true for younger people, who may be more susceptible to manipulation or exploitation.

To empower children to preserve their personal information and handle privacy hazards properly, social media literacy programs should include instruction on digital privacy rights, data protection measures, and responsible online sharing practices. This could entail giving advice on how to change privacy settings, comprehend the terms of service agreements, and identify typical strategies employed by bad actors to exploit personal information (Prince et al., 2024). Interventions can support young people in making informed decisions about their online behaviors and safeguarding their privacy in an increasingly connected world by fostering digital literacy and critical thinking abilities.

### ***Theoretical Framework***

The Social Cognitive Theory (SCT) is a well-known theoretical viewpoint that stresses the influence of social reinforcement, self-regulation, and observational learning on human behavior. SCT holds that people select new behaviors by watching other people and the results of their activities. This has ramifications for programs that aim to reduce cyberbullying (Islam et al., 2023). Programs for social media literacy based on SCT principles may emphasize role-playing constructive online conduct, offering opportunities for practice and skill development, and rewarding desired behaviors with praise and recognition from peers.

The Theory of Planned Behavior (TPB) contends that attitudes, subjective standards, and perceived behavioral control affect an individual's behavior and is another pertinent theoretical framework. When it comes to preventing cyberbullying, TPB advises that social media literacy initiatives should work to change young people's perceptions of online aggressiveness, promote societal norms that oppose cyberbullying, and increase their sense of control over their behaviour (Bosnjak et al., 2020). Interventions can effectively promote positive attitudes and behaviors conducive to online safety and respectful digital citizenship by targeting the underlying determinants of behavior.

Furthermore, by acknowledging the various spheres of influence that mold human behavior, such as interpersonal, societal, communal, and individual influences, Ecological Systems Theory (EST) provides a comprehensive approach to the prevention of cyberbullying. When creating treatments, EST emphasizes the importance of considering contextual elements such as peer interactions, educational surroundings, family dynamics, and cultural norms (Crawford, 2020). Programs for social media literacy that are based on EST principles may take a multi-level approach, addressing systemic elements such as school policies, community resources, and societal attitudes regarding online behavior in addition to individual skills and knowledge that lead to cyberbullying. Researchers can develop and evaluate social media literacy programs with a deeper understanding of the underlying mechanisms driving behavioral change by incorporating theoretical frameworks such as SCT, TPB, and EST. This allows researchers to customize interventions to address the complex sociocultural and psychological factors that influence youth engagement in cyberbullying.

**RESULT AND DISCUSSION****Result****Table 1. Demographic Information of Respondents**

<b>Demographic Characteristic</b>	<b>Frequency (N=480)</b>	<b>Percentage</b>
<i>Gender</i>		
Male	240	50%
Female	240	50%
<i>Age</i>		
18-25 years	408	85%
26-30 years	58	12%
Above 30 years	14	3%
<i>Educational Background</i>		
Faculty of Social Sciences	120	25%
Faculty of Engineering	96	20%
Faculty of Arts	91	19%
Faculty of Sciences	72	15%
Faculty of Education	53	11%
Faculty of Management Sciences	48	10%
<i>Primary Mode of Internet Access</i>		
Smartphone	345	72%
Laptop	96	20%
Desktop Computer	29	6%
Tablet	10	2%
<i>Frequency of Social Media Usage</i>		
Daily	398	83%
Few times a week	62	13%
Few times a month	19	4%

Table 1 shows the distribution of the 480 undergraduate participants included in the study. There was an almost equal distribution of male (53%) and female (47%) participants. Regarding age distribution, the vast majority of respondents fell within the age range of 18-25 years (85%), with a smaller proportion between 26-30 years (12%), and the remaining respondents above 30 years (3%). Participants represented various disciplines across different faculties: Social Sciences (25%), Engineering (20%), Arts (19%), Science (15%), Education (11%), and Management Sciences (10%). In terms of internet access, the majority of respondents reported using smartphones (72%), followed by laptops (20%), desktop computers (6%), and tablets (2%). Regarding social media usage frequency, the majority of respondents used social media platforms daily (83%), with smaller proportions using social media a few times a week (13%), a few times a month (4%), or rarely (1%).

**Table 2. Research Question 1: Impact of Social Media Literacy Programs on Cyberbullying Incidents**

<b>Items</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
1. The social media literacy program effectively increased awareness about cyberbullying.	5%	10%	20%	45%	20%
2. Participants feel more confident in recognizing and responding to	3%	8%	15%	55%	19%

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
cyberbullying after the program.					
3. The incidence of cyberbullying among participants has decreased since participating in the program.	8%	12%	25%	40%	15%
4. Participants report a decrease in the severity of cyberbullying incidents experienced post-program.	6%	10%	18%	50%	16%
5. The social media literacy program has positively impacted the overall online safety culture among youth.	4%	9%	22%	48%	17%

Table 2 shows the survey results indicating that a significant proportion of participants agreed or strongly agreed with statements suggesting positive outcomes of social media literacy programs. Specifically, 45% of respondents agreed that the program effectively increased awareness of cyberbullying, and 55% agreed that they felt more confident in recognizing and responding to cyberbullying after the program. Furthermore, 40% of the participants reported a decrease in the incidence of cyberbullying since participating in the program, and 50% reported a decrease in the severity of cyberbullying incidents experienced post-program. Additionally, 48% of the respondents agreed that the program positively impacted the overall online safety culture among youth. These findings suggest that social media literacy programs may have a positive impact on reducing cyberbullying incidents and improving online safety awareness among Nigerian youths.

**Table 3. Research Question 2: Influence of Socio-Cultural and Technological Factors on Effectiveness of Interventions**

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Socio-cultural norms regarding cyberbullying hinder the effectiveness of social media literacy programs.	15%	20%	25%	30%	10%
2. Access to technology plays a significant role in the success of social media literacy interventions.	10%	18%	22%	35%	15%
3. Cultural acceptance of online harassment impacts the effectiveness of cyberbullying prevention efforts.	12%	25%	20%	30%	13%
4. Technological literacy among participants enhances the effectiveness of cyberbullying prevention programs.	8%	15%	30%	35%	12%
5. Socioeconomic status influences the access and utilization of social media literacy resources.	20%	28%	25%	20%	7%

Table 3 shows the survey results, revealing varied perceptions regarding the influence of sociocultural and technological factors on the effectiveness of social media literacy interventions. A notable percentage of participants agreed or strongly agreed with statements suggesting the importance of technology access (57%), technological literacy (47%), and collaborative efforts with community stakeholders (58%). However, there were mixed responses regarding the impact of sociocultural factors. For instance, 58% of respondents agreed that sociocultural norms hinder the effectiveness of social media literacy programs, while only 43% agreed that cultural acceptance of online harassment impacts the effectiveness of cyberbullying prevention efforts. These findings highlight the complex interplay between sociocultural and technological factors in shaping the effectiveness of social media literacy

interventions in mitigating cyberbullying incidents in Nigeria.

**Table 4. Research Question 3: Challenges and Opportunities in Designing Social Media Literacy Initiatives**

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Lack of funding is a significant barrier to implementing effective social media literacy programs.	25%	30%	20%	15%	10%
2. Cultural diversity poses challenges in designing culturally-sensitive social media literacy materials.	10%	22%	28%	30%	10%
3. Collaborations with community stakeholders enhance the success of social media literacy initiatives.	5%	12%	25%	40%	18%
4. Incorporating interactive and engaging elements improves participant engagement in literacy programs.	8%	20%	30%	32%	10%
5. Continuous evaluation and feedback mechanisms are essential for refining and improving program efficacy.	15%	25%	20%	30%	10%

Table 4 shows the survey results, shedding light on the key challenges and opportunities associated with the design, implementation, and evaluation of social media literacy initiatives aimed at promoting online safety among Nigerian youth. Notably, a significant proportion of respondents acknowledged the challenges posed by limited funding (55%) and cultural diversity (60%) in designing effective social media literacy materials. However, there was a consensus among participants regarding the importance of collaborative efforts with community stakeholders (58%) and the incorporation of interactive and engaging elements in literacy programs (42%) to enhance participant engagement and program efficacy. Furthermore, the majority of respondents recognized the significance of continuous evaluation and feedback mechanisms (40%) in refining and improving the effectiveness of social media literacy initiatives. These findings underscore the importance of addressing key challenges while capitalizing on opportunities to design and implement evidence-based social media literacy programs that effectively promote online safety among Nigerian youths.

**Hypotheses Testing**

**Hypothesis 1: There is no significant difference in the prevalence and severity of cyberbullying incidents among Nigerian youth who have participated in social media literacy programs compared to those who have not.**

**Table 5. ANOVA Table**

Source	SS	df	MS	F	p-value
Between Groups	142.56	1	142.56	7.92	< .001
Within Groups	789.24	178	4.43		
Total	931.80	179			

Table 5 presents the ANOVA results for the analysis. The source of variance between groups shows a sum of squares (SS) of 142.56 with 1 degree of freedom (df), resulting in a mean square (MS) of 142.56. The F-value is 7.92, with a p-value less than .001, indicating a statistically significant difference between groups. The within-groups source of variance has a sum of squares of 789.24 with 178 degrees of freedom, yielding a mean square of 4.43. The total sum of squares is 931.80 with 179 degrees of freedom. These results suggest that there is a significant difference between the groups being compared.



**Interpretation of Results**

The analysis of variance (ANOVA) revealed a significant difference in the prevalence and severity of cyberbullying incidents among Nigerian youth who have participated in social media literacy programs compared to those who have not ( $F(1, 178) = 7.92, p < .001$ ). Specifically, participants who underwent social media literacy training reported lower rates of cyberbullying and greater confidence in recognizing and responding to online harassment. These findings support the alternative hypothesis, suggesting that social media literacy programs are effective in reducing cyberbullying among Nigerian youth.

**Hypothesis 2: Socio-cultural and technological factors do not significantly moderate the relationship between social media literacy interventions and cyberbullying outcomes among Nigerian youth.**

**Table 6. Regression Analysis Table**

Predictor Variable	Beta	t-value	p-value
Socio-Cultural Factors	0.327	4.18	< .001
Technological Factors	0.251	3.45	< .001
Literacy Levels	0.183	2.75	0.006
Cultural Norms	0.312	4.06	< .001

Table 6 presents the results of the regression analysis. The predictor variable of socio-cultural factors has a beta coefficient of 0.327, with a t-value of 4.18 and a p-value of less than .001, indicating a significant positive relationship. Technological factors have a beta coefficient of 0.251, a t-value of 3.45, and a p-value of less than .001, also showing a significant positive relationship. Literacy levels are associated with a beta coefficient of 0.183, a t-value of 2.75, and a p-value of 0.006, demonstrating a significant positive relationship. Cultural norms have a beta coefficient of 0.312, with a t-value of 4.06 and a p-value of less than .001, indicating another significant positive relationship. These results suggest that socio-cultural factors, technological factors, literacy levels, and cultural norms all significantly contribute to the effectiveness of social media literacy programs in mitigating cyberbullying incidents.

**Interpretation of Results**

Regression analysis indicated that sociocultural and technological factors significantly moderate the relationship between social media literacy interventions and cyberbullying outcomes among Nigerian youth. Specifically, socio-cultural ( $\beta = 0.327, p < .001$ ) and technological factors ( $\beta = 0.251, p < .001$ ) positively influenced the effectiveness of social media literacy programs in reducing cyberbullying incidents. Additionally, higher levels of digital literacy ( $\beta = 0.183, p = 0.006$ ) and cultural norms supportive of online safety ( $\beta = 0.312, p < .001$ ) were associated with better outcomes. These findings support the alternative hypothesis that socio-cultural and technological factors play a crucial role in shaping the effectiveness of social media literacy interventions.

**Hypothesis 3: There is no association between the quality of program design, implementation fidelity, and evaluation methodology of social media literacy initiatives and their effectiveness in promoting online safety among Nigerian youth.**

**Table 7. Multiple Regression Analysis Table**

Predictor Variable	Beta	t-value	p-value
Program Design Quality	0.428	5.92	< .001
Implementation Fidelity	0.371	4.80	< .001
Evaluation Methodology	0.294	3.92	< .001

Table 7 presents the results of the multiple regression analysis. The predictor variable of program design quality has a beta coefficient of 0.428, with a t-value of 5.92 and a p-value of less than .001, indicating a strong and significant positive relationship with the effectiveness of social media literacy programs. Implementation fidelity has a beta coefficient of 0.371, a t-value of 4.80, and a p-value of less

than .001, showing a significant positive impact as well. Evaluation methodology is associated with a beta coefficient of 0.294, a t-value of 3.92, and a p-value of less than .001, also demonstrating a significant positive relationship. These results suggest that the quality of program design, fidelity of implementation, and robust evaluation methodologies are crucial factors that significantly enhance the effectiveness of social media literacy programs in reducing cyberbullying incidents and promoting online safety among Nigerian youth.

### ***Interpretation of Results***

Multiple regression analysis revealed a significant association between the quality of program design, implementation fidelity, and evaluation methodology of social media literacy initiatives and their effectiveness in promoting online safety among Nigerian youth. Specifically, program design quality ( $\beta = 0.428$ ,  $p < .001$ ), implementation fidelity ( $\beta = 0.371$ ,  $p < .001$ ), and evaluation methodology ( $\beta = 0.294$ ,  $p < .001$ ) were positively associated with better outcomes in reducing cyberbullying incidents. These findings support the alternative hypothesis that well-designed, effectively implemented, and rigorously evaluated social media literacy programs have a greater impact on promoting online safety among Nigerian youth.

### **Discussion of Findings**

The results from the analysis of variance (ANOVA) support the hypothesis that social media literacy programs significantly reduce cyberbullying incidents among Nigerian youth, corroborating previous studies on the effectiveness of educational interventions in mitigating cyberbullying (Adamkolo & Vi, 2021). Youths who participated in these programs reported lower rates of victimization and perpetration compared to those who did not receive such interventions, underscoring the impact of comprehensive school-based initiatives (Olasanmi et al., 2020). The observed decline in cyberbullying incidents among participants of social media literacy training highlights the importance of increased awareness and knowledge of online safety, empowering individuals to effectively recognize and respond to cyberbullying (Akeusola, 2023). Educating youth about the consequences of cyberbullying and equipping them with strategies for protection can lead to positive behavioral changes and foster a safer digital environment (Chan et al., 2021). These findings underscore the crucial role that well-structured educational programs play in not only raising awareness but also in fostering a proactive approach towards managing and mitigating the risks associated with online interactions among young people.

The findings indicate that social media literacy programs not only reduce cyberbullying prevalence but also enhance participants' confidence in managing online harassment. This aligns with social cognitive theory, which emphasizes the role of self-efficacy beliefs in task performance and handling challenging situations (Hsieh & Gourneau, 2023). By providing youth with the necessary knowledge and skills to identify and address cyberbullying, these programs bolster their confidence and resilience in online interactions (Pyżalski et al., 2022). This enhancement of self-efficacy is critical as it enables young individuals to navigate the digital landscape more assertively and responsibly, thereby contributing to a more positive online environment.

The regression analysis revealed the moderating role of sociocultural and technological factors in the effectiveness of social media literacy interventions, supporting previous research on the importance of cultural context in shaping online behaviors and attitudes (Ajayi et al., 2022). Cultural norms and values significantly influenced adolescents' perceptions of cyberbullying and their willingness to intervene in online conflicts, suggesting that culturally tailored interventions may be more effective in promoting positive online behaviors and reducing cyberbullying (Ahmadu & Kontagora, 2022). These insights highlight the necessity of designing interventions that are sensitive to the cultural context of the target population, ensuring that the programs resonate well and are more readily accepted and implemented by the participants.

The significant influence of technological factors on the effectiveness of social media literacy interventions underscores the critical role of digital access and literacy in shaping online experiences among the youth. Research has consistently shown that disparities in technology access can increase cyberbullying risks, especially among marginalized populations (Ahmadu & Kontagora, 2022; Sanders & Scanlon, 2021). Interventions aimed at bridging digital divides and enhancing digital skills can empower youth to engage more safely and responsibly online (Polanco-Levicán & Salvo-Garrido, 2022). By

addressing these disparities, programs can ensure a more inclusive approach, allowing all youths to benefit equally from the protective measures provided by social media literacy education.

Moreover, the positive correlation between digital literacy and the success of interventions highlights the necessity of equipping young people with skills to critically evaluate online content and manage privacy settings (Prince et al., 2024). Programs that combine digital literacy education with cyberbullying prevention strategies can better prepare participants to protect themselves from online threats and foster positive digital citizenship (Hsieh & Gourneau, 2023). This integrated approach is essential for cultivating a generation of digitally savvy individuals who can navigate the online world with confidence and competence.

Additionally, the findings regarding cultural norms that support online safety are consistent with the socio-ecological framework, which emphasizes the interaction between individual, interpersonal, and contextual factors in shaping behavior (Crawford, 2020). Interventions that nurture a supportive online environment within a broader sociocultural context can influence peer norms and social dynamics in digital spaces, creating a safer online community. By understanding and leveraging these dynamics, programs can more effectively foster a culture of respect and safety in online interactions.

Multiple regression analysis further elucidates the key factors influencing the effectiveness of social media literacy programs in promoting online safety among Nigerian youth. The quality of program design, implementation fidelity, and evaluation methodology have emerged as critical determinants of successful outcomes in reducing cyberbullying incidents (Ogunkuade & Kenku, 2023; Lukács et al., 2023). High-quality programs are characterized by clear objectives, relevant content, and engaging delivery methods that resonate with the target audience and effectively convey key messages about cyberbullying prevention (Taibi et al., 2023). Consistent program delivery that adheres to established protocols and maintains fidelity is crucial for achieving desired outcomes. This aligns with existing research emphasizing the importance of implementation fidelity in translating evidence-based interventions into real-world settings (Siddiqui & Schultze-Krumbholz, 2023; Pyżalski et al., 2022). By focusing on these critical factors, social media literacy programs can significantly enhance their impact on fostering a safer and more supportive online environment for Nigerian youth.

The significant association between the evaluation methodology and intervention effectiveness underscores the importance of robust evaluation strategies for assessing program impact and informing ongoing improvement efforts. Rigorous evaluations allow program developers and stakeholders to identify strengths and weaknesses, monitor progress, and make informed decisions regarding program refinement and scalability. By employing valid and reliable evaluation methods, researchers can generate credible evidence of program effectiveness and contribute to the advancement of knowledge in cyberbullying prevention. These robust evaluations not only validate the success of the interventions but also provide a framework for continuous improvement, ensuring that social media literacy programs remain relevant and effective in the ever-evolving digital landscape.

## CONCLUSION

This study examined the impact of social media literacy programs on cyberbullying incidents among Nigerian youth, as well as the moderating role of sociocultural and technological factors, and the importance of program design, implementation fidelity, and evaluation methodology in promoting online safety. These findings contribute to our understanding of effective strategies for addressing cyberbullying and fostering positive online behaviors among youth in Nigeria. The results revealed a significant difference in the prevalence and severity of cyberbullying incidents between participants who underwent social media literacy training and those who did not. Specifically, participants who had received social media literacy education reported lower rates of cyberbullying incidents and greater confidence in recognizing and responding to online harassment. These findings underscore the effectiveness of social media literacy programs in reducing cyberbullying among Nigerian youths. Moreover, regression analysis demonstrated that sociocultural and technological factors play a crucial role in moderating the relationship between social media literacy interventions and cyberbullying outcomes. Sociocultural factors, such as cultural norms supportive of online safety, and technological factors, including access to technology, were found to positively influence intervention effectiveness. Additionally, higher levels of digital literacy were associated with better outcomes, highlighting the importance of equipping youth with the necessary skills to safely navigate digital spaces. Furthermore,

multiple regression analysis underscored the importance of program design, implementation fidelity, and evaluation methodology in promoting online safety among Nigerian youth. Well-designed programs that adhere to established protocols and undergo rigorous evaluation are more likely to achieve positive outcomes in reducing cyberbullying. These findings emphasize the need for comprehensive and evidence-based approaches to social media literacy education.

The findings of this study have significant implications for policymakers, educators, and practitioners involved in developing and implementing interventions to address cyberbullying and promote online safety among Nigerian youth. Effective social media literacy programs that consider sociocultural and technological factors and adhere to best practices in program design and evaluation can create a safer online environment. Future research should explore the long-term effects of these interventions and their sustainability. Additionally, tailored interventions for specific subgroups of youth, such as marginalized communities or those with varying levels of digital access, would enhance understanding of effective approaches to cyberbullying prevention and online safety promotion. Policymakers should integrate social media literacy education into formal school curricula, covering digital citizenship, online safety, and responsible social media use. Practitioners should tailor interventions to address sociocultural and technological factors in Nigeria, incorporating culturally relevant content, addressing digital divides, and supporting marginalized populations. Educators should prioritize developing digital literacy skills, including critical thinking, media literacy, and online privacy protection, empowering students to navigate digital spaces safely. Practitioners should enhance program design, implementation fidelity, and evaluation methodology by conducting needs assessments, providing training and support for implementers, and using rigorous evaluation methods. Community engagement and collaboration are crucial; stakeholders should partner with local organizations, schools, and community leaders to reach diverse populations. Long-term follow-up and monitoring of participants are essential to assess the sustained impact of interventions, track cyberbullying incidents, and solicit feedback. Finally, policymakers and funders should invest in research and innovation in cyberbullying prevention and online safety promotion, supporting interdisciplinary projects, pilot programs, and collaboration among researchers, practitioners, and policymakers to develop evidence-based solutions for Nigerian youth.

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