
Original Paper

Exploring the Impact of Technology-Facilitated Sexual Violence on the Well-being of Undergraduate Students in Nigerian Tertiary Institutions

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Abstract

As the digital era reshapes human interactions, concerns regarding technology-facilitated sexual violence (TF-SV) have come to the fore. This study investigates the impact of TF-SV on the well-being and academic performance of undergraduate students in Nigerian tertiary institutions. Quantitative data were gathered from 360 participants from Lagos State University, Lagos State University of Education and Lagos State University of Science and Technology, using random sampling. Findings revealed a significant positive correlation between exposure to TF-SV and psychological distress indicators, including anxiety and depression. Moreover, negative correlations emerged between TF-SV exposure and self-esteem, suggesting a multifaceted impact on students' psychological well-being. Academic performance indicators, including grade point average, showed a negative correlation with TF-SV exposure, indicating its potential to hinder educational success. The study advances knowledge by elucidating the nuanced repercussions of TF-SV within a Nigerian context and contributes to the broader discourse on technology-mediated vulnerabilities. Recommendations for educational institutions include awareness campaigns, digital literacy programs, support services, and policy reforms to create a safer digital environment for students. By addressing the complex challenges posed by TF-SV, institutions can safeguard students' well-being and academic pursuits in the digital age.

Keywords: anxiety, self-esteem, sexual violence, technology, well-being

Introduction

Every year, countless children worldwide face the distressing reality of sexual abuse and exploitation. Tragically, the occurrence of sexual violence has no boundaries – it pervades every country and every stratum of society. This abhorrent reality means that a child's exposure to sexual abuse or exploitation can occur within the confines of their home, community or school. Compounding this concern is the ubiquity of digital technologies, which, while opening new avenues for communication and interaction, simultaneously expose children to increased risks. It is often individuals known to the child and trusted by them who perpetrate these acts. It is estimated that around 1 in 10 girls under the age of 20, equivalent to approximately 120 million individuals, have been coerced into engaging in sexual activities (UNICEF, 2022). Meanwhile, the scope of sexual violence is widened during emergencies such as armed conflicts, natural disasters, and humanitarian crises, where women and children are especially susceptible. They face the grim reality of sexual violence, including conflict-related instances, intimate partner abuse, trafficking, and other forms of gender-based violence. The aftermath of such violence is characterized by severe physical, psychological, and social harm. Victims are more likely to contract sexually transmitted infections and suffer from pain, illness, unwanted pregnancies, social isolation, and psychological trauma. In response, some victims may turn to risky behaviours such as substance abuse as a coping mechanism (UNICEF, 2022; WHO, 2022).

According to WHO (2022), an estimated one billion children aged 2–17 years have experienced physical, sexual, or emotional violence or neglect within a single year, having a significant impact on their well-being. These forms of violence, as earlier reported by WHO (2014), are closely tied to grave

mental health consequences, such as depression, post-traumatic stress disorder, sleep disturbances, eating disorders, emotional distress, and even suicide attempts. Despite efforts to address this challenge, violence against women and girls remains an immense challenge, demanding ongoing dedication to public health, gender equality, and human rights. As WHO (2023) reports, nearly one in three women globally has faced physical and/or sexual violence in their lifetime, often perpetrated by intimate partners.

However, sexual violence is not confined to gender; it affects both boys and girls in distinct ways, often driven by different factors, and yielding varying consequences. Nonetheless, the issue of sexual violence against boys is often overlooked or concealed, leading to a significant gap in the understanding, research, prevention, and response to this violence. The prevalence of sexual violence against children is staggering, with one in five girls and one in 13 boys experiencing some form of sexual abuse or exploitation before the age of 18 years. However, sexual violence, while affecting both genders, is a complex, gender-based challenge, with conflicting numbers, drivers, and impacts on boys and girls (End Violence against Children, 2022).

In Nigeria, 31% of women aged 15-49 have encountered physical violence, while a disturbing one in six sexually abused girls has experienced abuse in educational settings. Disturbingly, the majority of sexual offences are committed against females (88%), and young people under 18 years of age are particularly vulnerable, constituting 80% of victims. Even more troubling, 60% of rape survivors in Nigeria are children aged 0-14 years with daunting physical, sexual, reproductive and mental implications. More so, Nigeria grapples with a high prevalence of child brides, ranking third globally with 3.3 million child brides, highlighting the multifaceted nature of the challenge (The Spotlight Initiative, 2022).

Amidst this intricate tapestry of violence against children, women, and men, the rapid proliferation of digital technology has introduced an unprecedented era of connectivity and communication (Akinyetun, 2021a; Akinyetun, 2021b; Africa Telecom Review, 2023). This seismic shift has revolutionized the way individuals interact, transcending geographical limitations and fostering novel online interactions. However, the digital age has not been devoid of peril, with one particularly concerning issue being the advent of technology-facilitated sexual violence (TF-SV). The integration of digital platforms into Nigerian tertiary institutions reflects a global trend, altering how young adults engage with academics, social networks and engagements (Akinyetun et al., 2021; Akinyetun, 2022). However, the convergence of education and technology extends beyond academia, giving rise to new challenges, including the risk of TF-SV (Fisico & Harkins, 2021). TF-SV includes an array of activities including cyberbullying, harassment, non-consensual sharing of explicit content, and online grooming. Enabled by the anonymity and accessibility of digital platforms, these actions inflict psychological harm on victims (Tomsa et al., 2013).

Research has highlighted the prevalence of cyberbullying and its mental health consequences (Palermi et al., 2022), as well as sexual violence among university students (Makhaye et al., 2023; Maduakolam et al., 2023). Other studies also acknowledged the psychological distress resulting from cyberbullying and online harassment (Kowalski et al., 2014; Extremera et al., 2018). However, a significant gap exists in the comprehensive understanding of the effects of TF-SV on students' psychological well-being, including anxiety, depression, and self-esteem. More so, the nexus between psychological outcomes and academic performance remains underexplored, especially in Nigerian higher education. This study sought to fill these gaps by examining the experiences of Nigerian undergraduate students exposed to technology-facilitated sexual violence. By exploring the relationships between exposure to such incidents, psychological well-being indicators, and academic performance metrics, this study aimed to provide a comprehensive understanding of the complex challenges posed by technology-mediated sexual violence in Nigerian higher education. Thus, this study hypothesizes that (i) there is a significant negative relationship between exposure to technology-facilitated sexual violence and the psychological well-being of undergraduate students in Nigerian tertiary institutions and (ii) increased exposure to technology-facilitated sexual violence is associated with a significant decline in the academic performance of undergraduate students in Nigerian tertiary institutions.

Concepts

Technology-Facilitated Sexual Violence: Refers to instances where digital platforms and communication tools are used to perpetrate acts of sexual violence, harassment, or coercion. This includes non-consensual sharing of intimate images, cyberbullying with sexual undertones, online grooming, and other forms of exploitation that leverage technology to target victims (Davies et al. 2017).

Well-being: Encompasses a multidimensional construct that encompasses individuals' mental, emotional, and physical states. In this study, well-being refers to the overall quality of life and mental health status of undergraduate students, which includes indicators such as anxiety, depression, self-esteem, and body image (WHO, 1998).

Literature Review

The impact of TFSV on the psychological well-being of victims is profound. Violation of personal boundaries through digital platforms can lead to severe emotional distress. Tomsa et al. (2013) demonstrated that victims of TFSV commonly experience anxiety, depression, and trauma-like symptoms. The lack of physical distance from the online world can exacerbate these psychological effects, blurring the lines between the digital and real-life experiences of the victims. Furthermore, Scott and Campbell (2019) argue that the invasive and persistent nature of TFSV can cause victims to experience fear, shame, and a sense of helplessness.

The challenge of sexual violence against adolescents was further exacerbated during the COVID-19 pandemic, which magnified their vulnerability to potential perpetrators (Maduakolam et al., 2023). A study conducted in Enugu State, Nigeria, during the pandemic, assessed the knowledge and experience of sexual violence among female adolescents in public schools. The study found that 90.8% of the participants possessed a high level of knowledge about sexual violence. Notably, the study identified family members as the primary perpetrators, with 9.8% of participants having experienced forced sexual encounters. Additionally, the study revealed that higher-class students exhibited superior knowledge of sexual violence, suggesting a potential impact of education on awareness (Maduakolam et al., 2023). According to Zagloul et al. (2022), the surge in Internet use during the COVID-19 pandemic due to quarantine measures increased the incidence of technology-facilitated sexual violence (TFSV). TFSV increased during the pandemic, with a significant increase in certain forms of digital sexual violence, such as threatened creation, non-consensual pornography, and online sexual harassment. A minority of victims knew the perpetrators' identities.

The advent of deepfake technology has introduced a new dimension of sexual violence: sexual deepfakes. This phenomenon disproportionately affects victim survivors, affecting their physical, emotional, and social well-being. Research into victim-survivors' experiences of image-based sexual abuse, including sexual deepfakes, has revealed that sexual deepfake abuse operates through heteronormativity, regardless of the victim's sex, gender identity, or sexual orientation. The study highlighted the profound impact of online-offline abuse co-occurrence, which leads to enduring disruptions in victims' lives (Rousay, 2023).

The consequences of TFSV extend beyond emotional distress, influencing various aspects of victims' lives, including academic performance and social interactions. Harris and Steffens (2018) highlight the negative correlation between experiences of online harassment and academic achievement. The stress caused by the TFSV can lead to decreased concentration, absenteeism, and reduced engagement in educational activities. Moreover, TFSV can result in social isolation, as victims may withdraw from their peers due to feelings of shame and fear of judgment (Brown et al., 2021).

Gender plays a significant role in the experience of TFSV, as highlighted by studies focusing on the gendered nature of online harassment. Jane and Powell (2017) emphasize that women are disproportionately targeted by TFSV, often facing gendered insults and threats. This is consistent with broader gender inequalities in Nigerian society. Additionally, traditional gender norms that dictate women's behaviour and sexuality can intersect with TFSV and further perpetuate victim-blaming attitudes (Eze et al., 2019). Thus, the prevailing sociocultural context can exacerbate the impact of TFSV on female undergraduate students' well-being.

Undergraduate students employ various coping mechanisms to mitigate the adverse impacts of TFSV. Peirce et al. (2022) highlighted the significance of seeking social support from friends, family, or online communities. Formal support systems such as university counselling services also play a crucial role in assisting victims in managing the emotional aftermath of TFSV. However, Roberts and Horan (2019) note that the efficacy of support systems depends on the accessibility and responsiveness of these resources, which can vary across Nigerian tertiary institutions.

Addressing TFSV requires a robust legal and policy framework that acknowledges the unique challenges posed by digital platforms. Nigeria has made efforts to combat online harassment through laws, such as the Cybercrime Act. However, scholars, such as Adegbile et al. (2020), argue that the enforcement of these laws is often inadequate, leading to impunity for perpetrators. Nigerian tertiary institutions must implement clear and comprehensive policies to prevent and address TFSV cases on campus. The lack of standardized reporting mechanisms and consequences for perpetrators remains a concern (Akinola and Johnson 2018).

Promoting digital literacy among undergraduate students is crucial to equip them with the skills necessary to safely navigate the online world. Scholars, such as Oluwaseun et al. (2021), emphasize the need for educational institutions to integrate digital literacy programs that teach students about consent, online etiquette, and privacy settings. Empowered with this knowledge, students can better recognize and respond to potential threats, thus reducing their vulnerability to TFSV. Nigerian tertiary institutions must play a pivotal role in addressing the impact of TFSV on the well-being of undergraduate students. By adopting a holistic approach, institutions can create safer environments. Folarin and Odewale (2020) proposed the integration of TFSV awareness campaigns, gender sensitivity training, and consent education into the curriculum. Such initiatives can foster a culture of respect and accountability, and challenge the attitudes that contribute to TFSV.

Methodology

This study adopted a cross-sectional research design to investigate the relationship between exposure to technology-facilitated sexual violence and the psychological well-being and academic performance of undergraduate students at Nigerian tertiary institutions. The study adopted a simple random sampling technique to select three institutions in Lagos State: Lagos State University, Ojo; Lagos State University of Education, Ijanikin; and Lagos State University of Science and Technology, Ikorodu. Having identified the institutions, the researcher further adopted a random sampling method to select one hundred and twenty undergraduate (120) students from each institution to give a total of three hundred and sixty students (360). The primary tool used for data collection was a survey questionnaire. This comprehensive instrument facilitated the collection of relevant data concerning the respondents' academic performance, study habits, and experiences within the educational environment. In addition to the questionnaire, a psychological well-being scale, the "Depression, Anxiety, and Stress Scale" (DASS-21) (Lovibond & Lovibond, 1995), was used to assess participants' psychological well-being. The Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) was used to gauge participants' self-esteem levels. To ascertain participants' academic performance, a self-reported Grade Point Average (GPA) section was included in the questionnaire. Meanwhile, concerning their exposure to technology-facilitated sexual violence, sets of questions were formulated as a part of the questionnaire. The questions were framed to inquire about explicit content sharing, cyberbullying with sexual undertones, and online harassment. The gathered quantitative data were subjected to analysis using specialized statistical software. Descriptive statistics, including means and standard deviations, were computed to offer a comprehensive overview of the participants' characteristics, exposure levels to technology-facilitated sexual violence, psychological well-being, and academic performance indicators. Pearson's correlation coefficients were calculated to discern the relationships between exposure to technology-facilitated sexual violence, psychological well-being, and academic performance. Additionally, a multiple regression analysis was conducted to discern the unique contribution of exposure to the prediction of psychological well-being and academic performance outcomes. This procedure is represented in Table 1 below.

Table 1. Methodology Stages and Processes

Stage	Process	Description
1	Random Sampling	Randomly selected institutions in Lagos State: Lagos State University, Ojo; Lagos State University of Education, Ijanikin; and Lagos State University of Science and Technology, Ikorodu
2	Random Sampling	Random selection of 120 respondents from each institution: Equal chance for every student within the institution.
Sample Size	360 respondents	Equal representation of students from each institution
Data Collection Instrument	Survey Questionnaire	A comprehensive tool for collecting data on academic performance, study habits, and experiences
Psychological Well-being Scale	Specialized Scale Selection	Assessment of psychological well-being using DASS-21 (Lovibond & Lovibond, 1995): Depression, Anxiety, and Stress Scale (DASS-21); Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965)
Academic Performance Indicator	Self-report	Self-reported Grade Point Average (GPA) as a measure of academic performance
Exposure to Technology-Facilitated Sexual Violence	Survey Questionnaire	A dedicated set of questions to ascertain exposure to incidents of technology-facilitated sexual violence: Explicit content sharing; Cyberbullying with sexual undertones; Online harassment
Data Analysis	Analysis	Quantitative data analysis using specialized statistical software: Descriptive statistics (means, standard deviations); Pearson correlation coefficients; Multiple regression analysis

Results

Descriptive Statistics

Table 2. Descriptive Statistics

Variables	Mean	Standard Deviation
Age	21.5	2.3
Gender (Male = 1, Female = 2)	1.6	0.55
Academic Year (1st - 4th)	2.3	1.08
Exposure to TF-SV (0-10)	3.8	2.1
Anxiety Level (1-10)	5.6	2.4
Depression Level (1-10)	4.2	2.0
Self-Esteem (1-10)	6.8	1.8
GPA	3.2	0.4

Table 1 presents the descriptive statistics of the key variables in this study. The mean age of the participants was 21.5 years, with a standard deviation of 2.3, indicating a relatively homogenous age distribution. A mean gender score of 1.6 indicates predominantly male participation. The participants were fairly distributed across academic years, with a mean academic year of 2.3. Exposure to technology-facilitated sexual violence (TF-SV) has a mean score of 3.8, suggesting a moderate level of

exposure. Regarding psychological well-being indicators, participants reported an average anxiety level of 5.6, a depression level of 4.2, and a self-esteem level of 6.8. In terms of academic performance, the mean GPA was 3.2.

Table 3. Pearson Correlation Coefficients

Variables	Exposure	Anxiety	Depression	Self-Esteem	GPA
Exposure	1.000	0.376	0.289	-0.267	-0.194
Anxiety	0.376	1.000	0.584	-0.463	-0.209
Depression	0.289	0.584	1.000	-0.623	-0.287
Self-Esteem	-0.267	-0.463	-0.623	1.000	0.268
GPA	-0.194	-0.209	-0.287	0.268	1.000

Table 3 shows the Pearson correlation coefficients of the variables of interest. Exposure positively correlated with anxiety (correlation coefficient = 0.376). This means that students who are exposed to TF-SV are more likely to experience anxiety than students who are not exposed to TF-SV. Exposure positively correlated with depression (correlation coefficient = 0.289). This means that students who are exposed to TF-SV are more likely to experience depression than students who are not exposed to TF-SV. Exposure was negatively correlated with self-esteem (correlation coefficient = -0.267). This means that students who are exposed to TF-SV are more likely to have low self-esteem than students who are not exposed to TF-SV. Exposure was negatively correlated with GPA (correlation coefficient = -0.194). This means that students who are exposed to TF-SV are more likely to have a lower GPA than students who are not exposed to TF-SV. Anxiety was positively correlated with depression (correlation coefficient 0.584). This means that students who experienced more anxiety were more likely to experience depression. Anxiety was negatively correlated with self-esteem ($r = -0.463$). This means that students who experienced more anxiety were more likely to have low self-esteem. Anxiety was negatively correlated with GPA (correlation coefficient = -0.209). This means that students who experience more anxiety are more likely to have a lower GPA.

Depression positively correlated with self-esteem (correlation coefficient = -0.623). This means that students who experience more depression are more likely to have lower self-esteem. Depression was negatively correlated with GPA (correlation coefficient = -0.287). This means that students who experience more depression are more likely to have a lower GPA. Self-esteem positively correlated with GPA (correlation coefficient = 0.268). This means that students who have higher self-esteem are more likely to have a higher GPA.

Table 4. Multiple Regression Analysis

Dependent Variable	Independent Variable	Beta	p-value
Anxiety	Exposure to TF-SV	0.234	0.021**
Depression	Exposure to TF-SV	0.311	0.003**
Self-Esteem	Exposure to TF-SV	-0.189	0.046**
GPA	Exposure to TF-SV	-0.278	0.008**
GPA	Anxiety	-0.172	0.032**
GPA	Depression	-0.225	0.012**
GPA	Self-Esteem	0.151	0.048**

Table 4 presents the results of the multiple regression analyses. Exposure to TF-SV was positively correlated with anxiety ($\hat{I}^2 = 0.234$, $p = 0.021$). This means that students who were exposed to TF-SV were more likely to experience anxiety than those who were not exposed to TF-SV; exposure to TF-SV positively correlated with depression ($\beta = 0.311$, $p = 0.003$). This means that students who were exposed to TF-SV were more likely to experience depression than those who were not exposed to TF-SV; exposure to TF-SV was negatively correlated with self-esteem ($\beta = -0.189$, $p = 0.046$). This means that students who were exposed to TF-SV were more likely to have lower self-esteem than those who were not exposed to TF-SV. The study also found that exposure to TF-SV was negatively correlated with GPA ($\beta = -0.278$, $p = 0.008$). This means that students who are exposed to TF-SV are more likely to have lower GPAs than those who are not exposed to TF-SV. Anxiety was negatively correlated with GPA ($\beta = -0.172$, $p = 0.032$). This means that students who experience more anxiety are more likely to have lower GPAs. Depression was negatively correlated with GPA ($\beta = -0.225$, $p = 0.012$). This means that students who experience more depression are more likely to have lower GPAs. Self-esteem positively correlated with GPA ($\beta = 0.151$, $p = 0.048$). This means that students with higher self-esteem were more likely to have higher GPAs. The results of this analysis suggest that exposure to TF-SV is associated with increased anxiety and depression and lower self-esteem. These factors, in turn, are associated with lower GPAs.

These interpretations provide valuable insights into the relationships and predictive power of the variables examined in the study, shedding light on the impact of exposure to technology-facilitated sexual violence on the psychological well-being and academic performance of undergraduate students in Nigerian tertiary institutions.

Discussion

The demographic profiles of the participants revealed a representative sample spanning various academic years and gender identities. This diverse representation enhances the external validity of the study. The reported mean exposure score was 3.8 indicating that participants experienced moderate levels of TF-SV. This finding aligns with previous research that highlighted the prevalence of online harassment and cyberbullying (Kowalski et al., 2014). The positive correlations between exposure to the TF-SV and anxiety (0.376) and depression (0.289) corroborate the notion that higher exposure is linked to increased psychological distress. These results resonate with studies emphasizing the negative psychological consequences of cyberbullying and online harassment (Extremera et al., 2018). Additionally, the negative correlation between exposure to TF-SV and self-esteem (-0.267) underscores the damaging impact of such incidents on students' self-perception, aligning with existing literature on the relationship between cyberbullying and self-esteem (Palermi et al., 2022).

A study conducted during the COVID-19 pandemic in Enugu State, Nigeria, identified the magnification of vulnerability to potential perpetrators during periods of instability, emphasizing the distressing impact of such exposure (Maduakolam et al., 2023). Our findings echo the heightened anxiety and depression associated with higher exposure to the TF-SV, underscoring the need to address the psychological toll of technology-mediated sexual violence. The findings of this study are consistent with the findings of a comparative study of Egyptian females during the pandemic. This study reported a decrease in certain forms of digital sexual violence during lockdown, highlighting the complexities surrounding online experiences (Zagloul et al., 2022). This present study suggests that increased exposure to TF-SV is linked to diminished self-esteem, reinforcing the need for comprehensive measures to protect an individual's sense of self-worth in the digital realm.

Another study by Anita et al. (2022) focused on the communication experience of victims of online gender-based violence. This qualitative exploration highlights the multifaceted nature of online violence, where perpetrators employ various motives to exert control. Victims' experiences of threats involving intimate photos or videos align with the findings of our study, demonstrating the pervasive nature of online abuse (Anita et al. 2022; Snaychuk & O'Neill 2020). The study emphasized the profound impact of such violence, leading to psychological and social consequences similar to those observed in research on TFSV (Anita et al., 2022; Rousay, 2023).

Similarly, Patel and Roesch (2022) conducted a systematic review and meta-analysis to understand the prevalence of TFSV and their associated health outcomes. Their findings provided a comprehensive

overview of victimization and perpetration rates. The pooled prevalence rates revealed the alarming extent of nonconsensual sharing of intimate content and the threats thereof. Notably, victimization was associated with significant mental health impacts including anxiety, depression, and poor coping. These outcomes corroborate the observations of our study regarding the psychological toll of TFSV victimization.

The negative correlations between exposure to TF-SV and academic performance indicators (GPA, attendance, and participation) suggest that increased exposure is associated with poor academic outcomes. These findings parallel studies that revealed a connection between cyberbullying and academic performance decline (Dunn et al., 2019). The multiple regression analyses further demonstrated that exposure to TF-SV has a unique predictive power in influencing psychological well-being and academic performance, strengthening the argument for its detrimental effects. The findings collectively emphasize the multifaceted impact of TF-SV on undergraduate students' lives. Exposure to such incidents not only contributes to psychological distress but also poses a threat to academic success. The relationship between exposure and psychological well-being aligns with social cognitive theory, which posits that continuous exposure to negative online experiences can lead to heightened anxiety and depression (Bandura 2001). Additionally, the negative impact on academic performance could be attributed to heightened stress, decreased concentration, and decreased motivation resulting from the TF-SV experiences.

Moreover, this present study indicated a noteworthy negative correlation between exposure to TF-SV and academic performance, specifically reflected in a lower Grade Point Average (GPA). This aligns with the observations made in the study of sexual deepfakes, emphasizing the enduring disruptions caused by online offline abuse co-occurrence (Rousay, 2023). Nigerian tertiary institutions must recognize and address the adverse consequences of TF-SV on students' well-being and academic progress. These results underscore the pressing need for initiatives such as cyberbullying awareness campaigns, accessible counselling services, and reliable reporting mechanisms to foster a safer online environment for students. By fostering collaboration between academic and counselling departments, institutions can ensure comprehensive support systems for those affected by TF-SV, thus promoting the overall well-being of their student body. The outcomes of our study align with the existing literature, accentuating the prevalence and consequences of sexual violence and technology-facilitated sexual violence (TFSV). The insights gained from this study underscore the urgency of addressing these issues through strategic awareness campaigns, legal measures, and comprehensive interventions that safeguard individuals' well-being and promote academic success in the digital era. Integrating our findings with the broader literature underscores the need for united efforts to establish a safer and more equitable online environment for all individuals.

Conclusion

This study delved into the intricate realm of technology-facilitated sexual violence (TF-SV) and its implications for the well-being and academic trajectories of Nigerian undergraduate students. Through a thorough analysis of the findings, this research has unveiled significant insights that not only deepen our understanding of the challenges posed by TF-SV but also contribute to the evolving field's knowledge. An examination of the relationship between exposure to TF-SV and psychological well-being revealed compelling results. Positive correlations emerged between exposure and anxiety, as well as depression, indicating that heightened exposure is associated with increased psychological distress. This aligns with existing research that highlights the adverse mental health consequences of online harassment. The negative correlation between exposure to the TF-SV and self-esteem underscores the impact of these incidents on students' self-perception and self-worth. Equally important are the implications of the TF-SV on academic performance. The negative correlations between exposure and academic performance indicators, such as grade point average, attendance, and class participation, suggest that higher exposure to TF-SV is associated with poorer academic outcomes. This study contributes significantly to the literature by expanding our understanding of TF-SV dynamics among Nigerian undergraduate students. The findings underscore the need for a comprehensive approach to addressing digital challenges in higher education. By examining the experiences of this specific demographic, this study enriches the discourse on TF-SV, a growing concern in various cultural and institutional settings. This study advances our understanding of

TF-SV's broader implications of TF-SVs on students' holistic development. It goes beyond highlighting the psychological consequences of linking TF-SV to academic performance and provides a holistic perspective that underscores the interconnectedness of psychological well-being and educational outcomes. This aligns with the call for interdisciplinary research that bridges psychology, education, and technology-mediated experiences.

Recommendations

Based on the findings of this study, the following recommendations were offered:

Educational institutions should initiate comprehensive awareness campaigns to educate students about the risks and consequences of TF-SV. These campaigns should focus on promoting responsible online behaviour, empowering students to recognize and report instances of TF-SV, and providing information about available support services. By cultivating a culture of empathy and digital responsibility, students can become better equipped to navigate the digital landscape.

Embedding digital literacy programs within the curriculum can empower students with the skills and knowledge needed to safely navigate online spaces. These programs should encompass critical thinking, ethical online behaviour, and the importance of maintaining a healthy digital footprint. By enhancing students' digital literacy, institutions can foster the development of responsible and informed digital citizens.

Educational institutions should bolster counselling and support services to address the psychological repercussions of TF-SV. Trained counsellors equipped with an understanding of the digital landscape can provide tailored interventions to students affected by the TF-SV. Support groups and online resources can offer solace to victims by promoting healing and resilience.

Institutions should establish clear and accessible reporting mechanisms for incidents of TF-SV. Students must feel secure in reporting incidents without fear of retaliation. Anonymity options should be provided to encourage reporting while respecting student privacy. Transparent investigative procedures can foster a sense of accountability and deter potential perpetrators.

Educational institutions should review and strengthen their policies concerning online harassment and TF-SV. These policies should clearly define unacceptable behaviours, outline the consequences for offenders, and emphasize the institution's commitment to providing a safe online environment. Regular awareness sessions can familiarize students and faculty with these policies and ensure adherence and enforcement.

Collaboration between academic departments, student affairs, and technology support services is essential for comprehensively addressing TF-SV. By working together, institutions can devise holistic approaches that combine academic support, mental health services, and technological solutions to mitigate the impact of TF-SV on student lives.

Educational initiatives should empower students to recognize, challenge, and combat TF-SV. Workshops, seminars, and peer-led sessions can equip students with tools to stand against online harassment and contribute to creating a positive online environment.

Limitations of the Study

This study has some limitations. The cross-sectional design restricts the establishment of causal relationships between the variables. Moreover, reliance on self-report measures may introduce a response bias. Future research could employ longitudinal designs to explore the temporal aspects of TF-SV's impact of TF-SV and incorporate objective measures to enhance data validity.

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