

Research Article

An Overt Aggression and Cyber Bullying on Students' Academic Achievement in Secondary Schools at Harari Regional State, Ethiopia

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Abstract

The research explores the influence of various forms of aggression on the academic performance of secondary school students in the Harari Regional State, Ethiopia. The study aims to better understand how overt physical and verbal aggression, as well as cyberbullying and cyber victims, contribute to the underachievement trend in regional secondary schools. This study used the explanatory sequential mixed method design using a standardized instrument as a primary data-gathering tool. The study's respondents were three Secondary School students at Harari Regional State. The stratified random sampling technique was used to select 400 respondents from the randomly selected secondary schools in the study region. The findings revealed a significant negative correlation between cyberbullying and academic performance, $r(400) = -0.32^{**}$, with cyberbullying being the strongest predictor of poor academic performance, $\beta = -0.43$, $t(400) = -4.75$, $p < 0.05$. This emphasizes the urgent need to address physical aggression, verbal aggression, and cyberbullying in the secondary school system, and the researchers recommend education and training for teachers, parents, and students to combat these destructive behaviors and improve academic success.

Keywords: Physical Aggression, Verbal Aggression, being a Cyber Bully, and Being a Cyber Victim

Introduction

Students' academic performance is a crucial indicator of their grasp of the subject matter, ability to apply knowledge, and level of engagement in studies [1]. This concern resonates with everyone involved in education: students, teachers, parents, administrators, and the wider community. Factors contributing to performance differences among students encompass initial grades, family support, accommodation, gender, previous assessment scores, GPA, and e-learning activity [2]. Psychologists have also delved into predictors of academic performance such as intelligence, self-concept, gender, study habits, maturation, and home background (Hussain, Shahzadi, Saleem, & Ahmad, 2023). Family attributes and behavioral factors such as aggression, whether expressed externally or internally, can significantly impact academic performance [3].

Aggression has been the focus of various psychological theories. Three main perspectives on aggression include psychoanalytic theory, drive theory, and social learning theory [4]. According to psychoanalysts, aggression is seen as an instinctive concept driven by inner impulses (Kristensen, Lima, Ferlin, Flores, & Hackmann, 2003). Behaviorists view aggression as a response to adverse situations influenced by external conditions. Drive theory suggests that aggression arises from accumulated frustration [4]. For example, aversive events like provocations, loud noises, uncomfortable temperatures, and unpleasant odors can lead to aggression due to the negative effects they produce [5]. Social learning theory posits that aggressive behaviors are learned through observation and imitation [6].

The general aggression model (GAM) is a comprehensive framework that integrates various theories of aggression, taking into account social, cognitive, personality, developmental, and biological factors that contribute to aggressive behavior [7]. Both individual characteristics and situational factors play a role in shaping thoughts, emotions, and arousal, ultimately influencing decision-making processes and the likelihood of engaging in either aggressive or non-aggressive behaviors [8]. Have provided empirical evidence that supports the presence of innate, automatic aggressive responses across different species [5]. Biological explanations of aggression encompass evolutionary and genetic principles, as well as hormonal influences, to elucidate variations in individual aggressive tendencies.

Categorized forms of aggression based on expression and motive [5]. They distinguished between physical and verbal, direct and indirect, and active and passive-aggressive behaviors. Verbal aggression involves behaviors like yelling, screaming, and name-calling, while physical aggression includes actions like hitting, kicking, stabbing, or shooting [9]. Moreover, aimed to distinguish between two common subtypes of aggression: overt and covert aggression [10]. Overt aggression refers to physical and verbal observable aggressive behaviors such as name-calling, taunting, physical intimidation, and threats, while covert aggression involves actions that are not readily observable, like lying or stealing.

The traditional view of gender differences in aggression suggests that men often display direct and physical overt aggression, while women tend to lean towards indirect and relational overt aggression due to evolutionary and sociocultural factors. However, recent studies have shown inconsistent support for this theory,

indicating that personal and social influences play a significant role [11]. Despite the common belief that gender is closely linked to aggression and violence, the reality of gender differences in aggression is more intricate than commonly perceived [12].

Upon further investigation, recent research has revealed that there is a moderate negative association between overt aggression and students' academic performance. Interestingly, a weak correlation was found between covert aggression and the academic performance of male students. Moreover, it was observed that there is a weak but negative correlation between covert aggression and the academic performance of female students. Surprisingly, there is a positive correlation of overt aggression with academic performance (Khurshid, Parveen, & Khurshid, 2021).

Bullying poses a significant challenge within high schools and has negative ramifications for students' academic success. Social psychologists define bullying as a form of psychological violence involving persistent aggression that erodes an individual's sense of control and dignity [13]. Recently, the issue of bullying in schools has garnered considerable attention [14]. Alongside traditional bullying, cyberbullying has emerged as a prevalent method to target high school students through digital platforms.

Cyberbullying encompasses intentional and repetitive aggressive actions using electronic means such as personal websites, blogs, emails, text messages, and social networks [15]. Examples include posting inappropriate content online, spreading rumors using someone else's identity, and harassment via text messages and social media [16]. Prolonged exposure to bullying in school can lead to increased absenteeism, adversely affecting students' academic performance. Borualogo and Casas discovered that 18.5% of students aged 12 to 17, particularly in secondary school, skipped school due to bullying, resulting in poor academic achievement [17]. Peer victimization, bullying, and school harassment have been linked to decreased classroom engagement and school participation, further diminishing students' academic performance (Espelage, Low, Rao, Hong, & Little, 2014).

Statement of the Problem

The prevalence of overt aggression and cyberbullying among secondary school students is a matter of concern for stakeholders in the educational system. Both male and female secondary school students exhibit overt aggressive behaviors and engage in cyberbullying within the school environment and the wider community. This frequent engagement in aggressive behavior not only harms them physically and psychologically but also has the potential to hinder their learning ability and disrupt the educational environment. Despite schools being intended to be conducive and education-friendly, the reality on the ground shows that a significant number of students experience aggressive episodes that adversely affect their academic performance and psychological well-being in both the short and long term.

As a result of the alarming increase in aggressive behaviors and cyberbullying among students, stakeholders, including parents, school authorities, and students, have called for investigations to address the problem. The questions that arise from this situation include whether both sexes engage in overt (physical and verbal) aggressive behavior, how their engagement in such behavior influences their academic performance, whether there is a significant association between students' aggressive tendencies and their academic performance, whether both sexes engage in cyberbullying, and how their engagement in cyberbullying influences their academic performance. Also, there is a need to determine if there is a statistically significant mean difference for both sexes concerning verbal and physical aggression and

cyberbullying. These inquiries are crucial for understanding the extent of the issue and its ramifications. Overall, it is imperative that these concerns are taken seriously and addressed promptly to ensure the well-being and academic success of secondary school students.

Research Gap

Most international and local research on aggression has focused primarily on traditional school bullying, with little emphasis placed on cyberbullying. The studies reviewed have generally not provided a comprehensive analysis of cyberbullying and overt aggression among secondary school students. Some studies concentrate on verbal and physical aggression, while others focus solely on cyberbullying, thus failing to fully address the prevalence of overt aggression among secondary school students. It is imperative to study all three variables (verbal and physical aggression and cyberbullying) simultaneously to gain a complete understanding of the prevalence of overt aggression. In addition, most research on factors influencing academic performance has been centered on socioeconomic status, intelligence, learning methods, personality traits, and classroom instruction. This study aims to highlight the prevalence of overt aggression and cyberbullying, as well as their impact on students' academic performance. It is crucial to note that past studies have not sufficiently investigated the influence of overt aggression (verbal and physical) and cyberbullying on academic performance. Therefore, this research endeavors to address this gap by thoroughly analyzing overt aggression and cyberbullying and their connections to academic performance among Secondary Schools in Harari Regional State.

Rationale of the study

The purpose of this study is to shed light on the impact of overt aggression and cyberbullying on the academic performance of Secondary School students in Harari Regional State, Eastern Ethiopia. Research has identified school bullying as a serious threat to educational outcomes, making it crucial for stakeholders such as school personnel, government policymakers, and the community to benefit from the findings [18]. Bullying victimization can hurt students' academic performance, while bullying behavior can also detrimentally affect educational environments [19,20]. Moreover, students themselves can benefit from understanding the prevalence of aggressive behavior and cyberbullying among their peers and the influence of these behaviors on their academic performance. Additionally, this research aims to provide insights into the prevalence of overt aggression and cyberbullying among students and how these behaviors are linked to academic performance, ultimately contributing to the existing literature and inspiring further in-depth studies on this subject.

Novelty of the Study

Upon reviewing scholarly studies in the field, it is evident that aggression and school bullying significantly influence academic success. While past research has largely focused on the relationship between aggression, bullying, and academic performance, our study delves into the specific effects of overt aggression and cyberbullying on academic performance in secondary schools. In addition, most research on factors influencing academic performance has been centered on socioeconomic status, intelligence, learning methods, personality traits, and classroom instruction. This study aims to highlight the prevalence of overt aggression and cyberbullying, as well as their impact on students' academic performance. It is crucial to note that past studies have not sufficiently investigated the influence of overt aggression (verbal and physical) and cyberbullying on academic performance. Specifically in Ethiopia, despite widespread media coverage of cyberbullying and overt aggression in Ethiopian secondary schools, this concerning behavior is not receiving the attention it

warrants. Additionally, there is a lack of comprehensive data on the extent of bullying and victimization in Ethiopian secondary schools, making it challenging to gauge the prevalence of overt aggression and cyberbullying and their consequent influence on academic performance across Ethiopian secondary schools. Methodologically, the majority of previous research was done on correlates between traditional bullying and academic achievement, but this research focused on the influence of cyberbullying, physical, and verbal aggression on students' academic performance in secondary school.

Purposes of the Study

The study aimed to achieve the following objectives:

- To outline the correlations between physical aggression, verbal aggression, cyberbullying, cyber victimization, and the academic performance of secondary school students in Harari Regional State.
- To forecast the impact of physical aggression, verbal aggression, cyberbullying, cyber victimization, and academic performance among secondary school students in Harari Regional State.

Methods and Materials

In this study, a mixed methods approach was utilized to gather both qualitative and quantitative data. Specifically, the researchers employed an explanatory sequential mixed methods design, which involved collecting quantitative data first, followed by the collection of qualitative data to provide further explanation and insight. The main reason for utilizing this mixed research design was for triangulation, aiming to corroborate and enhance the quantitative data with insights from the qualitative data. According to Miles et al (2013), qualitative data offer well-grounded, rich descriptions and explanations of human processes, which was a key factor in considering its inclusion in this study. The quantitative aspect of the data collection enabled the researchers to quantify the facts gathered from the learners.

The study focused on three selected secondary schools in the Harari Regional State, and a stratified random sampling technique was used to select students due to variations in population sizes of different strata, such as sex, grade, and school. The total number of students in these secondary schools was 3503, and a sample of 400 students was selected for the study, with 207 male students and 193 female students. Inclusion criteria for the study comprised factors such as age, gender, educational level, school type, and class size. The sample size was calculated using the Yamane (1967) formula with a 95% confidence level.

$$n = \frac{Ni}{1 + Ni(e)^2}$$

Where: n = sample size required N = number of people in the population

e = allowable error (%), i = (1, 2, 3 ... i)

$$n = \frac{3503}{1 + 3503(0.05)^2} = \frac{3510}{1 + 3510(0.0025)} = \frac{3510}{8.7775} = 400$$

Data was gathered through self-administered questionnaires, interviews, and document reviews, all of which were designed to

be easily understood. The questionnaires, specifically tailored as a research tool, were distributed to students. The researcher utilized the Buss-Perry aggression scale to evaluate overt aggression, both physical and verbal, developed by. This five-point Likert scale, comprising 29 items, examined aggressive attitudes, encompassing physical aggression, hostility, anger, and verbal aggression. The scale responses were coded as follows: (1) Absolutely Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Agree. According to [21], the internal consistency for each scale was as follows: Physical Aggression (.85), and Verbal Aggression (0.72), assessed using Cronbach's alpha. Additionally, to assess cross-cultural influence, the internal consistency of each scale was re-evaluated [21].

Table 1: Reliability test results of overt aggression and cyberbullying victims and cyberbullies

No	Variables	Number of items	Cronbach's alpha value
1	Physical Aggression	12	.73
2	Verbal Aggression	5	.74
3	Cyber Bully Victims	7	.85
4	Cyber Bully	4	.80
	Overall reliability	29	0.75

In Table 1, the reliability results for physical aggression, verbal aggression, cyberbullying victims, and cyberbullying were as follows: Cronbach's alpha for physical aggression was 0.73, for verbal aggression it was 0.74, for cyberbullying victims it was 0.85, and for cyberbullying it was 0.80. The overall reliability test result for overt aggression and cyberbullying victims and cyberbullies was 0.75, which is considered acceptable.

Conducting interviews allowed for more in-depth responses than other methods. The purpose of the interviews was to gather additional opinions to support and complement the questionnaire responses. The questionnaires used were approved by APA Yoon, J. (2013) and adapted for this study.

Furthermore, the researcher utilized the previous-semester average scores (CGPA) of the students, collected from each school's student roster for the year 2024. The data was then exported to the Statistical Package for Social Science (SPSS) version 23 for further cleaning and analysis. The data analysis involved both descriptive and inferential statistics. Descriptive statistics such as frequency, percentages, means, and standard deviation were used to summarize the demographic variables of the respondents' responses on aggressive tendencies and cyberbullying experiences. Inferential statistics, including independent t-tests, bivariate correlations, and stepwise multiple regression, were employed to demonstrate the strength of relationships among variables and to predict possible values of those variables.

Results and Discussions

Table 2: Background of respondents

	Demographic variable	Frequency	Percentage (%)
Sex	Male	207	51.75
	Female	193	48.25
	Total	400	100.00
Grade	9	110	27.50
	10	104	26.00
	11	98	24.50
	12	88	22.00

In Table 2, it's evident that 207 (51.75%) of the individuals surveyed were male, while 193 (48.25%) were female. Looking at the grade level breakdown, the largest portion, 110 (27.25%), was from grade 9, followed by 10 (26%) from grade 10, 98 (24.5%) from grade 11, and 71 (22%) from grade 12.

Table 3: Mean and Standard deviation of overt aggression, cyberbully victims, and cyberbully and students' academic performance

No	Variables	Mean	Std. Deviation
1	Physical aggression	3.38	.47
2	Verbal aggression	3.38	.69
3	Cyber Bully Victims	3.04	.17
4	Cyber Bully	3.09	.29
5	Student performance	64.75	12.50

Based on the data presented in Table 3, it is evident that students exhibited a mean physical aggression score of 3.38 with a standard deviation of 0.47, indicating a consensus on the issue of physical aggressiveness. Similarly, a mean verbal aggression score of 3.38 with a standard deviation of 0.69 was reported, suggesting agreement on the topic of verbal aggressiveness among the students. In contrast, the mean score for cyberbullying victimization was 3.04 with a standard deviation of 0.35, signifying indecision on this matter. The mean cyberbullying score was 3.09 with a standard deviation of 0.29, also indicating uncertainty among students regarding cyberbullying. Furthermore, students achieved an average academic performance score of 64.75 with a standard deviation of 12.50.

Table 4: Correlation matrices among academic performance, overt aggression, cyberbullying, and victims

No	Name of Variables	Academic Performance	Physical Aggression	Verbal Aggression	Cyber Victim	Cyber Bully
1	Academic Performance	1	-.247**	-.245**	-.092	-.272**
2	Physical Aggression		1	.137**	.055	.013
3	Verbal Aggression			1	-.036	.170**
4	Cyber Victims				1	.036
5	Cyber Bully					1

** . The correlation is statistically significant at the 0.05 level (two-tailed).

The correlation analysis presented in Table 4 highlights important relationships among academic performance and different types of aggressive behaviors, as well as cyberbullying. It was observed that academic performance was negatively correlated with physical aggression $r(400) = -.25^{**}$, verbal aggression $r(400) = -.24^{**}$, and cyber bullying $r(400) = -.27^{**}$, all of which were statistically significant at $p < 0.05$, two-tailed. However, the negative correlation between academic performance and cyber victim $r(400) = -.092$ was not statistically significant ($p > 0.05$, two-tailed). Conversely, physical aggression showed a significant positive correlation with verbal aggression, $r(400) = 0.14^{**}$, indirectly indicating a co-existence of these two types of aggression. Additionally, physical aggression exhibited a positive but not significant relationship with cyber victim $r(400) = 0.05$ and cyber bully $r(400) = 0.13$, suggesting that overt aggression negatively impacts academic performance. Verbal aggression was also significantly correlated with cyberbullying $r(400) = 0.17^{**}$, indirectly indicating its association with cyberbullying behavior. Notably, cyber bully and cyber victim showed a positive correlation, but it was not significant $r(400) = 0.36$, implying that the same students might engage in both cyber bullying and become victims at the same time.

In conclusion, cyberbullying, physical aggression, and verbal aggression have all been recognized as factors that adversely affect students' academic performance, with cyberbullying exhibiting the most significant impact and verbal aggression the lowest. Increased participation in these behaviors was associated with decreased academic performance. Additionally, academic performance exhibited

a negative correlation with cyber victims, but it was not statistically significant $r(400) = -.092$, indicating an insignificant decrease in academic performance for students who were victims of cyber bullying.

Table 5: Stepwise regression analysis of academic performance, overt aggression, and cyberbullying

Model	USC			SC			Sig.
	R	R Square	B	Std. Error	Beta	t	
	0.41	0.16					
1. Constant			6.38	.55		11.58	.000
Physical Aggression			-.22	.051	-.21	-4.30	.000
Verbal Aggression			-.14	.039	-.17	-3.53	.000
Cyber Bully			-.43	.092	-.23	-4.75	.000

a. Dependent Variable: CGPA

b. Predictors: (Constant), Physical Aggression, Cyber Bullying,

In Table 5, the results indicate a significant relationship between academic performance and overt aggression (both physical and verbal) as well as cyberbullying. The R-squared value of 0.16 suggests that overt aggression and cyberbullying combined account for 16% ($R^2 * 100\%$) of the variation in students' academic performance, leaving 84% ($1 - R^2 * 100\%$) as unexplained variables. From the data analysis, it was evident that out of the four independent variables predicting physical aggression, verbal aggression, and cyberbullying, only three were statistically significant: physical aggression (X1), verbal aggression (X2), and cyberbullying (X3). Therefore, the multiple regression equation for the students' academic performance (measured by CGPA, Y) can be presented as $Y = 6.38 - 0.22x_1 - 0.14x_2 - 0.43x_3$, where 6.38 is the constant term. The negative slope coefficients indicate that each unit increase in physical aggression (x1), verbal aggression (x2), and cyberbullying (x3) is associated with a decrease in students' academic performance by 0.22, 0.14, and 0.43 points, respectively. The strongest predictor in the model is cyberbullying, with a β value of $\beta = -0.43$, $t(347) = -4.75$, $p < 0.05$. These findings suggest that cyberbullying exerts the most influence on students' academic performance compared to the other variables.

Discussions

In this study, we explore the complex relationship between gender differences, aggression, and cyberbullying among secondary school students. Our first goal was to investigate whether there are statistically significant differences between males and females in terms of overt aggression (physical and verbal) and experiences of being a cyberbullying victim or perpetrator. Surprisingly, the results showed no significant gender disparities in these areas. This finding is consistent with several previous studies, including those by all of which found no significant differences between boys and girls in terms of verbal or physical aggression [22,23]. However, the broader research on gender and overt aggression has been somewhat contradictory, with some studies indicating that males tend to exhibit more physical and verbal aggression than females, as reported by and Shaffer (2005) [24]. Also found that physical aggression is more common among male students [25].

Regarding cyberbullying, the current study's findings aligned with certain previous research indicating minimal gender differences, as observed by [26-28]. However, other studies have suggested that girls are more susceptible to cyberbullying compared to boys, a conclusion contradicting the current study's results, as highlighted by, Schneider et al. (2012), and Wang et al. (2009). Marengo et al. (2021) added complexity to the issue, identifying higher rates of cyberbullying victimization among girls but higher perpetration rates among boys [29].

The study's second objective was to investigate how overt aggression, cyberbullying, and academic performance are connected among secondary school students. The results revealed significant negative links between physical aggression, verbal aggression, cyberbullying perpetration, being a victim of cyberbullying, and academic performance. These findings are consistent with previous research by [30], Hawkins et al. (1998), Stipek and Miles (2008), Schwartz et al. (2006), Uludag (2013), Khurshid et al. (2017), Rebellon and Van Guddy (2010) all of which also concluded that aggression and bullying are negatively associated with academic achievement [31-33].

The detrimental effects of aggression and cyberbullying on academic performance are undeniable. Students who are victims of bullying often experience reduced motivation and engagement in school, leading to increased absenteeism and higher dropout rates. Cyberbullying, in particular, presents a significant challenge as it can persist both inside and outside of the school environment, making it difficult for victims to escape its impact. Several studies, including those by Cynthia (2014), Shafqat and Jan (2015), Kokkinos (2012), Li (2007), and have discussed how overt aggression and cyberbullying behaviors can profoundly affect students' academic performance, influencing their physical, social, psychological, and emotional well-being [34,35].

The perpetration of aggression and cyberbullying can have detrimental effects on both the perpetrators and the victims. These behaviors can consume time and energy that should be dedicated to academic pursuits (Erdur-Baker, 2010). Research indicates that cyberbullying victimization can lead to low self-esteem, frustration, anger, depression, and increased suicidal tendencies. It has also been linked to emotional and behavioral problems among students (Kim et al., 2018). Additionally, aggressive students may struggle to control their aggressive feelings and display hostile behaviors towards others (Jeong et al., 2017).

Furthermore, cyber-victimization has been associated with mental health and behavioral problems (Dooley et al., 2012). Victims of cyberbullying may themselves become aggressive individuals due to increased levels of depression and anxiety (Tosuntaş et al., 2020). Aggression has also been found to be linked to cyberbullying perpetration (CBP; İçellioglu & Özden, 2014). A longitudinal study of 3449 Korean middle school students revealed that higher levels of aggression were associated with increased cyberbullying (You & Lim, 2016).

The research also found that extended internet use, prior offline bullying, and being a victim contribute to the detrimental impact of cyberbullying. Cyberbullying is especially damaging because

there is no respite from it. One of the most harmful outcomes is that the victim starts to avoid friends and social activities, effectively isolating themselves, which is precisely the aim of the bully. It's important to note that cyberbullying constitutes a form of psychological abuse, with victims being more than twice as likely to suffer from mental health disorders compared to traditional bullying. Furthermore, perpetrators may face negative social repercussions, including reduced social support and increased isolation, which can further influence their academic performance.

The study aimed to anticipate the impact of overt aggression, cyberbullying perpetration, and cyberbullying victimization on the academic performance of students. The results of the multiple regression analyses indicate that both physical and verbal aggression, along with involvement in cyberbullying as either a perpetrator or victim, hurt students' academic performance. This corresponds with previous studies conducted by, Caprara et al. (2000), and all of which have highlighted the harmful effects of aggressive and bullying behaviors on academic success [36-38]. Verbal aggression, physical aggression, and cyberbullying all have adverse effects on an individual's self-esteem and personality.

Those who are bullied may experience challenges such as depression, anxiety, sleep and eating disorders, loneliness, and reduced academic achievement. Often, these effects may persist into adulthood, leading to increased substance abuse and decreased social stability. The study reveals that students who are bullied often suffer in silence due to shame, embarrassment, and fear of further pain. As a result, the bullying continues unchecked. Those who do not seek help from trusted adults or school counselors tend to experience more severe physical, psychological, and social consequences compared to their peers in similar situations. These effects may include frequent headaches or stomachaches, self-destructive behaviors, and avoidance of social interactions.

The findings from this study emphasize the intricate and varied ways in which both overt aggression and cyberbullying can negatively impact students' academic performance. These impacts range from decreased concentration and engagement to increased absenteeism and mental health challenges. Previous works by Kowalski and Limber, and Nansel et al. (2003) have also highlighted these concerns [39-41]. In conclusion, this study offers valuable insights into the complex relationships among gender, aggression, cyberbullying, and academic performance among secondary school students. The implications are important for developing intervention and support strategies within the educational context [42-46].

Conclusion

This study's findings reveal a significant negative relationship between cyberbullying, overt aggression (both physical and verbal), and the academic performance of secondary school students in Harari regional state. The research explores how these various forms of bullying and aggression impact students' educational outcomes, with some intriguing and unexpected results. Notably, the study found that cyberbullying, physical aggression, and verbal aggression all negatively influence students' academic performance. This suggests that the detrimental effects of bullying extend beyond just the psychological and emotional toll and can directly hinder a student's ability to succeed in the classroom. The negative impact of these aggressive behaviors is likely multifaceted - the stress and distraction they cause can impair cognitive function and focus, while the social isolation and lack of support they engender can undermine a student's overall engagement and motivation in their studies.

However, the researchers made one surprising discovery - cyberbullying victims, unlike victims of other forms of aggression, did not show a significant association with poorer academic performance. This unexpected result indicates that, for reasons the study does not fully elucidate, cyberbullying victims may be able to maintain their academic achievement despite the trauma they endure. Perhaps these students can compartmentalize the online abuse or receive sufficient support from teachers and peers to buffer its impact on their schoolwork. Ultimately, the most important finding is that cyberbullying emerged as the single strongest predictor of diminished academic performance among secondary school students in this region. This suggests that addressing the growing problem of cyberbullying should be a top priority for educators and policymakers seeking to support student success. Developing robust anti-bullying initiatives, improving digital citizenship education, and fostering more positive school climates will all be critical in mitigating the academic consequences of this pervasive issue.

Limitations of the study

This study, while providing valuable insights into the relationship between overt aggression, cyber victimization, cyber bullying, and academic performance among secondary school students, is subject to several important limitations that should be considered when interpreting the findings. Firstly, the research was conducted exclusively on 9th, 10th, 11th, and 12th-grade students, encompassing a sample size of only 400 individuals. This relatively small and homogeneous sample may not be fully representative of the broader secondary school population, and the results may not generalize to younger or older students. Secondly, the scope of the study was narrowly focused on the influence of specific forms of aggression and victimization, namely physical, verbal, and cyber-based, on academic achievement. While these factors are certainly relevant, there are likely numerous other variables, both within the school environment and in students' personal lives, that could also impact their educational outcomes.

The geographic limitation of the research to the Harari Regional State in Ethiopia also raises questions about how well the findings would translate to secondary schools in other regions or countries, where cultural norms, educational systems, and technological access may differ significantly. Additionally, the cross-sectional nature of the study, conducted at a single point in time, means that the researchers were unable to establish causal relationships between the predictor variables and academic performance. A longitudinal design tracking students over an extended period would be necessary to more definitively determine the long-term effects of overt aggression, cyber victimization, and cyber bullying on educational attainment.

Finally, the researchers acknowledge that their findings may be influenced by human biases, particularly about students' self-reported experiences in the digital realm, which can be difficult to verify and may be subject to distortion or underreporting. In light of these limitations, the authors rightly call for further research with larger, more diverse samples and extended timelines to corroborate and expand upon the current studies.

Recommendations

The study's findings underscore the concerning influence that overt aggression, both physical and verbal, can have on students' academic performance when they are the victims or perpetrators of cyberbullying. The profile of students' aggressive cyberbullying tendencies reveals a clear, negative impact on their scholastic achievement. This troubling trend highlights the critical need for comprehensive interventions to address and reduce the prevalence

of such harmful behaviors in schools. School administrators, working closely with guidance counselors, must take proactive steps to map the aggressive and cyberbullying landscape within their institutions. Conducting regular surveys will provide the crucial data needed to determine the specific nature and extent of the problem. Identifying the root causes behind these aggressive tendencies and bullying patterns is a vital first step. With this accurate, holistic information, schools can develop tailored strategies to tackle the issue head-on.

Educating students, teachers, and parents about the alarming prevalence, underlying factors, and far-reaching consequences of aggressive behavior and cyberbullying is paramount. Equipping young people with assertiveness training can empower them to stand up to bullying and find constructive ways to channel their emotions. Engaging families in the intervention process is also key, as parents must be made aware of the bullying challenges their children face and be empowered to support them. Furthermore, schools should proactively identify students who exhibit a propensity towards aggressive or bullying conduct and direct them towards positive, community-building activities and group work. This multifaceted approach, leveraging data-driven insights, comprehensive education, skill-building, and targeted interventions, offers the best path forward to mitigate the detrimental impacts of overt aggression and cyberbullying on students' academic success.

Ethics Approval and Consent to Participate

The Haramaya University postgraduate program directorate approved this study. All procedures performed in the study followed the ethical standards of the institutional research committee, the 1964 Helsinki Declaration and its later amendments, or comparable ethical standards. For participants under the age of 18, written consent was obtained from a parent or legal guardian, along with assent from the minors themselves. Informed consent was obtained from all individual participants included in the study.

Consent to Publication

Informed consent for the publication of the data and identifying information was obtained from all participants, including this study. Participants reviewed the content and explicitly agreed to its publication.

Availability of data and materials

The data supporting the findings of this study are not publicly available due to privacy and ethical restrictions, but are available from the corresponding author upon reasonable request.

Conflict of interest

The authors have no conflict of interest to disclose, including financial, personal, or institutional relationships that might influence the content of this article.

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