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The Impact of Cyber Bullying on the Psychological Well-being of University Students: A Study in Jordanian Universities

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Abstract: The study examined the impact of Cyberbullying on Jordanian university students' psychological well-being. The correlational descriptive method was used with a sample of 750 male and female students from Jordanian universities. Findings revealed a low degree of cyberbullying's effect on their psychological well-being. No significant differences were found based on gender, college, cumulative GPA, or type of university. However, first-year students experienced higher levels of impact. The researcher recommended raising awareness about cyberbullying consequences, utilizing punishments as deterrents, and implementing preventive mechanisms.

1 Introduction

In the digital age, societies are experiencing a cognitive openness and technological revolution in all areas of individual practice. It has become difficult to control the inputs and outputs of a generation raised in the absence of supervision that was more applicable before the development of social media and its rapid spread among all segments of society. Especially since social media platforms have become fundamental priorities for individuals in general, and particularly for students whose studies often require access to online educational platforms. This necessitates a culture of dealing with these platforms to avoid the psychological repercussions on the service recipient (the victim) if they are not properly utilized.

Social networking sites and electronic platforms have spread significantly in recent times, becoming the largest and most extensive websites on the web. They continue to spread rapidly, and the desired services from these networks have expanded, granting users extensive capabilities to exchange information in various fields such as education, culture, sports, and more. These social websites, through their participants, provide a vast amount of information, research, and study materials [1]. They are electronic social networking sites that allow individuals to establish social networks by introducing themselves, their interests, and orientations, and selecting their friends from open, closed, or secret groups. They also facilitate the exchange and dissemination of written materials, photos, videos, and a range of tools that facilitate communication and interaction [2].

Cyberbullying has become a contemporary issue in most fields due to its role in undermining individuals' psychological well-being, it investigates a dangerous behavioral phenomenon that has become evident with the advancement of information technology and communication means in recent times, researchers have focused on the concept of cyberbullying, considering it as a new form of traditional bullying [3]. Information technology and communication have brought about radical transformations in communication concepts, exerting control over various domains, which has enabled some young people to engage in bullying and harassment of their peers using the available electronic means [4]. Thus, intentionally causing harm and repeated damage to individuals through the use of technology, such as various social networking sites, is referred to as cyberbullying.

Cheng et al [5] defined cyberbullying as "repeated aggressive acts committed by a group or individual using technology to deceive and harass a person by revealing personal or embarrassing information about them and sending it to others or sharing explicit photos of them." Hartzler [6] defined cyberbullying as "unwanted aggressive behavior with an imbalance of power, occurring repeatedly, and executed through digital devices." Dark [7] indicated that extortion, manipulation, and enticement are forms of cyberbullying, in addition to verbal abuse, exclusion, exposure, online stalking, harassment, and identity theft [8]. These behaviors allow individuals to enter social relationships with those around them, isolating them from others, leading to the emergence of psychological disorders beyond real social situations [9]. Khine et al. [10] define cyberbullying as "deliberate aggressive acts performed using electronic

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communication forms by an individual or group repeatedly over time against a victim who cannot defend themselves."

[11] Indicated that cyberbullying is one of the most dangerous forms of bullying due to its reliance and extensive hiding opportunities. This allows cyberbully to repeatedly harm the victims, spreading content that psychologically and socially harms them and causing negative experiences for both victims and bullies. It is a more secretive form of traditional bullying and includes teasing, name-calling, threats, false accusations, and social isolation.

Furthermore, Al-Brashidiyah [12] identified the reasons for the spread of cyberbullying among students, including the bully's ability to hide, the ease of spreading bullying content, the speed at which it reaches a larger audience with rapid dissemination and transcending the boundaries of time and place. Other factors include a lack of emotional empathy, as the impact of their actions on the victim, the lack of supervision on social media platforms, and the ability to track the victim outside the school through mobile phones, email, or messaging apps at any time of the day.

Cyberbullying has been associated with various psychological disturbances, such as aggressive behavior, social maladjustment, antisocial behavior, low self-esteem among victims, psychosomatic disorders, decreased sense of psychological security, increased anxiety, emotional instability, social anxiety, and in severe cases, it can be a contributing factor to the onset of severe depression and suicidal behavior. Its spread has consequences that affect individuals' psychological and academic adaptation, the educational environment, and the psychological and emotional aspects of students, thus impacting society as a whole [13]. Widespread by university students, the issue of cyberbullying has emerged as a contemporary problem.

Cyberbullying provides perpetrators with a sense of freedom and an escape from punishment, making them more audacious in committing foolish acts against others. Some individuals exploit their skills in using modern technologies to harass their peers or teachers, taking advantage of the anonymity provided by the online space [14]. Electronic bullies may experience repeated delays in starting or completing educational tasks, despite being aware of their importance and the absence of a need to postpone them. This is due to their constant preoccupation with social media platforms in threatening and electronically pursuing their victims, resulting in the waste of time and the misdirection of their intellectual and physical energies towards cyberbullying [15]. University students often delay a third of their daily activities due to sleep and social media usage, resulting in negative effects on their academic success and feelings of psychological stress [16].

 There are several types of electronic bullying used by individuals to harm others, as reported by [17] [18], including:

- Harassment: This involves sending disrespectful, insulting, and offensive messages or writing comments of this nature.

- Reputation damage: This entails sending untrue someone picture intention mocking them.

- Electronic bullying involves speaking in an insulting manner, with the purpose of enjoying seeing them feel sad.

- Identity theft: This involves identity matters.

- Deception: When the bully deceives someone to reveal their secrets and then publishes and sends them to others.

The bully engages in this behavior intentionally and repeatedly, relying on the power imbalance between them and the victim. Bullying takes various forms, such as verbal aggression, physical assault, harassment, spreading rumors, isolation, and social rejection [19]. This includes sending abusive electronic messages, pictures, and videos that contain insults and derogatory language, diminishing the dignity and worth of others, causing them emotional or material harm. The methods of cyberbullying can vary, and they include verbal aggression, physical assault, harassment, spreading rumors, social isolation, and rejection.

According to Gupta & Prabhu [20] the reasons for internet addiction among some university students can be attributed to poor time management and the easy access to the internet within universities, which increases their internet usage. This coincides with the challenges that new students face in adapting to university life and finding new friends, leading them to rely on available social media platforms to compensate for these difficulties and escape from the academic stress. Thus, their virtual relationships become strong due to the comfort they provide.

The need for security is closely related to the instinct of self-preservation, and it includes the need for psychological security, which is the individual's sense of living in a friendly environment that fulfills their needs, where others love, respect, and accept them within the community. It also involves stability, safety, social compatibility, and good health, as well as avoiding danger, exercising caution, dealing with crises, securing against natural disasters, and experiencing stability, trust, security, and peace of mind, psychological stability is essential in a person's life, as without it, they may experience misery and unhappiness, unable to enjoy their God-given abilities. Over time, mental health, especially the changes and the emergence of platforms and websites that make individuals susceptible to cyberbullying, an easily accessible prey.

Social media platforms and e-learning platforms have become more attractive and widespread among students who use various electronic communication tools. This has led cyberbullies to move from the real world to the virtual world, which has significantly contributed to the prevalence of many negative behaviors. This phenomenon is experienced by all societies, as it has facilitated the spread of violence and crime. Consequently, students suffer from various social and psychological problems such as anxiety, depression, social exclusion, and low self-esteem. This drives individuals to seek refuge in another world, represented by the virtual (electronic) world of the internet, in order to compensate for their deficiencies. It requires concerned parties to strive to address this electronic phenomenon before it worsens [21].

One of the most important means of preventing cyber bullying, as stated by Al-Brashidiyah [12], Personal and individual skill development, Firm parental upbringing Adaptation strategies, Peer-led anti-cyberbullying programs, Preventive intervention programs, and School intervention and awareness programs about cyber bullying.

By about cyber bullying, engaging civil society organizations in combating the phenomenon, focusing on educational institutions and their role in fighting cyber bullying, designing electronic films that explain the concept of cyber bullying and its problems in a simplified manner for members of society, and benefiting from the experiences of other countries in dealing with the phenomenon.

Numerous studies have been conducted to demonstrate the psychological effects of cyber bullying on its victims. Yavuz and Eristi [22] found that most cyber bullying victims are male. Exposure to cyber bullying depends on the mastery of internet usage and the typical websites used by victims, as well as the age group and the curriculum. Hynujoo [23] found that most university students who were victims of cyber bullying experienced a decrease in their psychological adjustment to university life, increased social isolation, and a lack of social and cognitive support that could help them deal with the cyber bullies.

A study by Safari [24] indicated that 55% of university students were victims of cyberbullying at least once in their lives. Furthermore, a study by Goodrich [25] revealed that 51% of girls in higher education institutions experienced cyber bullying, compared to 7% of boys, and 31% of them identified their cyber bullies through various technological means. Another study by Ammar [26] indicated statistically significant associations between cyber bullying and internet addiction, with males being more likely to engage in cyber bullying and have internet addiction. Antoniadou and Kokkinos [27] observed a negative correlation between empathetic sympathy and participation in bullying, especially among girls. The development of empathetic sympathy, particularly emotional empathy, may be inadequate among students, preventing them from understanding and caring about the emotional state of others. The negative association between online empathy and aggression among participants in education may be related to computer-mediated communication. Furthermore, a study by Al-Munizil and Al-Sharifin [28] showed no evidence of cyber bullying among students despite their usage of social media platforms.

Additionally, a study conducted by Bashir [29] found that e-learning interaction consists of a triadic structure: learner interface, feedback interaction, and learning content. Zhou, et al [30] found significant gender differences in online bullying, with males exhibiting higher levels of aggression, harm, and mobbing behavior. Compliance was negatively associated with involvement in crime, harm, and mobbing behavior, while gangsterism was positively associated with mobbing behavior.

A study conducted by Al-Faqi et al [31] revealed a significant positive correlation between cyberbullying and academic procrastination among university students. The study also found no statistically significant differences in cyber bullying based on gender (males vs. females) among university students, and there were no statistically significant differences in cyber bullying and academic procrastination attributed to the variable of gender.

Finally, a study was conducted (2022) that COVID-19 pandemic closures led to the transformation of the teaching process to be online leaving thousands of students out of access, and the results showed that time management for educational waste recovery programs is the first important factor affecting the outputs, teacher participation is considered In the formulation of these recovery programs is extremely important to improve outcomes [32].

Regarding previous studies, the researchers benefited from them in developing the data collection tool, understanding and comparing their results with the current research, and using appropriate statistical analyses. They also reinforced some opinions related to the theoretical framework. Therefore, the current study was distinguished from previous studies by its attempt to identify "cyberbullying and its psychological impact among a sample of Jordanian university students for the academic year 2022-2023."

From the above, it can be concluded that there has been an increasing trend towards digital transformation in various aspects of life in the current era. This transformation has become a realistic technological phenomenon with its multiple mechanisms and means through social networking sites, including popular platforms such as WhatsApp, Twitter, Facebook, Messenger, and others. Additionally, educational platforms have become an integral part of the educational reality. This has contributed to the development of the digital openness environment and the resulting prevalence of

cyber bullying among a category of empowered individuals who are proficient in the art of cyber bullying, affecting victims who are aware of the risks of misuse of electronic communication media.

Hence, the importance of a sense of psychological security, which is needed by all individuals, especially workers, as it contributes to their sense of security, psychological stability, and well-being. However, the challenges of online education have weakened the motivation for belonging, love of life, and communication skills with others, leading individuals to feel a lack of security and stability among their peers and society. Psychological security is a necessary need for academic professionals to ensure the continuity of their effectiveness. Nevertheless, cyber bullying issues hinder this.

There is a consensus among many researchers that communication technology has ushered in a new era of communication and interaction among the Earth's population, providing abundant information and knowledge to its users. However, on the other hand, there are concerns about the potential negative psychological effects or repercussions it may have. Therefore, the focus will be on cyber bullying and its psychological impact on users of social networking sites and educational platforms, particularly among university students.

The Problem of the Study and its Questions

Electronic communication and modern technologies in their various forms have paved the way for the establishment of a culture shaped by children, teenagers, and young people. These technologies grant them the ability, from their perspective, to overcome traditional culture. However, they may find a loss of privacy in technology as they venture into a virtual world that stimulates their imagination, entertains them, and provides hidden pleasures. Yet, behind these pleasures lie depression, bullying, dependence, intellectual deviation, extremism, and ethical challenges.

The phenomenon of electronic bullying poses a new challenge to society, as it represents a serious threat to the mental health and academic achievement of its victims. It occurs when university students misuse the internet, social media platforms, educational platforms, and digital devices, using them to share inappropriate content such as images, videos, harmful messages, and engaging in inappropriate speech and actions on a recurring basis. This issue warrants studying the extent to which electronic bullying reflects on the psychological well-being of a sample of Jordanian university students by addressing the following research questions:

1. To what extent does electronic bullying affect the psychological well-being of a sample of Jordanian university students from their perspective?

2. Are there statistically significant differences at a significance level ($\leq 0.05\alpha$) in the assessments of the study sample of university students regarding the extent to which electronic bullying affects their psychological well-being, attributed to factors such as gender, academic year, and college type?

Study Objectives: Assess electronic bullying psychological well-being of a sample of Jordanian university students, as perceived by the students themselves. Additionally, differences in perceptions regarding the extent of electronic bullying have an impact on their psychological well-being based on variables such as gender, academic year, and college type.

Significance of the Study:

- This study addresses issues related to electronic bullying, which poses a burden on students, parents, and society. It negatively affects the mental well-being of students (victims) and leads to psychological side effects such as academic failure, harm to others, and social unrest.

- The study can benefit students, faculty members, parents, and researchers interested in this field of research.

- It can contribute to enriching educational literature related to electronic bullying by defining it, exploring its causes and motives, and suggesting ways to mitigate it.

- The findings of this study can be utilized by educational practitioners in Jordanian universities to address the current situation. Additionally, postgraduate students and researchers interested in this topic can benefit from it, as it provides a comprehensive understanding of the psychological state of students who engage in electronic bullying.

- Previous studies have not given adequate attention to this topic. This study paves the way for conducting further research on various research aspects in the same field.

- Terminological and Procedural Definitions: This study adopts the following terms:

- Cyber bullying: Al-Makanini, Al-Najati, and Al-Hayari [33] defined cyber bullying as remote harassment and bullying using electronic communication methods. It involves the intentional creation of a psychological atmosphere by the perpetrator to threaten and cause anxiety to the victim.

- Procedural Definition: It refers to the repetitive behaviors undertaken by university students using the internet, digital communication devices, and related technologies to electronically tarnish the reputation of the victim. These methods lead to psychological pressure on the victim. The study assesses the degree of cyber bullying's impact on the psychological well-being of a sample of university students through their responses to the researcher's prepared instrument.

- Psychological Aspect: Al-Sayed [34] defined the psychological aspect as the desire to avoid pain, seek comfort, overcome fear and anxiety, feel secure, and rely on individuals capable of meeting their needs. Procedurally, it refers to the state of psychological instability experienced by university students due to the misuse of multiple social media platforms. The study assesses this psychological aspect through the responses of the student sample to the instrument prepared by the researchers.

The Study's Limits and Limitations:

This study is limited to a sample of Jordanian university students for the academic year 2022/2023. The study is confined to their responses to the study instrument, which possesses psychometric properties of validity and reliability. The generalizability of the study's results depends on the authenticity of the responses from the study sample and the reliability of the study's measurement scale.

2   Materials and Methods

Study Design:

To achieve the study's objectives and answer its research questions, a survey methodology was employed. This methodology is most suitable for such a study as it involves collecting data through the distribution of questionnaires, followed by their collection and statistical analysis using appropriate methods.

Study Population:

The study population consists of all students enrolled in both public and private universities in northern Jordan during the second semester of the 2022/2023 academic year.

The study's sample:

The study sample was selected using simple random sampling from university students. An electronic questionnaire was distributed to the students, and the number of respondents reached (750) students from Jordanian universities. Table (1) presents the distribution of the study sample according to the independent variables:

Table 1: Distribution of study sample individuals according to the levels of their variables

Variables	Category	N	Percentage
Gender	Male	306	40.8%
	Female	444	59.2%
Faculty	Humanities	370	49.3%
	Sciences	380	50.7%
Cumulative GPA	Less than 2	56	7.5%
	2 to less than 3	361	44.4%
	More than 3	333	48.1%
University Type	Public	245	32.7%
	Private	505	67.3%
Academic Year	First	336	44.8%
	Second	285	38.0%
	Third	80	10.7%
	Fourth	49	6.5%
Total		**750**	**100%**

Study Instrument:

For the purpose of developing the study instrument, the researchers referred to educational literature and previous studies related to cyberbullying. The researchers primarily relied on the measures used in previous studies, such as the study by Saraj [35] and the study by Al-Faqi et al [31]. The respondents indicate their response to each item in the domains on a five-point scale: (Very High, High, Moderate, Low, Very Low) - Appendix 1. The weights assigned to these response options were as follows: (5, 4, 3, 2, 1). The instrument's validity and reliability were ensured.

Validity of the Instrument:

To verify the validity of the study instrument, the content validity method was adopted. The initial questionnaire was presented to nine experts who are university professors specializing in educational administration and educational policies in Jordanian universities. They were asked to review the questionnaire items and delete, modify, add, merge, or rephrase and clarify certain statements they deemed inappropriate from their perspective. The experts reached a consensus on the accuracy of a significant number of items, proposed modifications to the phrasing of some items, which were already revised, and suggested additional items. The researchers collected the feedback, made the necessary revisions and additions based on the experts' suggestions.

Reliability of the Instrument:

To ensure the reliability of the instrument, internal consistency (Cronbach's alpha) was used for the questionnaire domains, based on availability and relevance. Table (2) demonstrates the results.

Table 2: Results of internal consistency (Cronbach alpha) for the study measures

Variable	Reliability Coefficient (Cronbach's Alpha)
Impact of Electronic Dependence on the Psychology of a Sample of Jordanian University Students	0.92

In Table (2), it is evident that the coefficient for the Electronic Dependence Reflection Degree Measurement Tool among a sample of Jordanian university students is 0.92. This indicates that the tools have an appropriate reliability coefficient to achieve the study's objectives. It should be noted that the responses of the study sample were expressed using a five-point Likert scale (Very High, High, Moderate, Low, Very Low), with scores assigned as follows: (5) for the option Very High, (4) for High, (3) for Moderate, (2) for Low, and (1) for Very Low. To assess the mean scores of items, domains, and the overall tool, the statistical criterion was applied using the following equation:

Category Range = (Highest value - Lowest value) divided by the number of options

Category Range = 5 - 1 = 4 ÷ 5 = 0.8

Statistical judgment standard

The arithmetic mean	average
From 1.00 to less than 1.80	Very low
From 1.80 to less than 2.60	low
From 2.60 to less than 3.40	Moderate
From 3.40 to less than 4.20	High
From 4.20 to 5.00	Very high

Study Procedures:

- To achieve the study objectives and obtain the desired results, the following procedures were followed:

- Obtaining an official letter to facilitate the researchers' task in implementing the study tool in the faculties of Jordanian universities, both public and private, in the Northern region. It was necessary to communicate with the students via email, especially since the practice of delivering paper tools is no longer acceptable in light of technological advancements.

- Developing the study tool and ensuring its validity and reliability.

- Identifying the study population by referring to the official records of the Ministry of Higher Education and Scientific Research and obtaining the official numbers. The sample size was determined, consisting of (750) faculty members, randomly selected.

- Distributing the study tool to the sample participants for data collection, along with providing clarification on how to respond to the study tool. The collected information was strictly used for scientific research purposes.

- Collecting the study tool data, ensuring its suitability for statistical analysis, categorizing it according to study variables, and statistically processing the data using statistical analysis software (SPSS). The results were interpreted, discussed, and recommendations were made.

1. **Presentation of Study Results**

The results of the first question, which asks: "To what extent does electronic dependence reflect on the psychology of a sample of Jordanian university students from their perspective?"

To answer this question, the arithmetic means and standard deviations of the study sample's ratings on the items measuring the degree of electronic dependence reflection on the psychology of Jordanian university students from their perspective were calculated. The results are presented in the following table:

Table 3: Means and Standard deviation for Cyberbullying

N	Field	Mean	SD	Rank	Degree
1	Online bullying makes me feel isolated and detached from the world	3.05	1.09	1	Medium
6	Electronic bullying engagement leads me to a state of lethargy and behavior that reflects indifference towards myself and society	3.03	1.17	2	Medium
5	Cyberbullying makes me causes me to experience sharp mood swings between sadness and anger	3.02	1.20	3	Medium
16	I feel better sitting alone	2.96	1.34	4	Medium
3	Electronic bullying engagement reinforces my tendency to isolate myself from my peers and family	2.95	1.20	5	Medium
2	Online bullying engagement makes me feel that others have better luck than me when I feel victimized by engagement	2.93	1.05	6	Medium
12	electronic bullying engagement has contributed to a decline in my academic achievement	2.92	1.26	7	Medium
8	Electronic bullying engagement led me to avoid activities that I used to enjoy before being engaged	2.90	1.28	8	Medium
20	Electronic bullying weakens my trust in others.	2.86	1.33	9	Medium
10	Electronic bullying makes me feel exhausted, constantly anxious, distressed, and stressed	2.81	1.19	10	Medium
11	Electronic bullying contributed to my exposure to physical diseases (such as headaches and stomach ailments)	2.79	1.23	11	Medium
13	Electronic bullying makes me feel that I lack the ability to participate in my lectures	2.76	1.23	12	Medium
17	I feel frustrated with everyone around me (colleagues and friends)	2.64	1.31	13	Medium
14	Online bullying engagement makes me feel that others on social media are fake personalities trying to monitor me	2.65	1.22	14	Medium
19	Electronic bullying engagement instills in me the feeling that everyone I know speaks negatively about me (unliked person)	2.63	1.21	15	Medium
4	Online bullying makes me feel ashamed, with low self-esteem and a lack of value and importance	2.62	1.19	16	Medium
18	Negative looks from my colleagues bother and hurt me	2.60	1.27	17	Medium
15	I feel low self-esteem from my family after they learned about me being bullied online	2.34	1.25	18	Low
7	Online bullying engagement undermines my self-confidence	2.22	1.14	19	Low
9	Suicidal thoughts, conversations, or actions related to electronic bullying engagement occur to me	2.13	1.29	20	Low
Total		**3.71**	0.77		Medium

* The lowest degree (1) and the upper degree (5)

Table (3) shows the arithmetic means and standard deviations of the estimates of a sample of Jordanian university students regarding the degree of reflection of electronic bullying on their psychology, ranked in descending order according to the arithmetic means.

To answer this question; Arithmetic means and standard deviations were calculated for the estimates of the study sample on the degree of reflection of electronic bullying on the psychology of a sample of Jordanian university students from their point of view, according to the study variables. Table (4) shows that.

Table 4: The arithmetic means and standard deviations of the estimates of the study sample on the degree of reflection of electronic bullying on the psychology of a sample of Jordanian university students from their point of view, according to the study variables

variable	level/category	Mean	SD	N
Gender	Male	2.68	.817	306
	Female	2.59	.875	444
Faculty	Humanities	2.59	.896	370
	Sciences	2.66	.807	380

Cumulative GPA	Less than 2	56		56
	2 to less than 3	361		361
	More than 3	333		333
University Type	Public	2.69	.884	245
	Private	2.59	.836	505
Academic Year	First	2.78	.829	336
	Second	2.52	.766	285
	Third	2.34	1.070	80
	Fourth	2.63	.913	49

It is noted from Table (4) that there are apparent differences between the arithmetic averages of the estimates of the study sample on the degree of reflection of electronic bullying on the psychology of a sample of Jordanian university students from their point of view, according to the variables (sex, college, cumulative average, type of university, and academic year), and to determine The statistical significance of the apparent differences, a five-way analysis of variance was performed, and Table (5) shows that:

Table 5: Analysis of five-way variance of the arithmetic means of the estimates of the study sample on the degree of reflection of electronic bullying on the psychology of a sample of Jordanian university students from their point of view, according to the study variables

source of contrast	sum of squares	D F	Mean Squares	f	Statistical significance
Gender	.250	1	.250	.357	.551
Faculty	1.082	1	1.082	1.543	.215
Cumulative GPA	4.113	2	2.056	2.933	.054
University Type	1.684	1	1.684	2.401	.122
Academic Year	16.592	3	5.531	7.888	.000
Error	519.560	741	.701		
Total	5715.170	750			
Mean Total	544.313	749			

*Statistically significance at (α= 0.05)

From Table (5), it is observed that there is no statistically significant difference at the significance level (α = 0.05) in the estimates of the study sample individuals regarding the degree of reflection of electronic bullying across all study variables except for the academic year. To determine the statistical differences based on the academic year, post hoc comparisons were conducted using the Scheffé method, as shown in the following:

Table 6: Post hoc comparisons using the Scheffé method according to the variable of academic year.

(I) Academic Year	(J) Academic Year	Difference between means	Statistical significance
First	Second	.25*	.003
	Third	.43*	.001
	Fourth	.15	.712
Second	First	-.25-*	.003
	Third	.18	.408
	Fourth	-.10-	.885
Third	First	-.43-*	.001
	Second	-.18-	.408
	Fourth	-.28-	.319
Fourth	First	-.15-	.712
	Second	.10	.885
	Third	.28	.319

The table of dimensional comparisons shows that there are differences in the degree of psychological reflection of electronic bullying according to the variable of the university year between the first and second, first and third year groups, and the differences were in favor of the first-year group.

2. Summary of Study Results:

After presenting, interpreting, and discussing the results obtained through the study tool, the following findings emerged:

- The degree of psychological reflection of electronic bullying on Jordanian university students was found to be Medium. The item "Electronic bullying makes me feel isolated and disconnected from the world" ranked first, while the item "Electronic bullying triggers dark thoughts, conversations, or actions related to self-harm or even suicide" ranked last with a low degree.

- The results indicated no statistically significant differences in the degree of psychological reflection of electronic bullying attributed to variables such as gender, college, university type, and cumulative GPA. However, differences were observed based on the academic year, with first-year students having higher scores.

Discussion of Results:

The results showed for items reflecting the psychological impact of electronic bullying on sample of Jordanian university students were moderate, ranging from (2.13 - 3.05), on a scale of low to moderate. These findings were responses sample, consisted of from both public and private universities in the northern region of Jordan, from the first to the fourth year of both humanities and scientific colleges. According to the perceptions of the study participants, electronic bullying is a negative phenomenon experienced by individuals who interact with social media platforms to varying degrees, including university students. The moderate results indicated the severity of this phenomenon, considering that online communication platforms have become an integral part of academic and administrative work, potentially impacting the social and ethical aspects positively or negatively. These findings align with the survey items and overall results, which indicated a moderate degree of impact.

It may be attributed to the students' awareness that electronic bullying is the activation of modern technological devices such as short messages, social networks, e-mail, game sucks, phone calls, virtual games, and others, in order to harm others, and bullying often takes place immediately and without planning. Advance and thinking about the results and obstacles, due to the ease and speed of carrying out the behavior of cyber bullying and contributes to others knowing about it and interacting with it, but the victim may know it late, while the bully can only deal with bullying and its effects.

Despite the seriousness of electronic bullying, except for paragraph (1), which came in a medium degree, it indicated that as a student I still need to be aware of the effects of the bullied, which makes me feel isolated and separated from what is going on around me because of the pressures and bullying of the bullied electronically. This result may be attributed to the feeling of the electronic student who is dependent on him in a state of lethargy and behavior that reflects indifference towards himself and society, as referred to in paragraph (6), in medium.

Intermediate feeling electronically dependent on social media platforms and websites of a state sharp mood fluctuations between sadness and anger, a preference for isolation and being alone with oneself, and my lack of confidence in my family and friends around me, and I feel that they are better fortunate than me, which leads to It made me think a lot about neglecting my studies and declining my academic achievement.

Among the consequences of being bullied electronically is the student's feeling of lack of confidence in others, evading the activities that he used to enjoy before being bullied, exhaustion, constant anxiety, distress, and tension (20,10,11,13,17) and all of them came with an average score.

Among the effects is also the feeling of the oppressed others on social networking sites who are imaginary personalities seeking to monitor him, and that those he knows talk badly about him (someone they do not like), and he also feels that the looks of his colleagues towards him have become negative and disturbing causing him harm, and this is what the paragraphs indicated (14, 19, 4, 18) and all of them came with an average score, while Paragraph (9) came last with an arithmetic average of (213), and with a low score.

The state of their falling into the phenomenon of bullying so that it does not make him lose confidence in himself and does not give in to his negative thoughts of words, conversations and actions that may lead him to self-harm, and this is indicated by the paragraphs (15, 7, 9) and with a low.

This average is consistent with findings of a study by Hynujoo (2014), which indicated that most students who experienced electronic bullying in universities showed a low level of psychological adjustment to university life, isolation from others, and a lack of social and cognitive support to deal with the bullies. On the other hand, a study by Safari (2016) found that 55% of university students had been victims of electronic bullying at least once in their lives. This result differed from Munizil and Sharifin (2017), indicated absence of electronic bullying among students, despite the presence of addiction to social media platforms.

Furthermore, the results showed no statistical differences in the degree of psychological impact of electronic bullying attributed to variables such as gender, college, university, and cumulative GPA. However, there were differences attributed to the variable of academic year, with first-year students having higher levels of psychological impact.

Regarding the gender variable, this result can be attributed to the fact that both male and female students are obligated to use educational platforms as an integral part of their academic work, and therefore they are more aware of how to use them effectively. Similarly, social media platforms have become indispensable, leading to a higher awareness among students. However, this result contradicts the findings of the study by Yavuz and Eristi [22], which indicated that most victims and perpetrators of electronic bullying were males, as well as the findings of the study by Goodrich [25], which found that 51% of girls in higher education institutions experienced bullying compared to 7% of boys, and 31% of them identified the perpetrators through various technological means. Additionally, a study by Amar [26] indicated that males engage more in electronic bullying and are more addicted to the internet. However, this differs from the findings of the study by Al-Faqi et al. [31], which showed no gender differences in electronic bullying.

As for the college and university variables, the absence of differences systems is implemented by both government and private universities, as well as humanities and scientific colleges. Students are well-regulated in their remote learning process through educational platforms, making it easier to detect instances of electronic bullying as their information can be easily obtained from the university's computerized system. Consequently, students are more aware and able to avoid technological errors.

The results showed that the cumulative GPA (Grade Point Average) is not related to cyber bullying, as most students who take online courses do not have social relationships with each other. The only link between them is the course itself, and the majority of them only know each other's university ID numbers and are unaware of their GPAs except for their instructors. Therefore, GPA does not affect cyberbullying.

As for the variable of academic year, the results showed differences in favor of first-year students. This is logical because first-year students are still unaware of many laws and regulations, and they continue to interact with their university peers as they did in school. Consequently, they become easy targets for cyberbullies. This finding is consistent with the study by Hynujoo (2014), which found that most students who experienced cyberbullying in universities showed lower levels of psychological adaptation to university life, social isolation, and a lack of social and cognitive support to cope with cyberbullies.

Recommendations:

Based on the results, the researchers recommend the following:

- Universities should continue to provide intensive training and supervision to students and faculty members to establish a negative perception of cyber bullying in its various forms, emphasizing the psychological, ethical, and social aspects for all parties involved.

- Increase awareness of the concept of cyber bullying in the digital age through intensive workshops, seminars, conferences, lectures, and educational workshops.

- Educate students about the consequences of engaging in cyber bullying and how to avoid it by making use of the penalties imposed on cyber bullies.

- Conduct further studies to explore ways to identify and propose measures to reduce cyber bullying, considering larger communities, larger samples, and other variables, to enrich the scientific and research knowledge related to the research topic.

Suggestions:

- Universities should intensify the organization of seminars and courses to raise awareness among students about the negative consequences of misusing online platforms and social media, and the associated psychological, academic, social, ethical, and economic effects.

- Prepare an educational document outlining the criteria for using online platforms, the applicable legal rules, and the negative consequences of engaging in cyber bullying.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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