



The impact of cyberbullying on student motivation to learn: Insights from Abu Dhabi Emirate schools

 **Mohammad A. Tashtoush¹**

 **Yousef Wardat²**

 **Rommel AlAli³⁺**

Khaled Al-Saud⁴

¹Department of Basic Science, AL-Huson College University, AL-Balqa Applied University, Jordan.

²Faculty of Education & Arts, Sohar University, Oman.

Email: mtashtoush@su.edu.om

³Higher Colleges of Technology, United Arab Emirates.

Email: yousef_alwardat@yahoo.com

⁴The National Research Centre for Giftedness and Creativity, King Faisal University, KSA.

Email: ralali@kfu.edu.sa

⁵Department of Art Education, King Faisal University, KSA.

Email: Kmsoud@kfu.edu.sa



(+ Corresponding author)

ABSTRACT

Article History

Received: 19 September 2023

Revised: 27 November 2023

Accepted: 12 December 2023

Published: 22 December 2023

Keywords

Bullying

Cyberbullying

Educational level of the guardian

Motivation towards learning

School level

UAE students.

This study explores the influence of cyberbullying on students' motivation towards learning. The research included a sample of 336 students encompassing both genders and various educational levels in schools across the Emirate of Abu Dhabi during the first semester of the 2022-2023 academic year. After conducting extensive validation and reliability testing, the study developed a motivation for learning questionnaire using a descriptive analytical technique. The questionnaire consisted of four dimensions: self-confidence, responsibility, persistence and ambition. The findings revealed statistically significant differences in motivation towards learning among the study sample based on gender and school level while no significant differences were observed concerning the educational level of the guardian. The study recommends reducing adolescents' excessive screen time, monitoring their exposure to violent content in electronic media and increasing community awareness through media campaigns regarding the negative consequences of cyberbullying. Furthermore, it highlights the importance of media promoting authentic Arab and Islamic values such as tolerance, citizenship, belonging and community engagement.

Contribution/Originality: This research is important because it focuses on a modern education that has developed as a result of the rapid advancement of communication and information technologies. This study is considered one of the first to investigate the impact of cyberbullying in the UAE.

1. INTRODUCTION

The world has recently witnessed significant advancements in various aspects of life, particularly in technology and the proliferation of internet-connected devices and accompanying software programs. These technologies have made life easier. They have also brought about some undesirable characteristics such as cyberbullying. This study aimed to investigate the impact of cyberbullying on students' motivation to learn, to develop a comprehensive strategy or remedial program aimed at mitigating and curbing the prevalence of cyberbullying in Arab societies and to formulate practical recommendations and proposals that can significantly enhance students' motivation to learn across different educational levels. It provides valuable insights into this critical issue within the UAE educational

context. The development and prevalence of bullying in recent decades have made it a significant psychological phenomenon that has attracted more attention. It exerts detrimental effects on individuals at psychological, social and academic levels impacting both the bully who often shows signs of psychological disorders and the victim who experiences psychological and behavioral disorders as a result of exposure to bullying behaviors. With the advent of the internet's second generation, new forms of bullying have emerged, distinct from traditional notions limited to verbal, physical or sexual harassment (Black & Jackson, 2007; Smith, 2004).

The study of bullying behavior gained traction in the 1970s leading to a surge in research on this topic and the development of preventive programs in numerous countries. Collaborative initiatives to combat bullying have been proposed in the European Union while Japan has introduced a crisis management guide for schools. In the United States, entities like the National Anti-Bullying Awareness Campaign, the Child Safety Institute and the National School Safety Center have been established to address this issue (Hillsberg & Spak, 2006; Sezer, Sahin, & Akturk, 2013). Bullying, whether it takes the form of verbal, physical, social or sexual aggression poses significant problems with negative consequences for the perpetrator, victim, school environment and society. Victims of physical aggression experience rejection, fear, anxiety, discomfort and a reluctance to participate in both curricular and extracurricular activities. This leads to avoidance behaviors driven by the fear of confrontation with their bullies (Adams & Conner, 2008; Rasheed & Tashtoush, 2021; Storey & Slaby, 2008; Wardat, Jarrah, & Stoica, 2021). Cyberbullying has become a prevalent issue as children and young people increasingly use current technological tools, programmes and internet-based communication techniques. Bullies can conceal their identities behind fictitious or borrowed names and nicknames which makes it easier to harass victims at any time. This differs from traditional bullying (Litwiller Brausch, 2013; Trolley, Hanel, & Shields, 2006). Additionally, the bully lacks emotional empathy since they are unable to see how their actions affect the victim and have no control over technological communication paths (Akbulut & Eristi, 2011; Dilmac, 2009).

Cyberbullying has increased in accordance with the expansion of digital technology, the internet and communication channels. This form of bullying which occurs mainly through social media, text messages, emails or hacking personal accounts on social networking platforms, involves spreading lies, offensive content and stolen personal data or photos. Cyberbullies employ unethical tactics such as forcing individuals to disclose sensitive information, thereby causing psychological harm to their victims (Storey & Slaby, 2008; Whang, Lee, & Chang, 2003). This indirect form of confrontation has shifted the battleground from physical spaces to virtual environments where modern technology tools and communication means enable bullies to direct abuse and threats towards their victims often using fake accounts and impersonation (Gropper & Froschl, 2000; Hillsberg & Spak, 2006; Juvonen & Gross, 2008). Digital technology and modern communication methods have given rise to a new form of harassment known as cyberbullying. This phenomenon enables individuals to threaten, intimidate or spread false information through mobile phones and the internet (Black & Jackson, 2007; Rasheed & Tashtoush, 2023). Cyberbullying is distinct from traditional bullying in that it occurs virtually and has the potential to be more damaging and pervasive. It can happen through email, social networking sites, text messages, photos and videos. As a result, cyberbullying has become a prevalent form of aggressive behavior (Kerney, 2006; Liang, Flisher, & Lombard, 2007; Minton, 2010; Whang et al., 2003).

There are various forms of cyberbullying identified by experts and teachers (Litwiller & Brausch, 2013; Robert, 2010; Sezer et al., 2013; Willard, 2007). *Hostile messages*: This involves online conflicts using electronic messages with ambiguous language such as sending threatening emails from anonymous sources. *Harassment*: Cyberbullies send offensive messages to victims through email or lure them into accessing harmful links containing viruses. *Defamation and contempt*: Perpetrators destroy people's reputations and friendships by spreading rumors about them. *Impersonation*: Cyberbullies pretend to be someone else and send electronic materials to damage the victim's reputation or relationships. *Disclosure of secrets*: This involves stealing personal photos and publishing them on other people's accounts or sharing embarrassing secrets about the victim. *Deception*: Cyberbullies engage in conversations

with victims to extract embarrassing secrets and then publish them online – often forwarding these messages to the victim's friends. *Exclusion*: Bullies intentionally exclude their victims from online groups or conversations. *Electronic Harassment*: This form of cyberbullying includes making threats, instilling fear, hacking personal accounts – and spreading false rumors to the victim's friends.

Cyberbullying is more prevalent during childhood and adolescence becoming a more significant issue in secondary education. Chronological age plays a significant role in the spread of cyberbullying – with 40% of young people reporting exposure to cyberbullying at least once (Robert, 2010). Bullying is not limited to a specific age group or gender but tends to peak during middle school and high school. The consequences of bullying can affect both the bully and the victim in the future (Gropper & Froschl, 2000).

The increased attention to bullying in schools is driven by several factors including its devastating effects, awareness among parents – and media efforts to raise awareness (Smith, 2004). Research has shown that a substantial percentage of students – especially those in higher education – have been exposed to cyberbullying (Juvonen & Gross, 2008). The prevalence of cyberbullying behavior has increased over the years – with varying involvement and victimization – rates among male and female students (Dilmaç & Aydoğan, 2010).

Several researchers have determined that various elements contribute to the causes of cyberbullying (Darwish et al., 2023; Dilmac, 2009; Juvonen & Gross, 2008; Litwiller & Brausch, 2013; Sezer et al., 2013; Whang et al., 2003). *Disturbances in social and family relationships*: Individuals who misuse the internet often experience disturbances in their social and family relationships. This can lead to social behavior disorders, a tendency to escape from reality, increased psychological loneliness – and a fear of interacting with others. *Aggressive traits*: Cyberbullying is often linked to students who display aggressive traits. There is a relationship between a student's propensity for violence in the primary stages and their continuation of such behavior at higher educational levels. *Drug abuse*: There is a correlation between drug misuse, violent conduct and suicide ideation among certain victims of cyberbullying. *Frequent exposure to harm and psychological damage*: Victims of cyberbullying often experience harm and psychological damage – which can lead to their frequent use of online platforms. This usage can be linked to school and educational problems – and in some cases – may lead to criminal behavior. *Poor family upbringing*: Inadequate family upbringing is considered one of the significant causes of bullying – affecting not only peers but also teachers.

Research conducted by the National Center for Child Health and Human Development has shown that exposure to bullying has long-term psychological effects. These effects include feelings of loneliness, anxiety, social and emotional fatigue, difficulty making friends, humiliation, insecurity, loss of security – and may progress to fear of attending school. In severe cases, these symptoms can develop into depression, schizophrenia – and may lead to suicidal tendencies (American Medical Association, 2002).

The prevalence of bullying is a significant concern in many countries. In the United States, more than one million school students engage in bullying (Hillsberg & Spak, 2006) while over seven million students fall victim to bullying. Thousands of students in the U.S. skip school daily due to the fear of bullying. In Australia, one in six students aged 9-16 is exposed to assault at least once a week (Dilmac, 2009). Similar trends are observed in countries like New Zealand and Sweden – where bullying affects a significant portion of students (Kerrney, 2006). In Ireland, a considerable percentage of primary and middle school students have reported exposure to bullying in various forms (Minton, 2010). South Africa has also seen a high prevalence of bullying – with a significant number of students participating in various forms of bullying and exhibiting violent and socially inappropriate behaviors (Liang et al., 2007).

The phenomenon of bullying and cyberbullying is indeed prevalent in Western societies. Research has been conducted to address this issue. However, in Arab societies, there has been relatively less study and attention given to this phenomenon – despite its increasing prevalence in Arab schools in recent years.

Some studies conducted in Arab countries have shed light on the presence of bullying and cyberbullying in the region. For example, a study by Abu Sahloul (2017) in the Khan Yunis Governorate found that bullying is widespread in secondary schools to a significant extent. Another study conducted in Riyadh (AL-Qahtani, 2008) (Saudi Arabia) found that the phenomenon of bullying is moderately prevalent in middle schools both in public and private institutions. Additionally, research in Algeria by AL-Zahraa (2014) on middle school students revealed the widespread prevalence of bullying behaviors in the educational environment. In Egypt, a study by Abu El Ela (2017) found a high prevalence of cyberbullying among secondary school students.

Motivation towards learning is a crucial aspect of students' academic lives. It encompasses both internal and external factors that drive individuals to pursue their educational goals and satisfy their needs (Hillsberg & Spak, 2006). This motivation plays a significant role in determining students' engagement, effort and success in various learning activities (AL-Atal, AL-Ajame, & AL-Shamare, 2021; Meghar, 2022). Research on motivation towards learning has received considerable attention from scholars. It influences students' involvement with educational situations and their perseverance in reaching learning goals. It is viewed as a subcategory of general motivation. Motivation is closely tied to social activities and fostering motivation towards learning is a shared responsibility of schools, homes and social institutions.

Ryan and Deci (2000) argue that motivating students towards learning enhances the effectiveness of the learning process and creates a more positive classroom environment. It increases students' enthusiasm, encourages their participation in various learning situations and activities and empowers them to take control of their learning experiences. Strong motivation contributes to students' success, excellence and self-actualization. On the other hand, weak or absent motivation often leads to academic challenges and failures (Ryan & Deci, 2000).

1.1. Problem Statement

Schools, homes and social institutions play a crucial role in motivating students and encouraging their active participation in learning activities. This collaborative effort is essential for achieving the educational goals and outcomes of the learning process. The study addresses a critical issue related to the widespread problem of student cyberbullying. This deviant behavior has deeply ingrained itself in student communities particularly among teenagers. It has gained prominence due to the significant advancements in communication and information technology. This phenomenon is of grave concern for many communities due to its severe consequences for educational and pedagogical processes.

The prevalence of cyberbullying among teenagers and its diverse manifestations call for a thorough understanding of the issue as well as practical remedies due to its serious consequences. Unfortunately, the Arab world lacks a clear definition of this invasive phenomenon making it difficult to assess its extent, manifestation and prevalence.

In contrast, Western countries have made major advances in researching and addressing cyberbullying, collecting an abundance of data and knowledge regarding its nature and development. They have also developed strategies, methods and intervention programs to combat it. Observations from researchers working in the field of educational guidance and supervision have revealed that bullied students often face a multitude of psychological, educational and social challenges. These challenges include heightened anxiety, increased introversion, social isolation from their peers, decreased academic performance and reduced motivation towards learning.

The current study attempts to provide insight into the prevalence of cyberbullying, its impact on students and the underlying causes and incentives that encourage its spread. The study is important for addressing a significant gap in the literature by investigating the effects of cyberbullying on characteristics including academic accomplishment, cognitive ability and motivation to learn especially in the Arab atmosphere. The main research question driving this study is: "*What is the influence of cyberbullying on students' motivation towards learning in the Emirate of Abu Dhabi considering variables (gender, educational level, and the guardian's educational level)*"?

1.2. Study Importance

Research holds significant importance due to its focus on a critical and contemporary aspect of the educational process which has emerged as a consequence of the rapid advancement of communication and information technology. This study investigates a prevalent modern phenomenon, cyberbullying and explores its intricate relationship with various associated variables including its impact on students' motivation towards learning in secondary schools. Additionally, the study aims to propose effective guidance and awareness programs to mitigate the extent of bullying and restore students' personal security.

Furthermore, the research is very significant since it is an innovative initiative that paves the way for further investigations into the relationships between cyberbullying and other factors in Arab societies. It seeks to shed light on the gravity of this phenomenon's impact on the social fabric and offers valuable insights into addressing the problems arising from it. The study aims to direct and advise students on how to use and appropriately interact with current communication and information technologies by offering a theoretical framework on cyberbullying. This study contributes to our comprehension of the complex issues raised by cyberbullying and helps to create a more secure and comfortable learning environment for students in the Emirate of Abu Dhabi.

1.3. Objectives of the Study

This study has several key objectives:

- To investigate the influence of cyberbullying on students' motivation to learn.
- To develop a comprehensive strategy or remedial program aimed at mitigating and curbing the prevalence of cyberbullying in Arab societies.
- To formulate practical recommendations and proposals that can significantly enhance students' motivation to learn across different educational levels.
- Despite these limitations, the study is valuable in shedding light on the impact of cyberbullying on students' motivation within the defined parameters. It provides valuable insights into this critical issue within the Emirate of Abu Dhabi's educational context.

1.4. Limitations of the Study

- Population and time constraints: The study is focused on students within specific academic levels (primary, middle and secondary) during the first semester of the 2022-2023 academic years. This limited scope may not capture the experiences of students at other academic levels or time periods.
- Geographic limitations: The research is conducted exclusively within schools in the Emirate of Abu Dhabi which may not fully represent the experiences of students in other regions or countries.
- Research objectives: The study primarily aims to assess the impact of cyberbullying on motivation towards learning which means other potential effects or aspects related to cyberbullying may not be explored.
- Tool constraints: The study relies on specific research tools with established psychometric properties.
- These tools may not cover all aspects of the cyberbullying phenomenon or students' motivation towards learning.

1.5. Procedural Definitions

- Cyberbullying: It is a form of aggression that causes harm to others by invading their privacy, intimidating them and harming them. It depends on the use of social media, modern information technology and internet applications such as phones, laptops, video cameras and e-mail to publish posts, comments or messages that cause harm to others to promote false news or to send electronic messages to cause moral and material harm to others.

- Motivation towards learning: It is the constant desire to succeed, accomplish difficult tasks and overcome obstacles efficiently with the least time and effort and with the best level of performance. It is measured by the score that students obtain on the motivation towards learning scale prepared by researchers.

2. LITERATURE REVIEW

According to a thorough review of previous studies and existing literature examining the phenomenon of cyberbullying in Arab societies, there is a lack of research conducted in the United Arab Emirates that focuses on the impact of cyberbullying on students' motivation to learn. However, studies in similar fields carried out in nearby Arab nations can provide valuable insights. The following key studies shed light on the prevalence and effects of cyberbullying in various Arab contexts:

Saudi Arabia (AL-Habashi, 2022): This study investigated the prevalence of cyberbullying and its association with emotional intelligence among female students at Al Baha University in Saudi Arabia. The research identified a high prevalence of cyberbullying among female students and established a relationship between cyberbullying and emotional intelligence although the emotional intelligence levels were moderate.

Iraq (Ibrahem, 2020): This study investigated the relationship between cyberbullying and emotional intelligence with a focus on Iraqi students in primary schools. Findings revealed that deficiencies in emotional intelligence were positively linked to experiencing cyberbullying for both genders with a stronger relationship observed among females. The study also highlighted the significance of emotion regulation in explaining cyberbullying experiences.

Jordan (Banat, 2021): This study was carried out at Amman Arab University with the aim of determining the prevalence of cyberbullying among students. It revealed that both perpetration and exposure to cyberbullying were relatively low among students. Significant differences were observed based on gender, academic stage and CGPA. The study suggested more research on the relationship between student characteristics and cyberbullying.

Kuwait (Al-Atal et al., 2021): This study examined many types of cyberbullying that affect students at Kuwait's College of Basic Education. It also evaluated the impact of variables including gender, academic year, social media usage, usage hours and electronic games. The research identified exclusion as the most common type of cyberbullying followed by ridicule, threats, violations of privacy, defamation of reputation and sexual harassment. Gender-based differences were noted while social media and electronic games also played roles in cyberbullying experiences.

Palestine (Oteer, 2019): This study explored the impact of electronic bullying in public secondary schools in Tulkarm Governorate. It examined the role of gender, family economic status and place of residence in cyberbullying experiences. The research found statistically significant gender-based differences with females experiencing more cyberbullying. However, economic status and place of residence did not show significant variations in cyberbullying.

Egypt (Mohammad, 2019): This study aimed to comprehend the reality of cyberbullying and its manifestations with a focus on high school students in the Fayoum Governorate, Egypt. The research identified several forms of cyberbullying, including ridicule, defamation, spreading rumors, false information, disturbing images, harassment, repeated insults, impersonation, theft, embarrassment and revealing secrets. The study concluded that the degree of cyberbullying was moderate, calling for proposals and remedial methods to address the issue.

Algeria (Meghar, 2022): This study examined how common cyberbullying is among Algerian first-year intermediate students and how it relates to academic success. The findings revealed a high level of cyberbullying among students coupled with low academic enthusiasm. Additionally, the study established an inverse relationship between cyberbullying and academic enthusiasm.

These studies provide valuable insights into the landscape of cyberbullying across different Arab societies but the research gap remains in understanding its impact on students' motivation towards learning in the United Arab Emirates particularly in the Emirate of Abu Dhabi. This study seeks to address this gap and contribute to the broader knowledge about the implications of cyberbullying on students' educational experiences.

A review of earlier research reveals that the study's sample included university students as well as students from middle and high school among other academic levels. This aligns with the current study's sample which includes all academic levels (primary, middle and secondary). The methodology of this study is consistent with that of earlier research which used a variety of quantitative correlational, descriptive comparative and descriptive analytical techniques. Regarding the study variables, previous studies have used several variables such as emotional intelligence, socioeconomic status of the family, place of residence and others. In contrast, the current study focused on motivation towards learning as its main variable. This sets it apart as there have been no previous studies addressing the topic of motivation towards learning and its relationship with cyberbullying. Furthermore, the results of previous studies indicated that females are more likely to experience cyberbullying than males. However, this differs from the findings of the current study which showed that males are more exposed to cyberbullying than females.

3. METHODOLOGY

The current study employs a descriptive analytical approach that focuses on the collection, classification and analysis of data leading to the interpretation of results. This method is chosen to provide a comprehensive understanding of the phenomenon under investigation.

3.1. Participants

The study's population comprises students across three educational levels: primary (grades 1-4), middle school (grades 5-9) and secondary school (grades 10-12) that were enrolled during the first semester of the 2022-2023 academic years in schools throughout the Emirate of Abu Dhabi. A cluster sampling method was used to select the study sample. This approach involved the random selection of students from various schools. The sample includes 336 male and female students from different schools in Abu Dhabi. The distribution of the study sample members is presented in Table 1.

Table 1. Demographic distribution of the study sample participants.

Variables	Classification	Number	Percentage
Gender	Male	153	45.5%
	Female	183	54.5%
Stages	Primary	104	30.9%
	Medium	124	36.9%
	Secondary	108	32.2%
The educational level of the guardian	Less than secondary	154	45.8%
	Secondary	134	39.8%
	Bachelor	48	24.4%

3.2. Instrument

3.2.1. Motivation for Learning Questionnaire:

- The researchers developed a questionnaire to measure motivation towards learning based on existing literature (Coy, 2011; Fannakhosrow, Nourabadi, Ngoc Huy, Dinh Trung, & Tashtoush, 2022; Hillsberg & Spak, 2006).
- The questionnaire used a Likert scale with five response options: strongly agree, agree, not sure, disagree and strongly disagree.

- The questionnaire consisted of 23 items distributed across four areas: self-confidence, taking responsibility, perseverance and ambition with 6, 7, 6 and 4 items allocated to each area respectively.
- Responses to the questionnaire items were assigned scores (5, 4, 3, 2, 1) corresponding to the Likert scale options.
- The maximum achievable score on the motivation scale was 115 and the lowest score was 23.
- To assess the validity of the tool, a group of experts including university professors specializing in counseling, educational psychology, mental health, measurement and evaluation and teaching methods, evaluated the items. They provided feedback on item suitability, linguistic formulation and alignment with the study's objectives.
- The tool's content validity was also assessed through Pearson correlation coefficients for each area and the overall scale using an exploratory sample from outside the study's main sample. Correlation coefficients ranged from 0.86 to 0.92 indicating strong content validity.
- It was given to an exploratory sample twice, with a two-week gap between administrations in order to assess its reliability.
- Cronbach's alpha coefficient was used to assess reliability, resulting in coefficients ranging from 0.81 to 0.86 for the sub-domains (self-confidence, taking responsibility, perseverance and ambition) and 0.83 for the overall scale. These high coefficients confirm the tool's significant reliability.

3.3. Statistical Processing

- Statistical analysis included calculating the mean and standard deviation of students' scores on the motivation towards learning scale for each field and for the entire scale.
- Multiple Analysis of Variance (MANOVA) was employed to detect apparent differences in the means and standard deviations.

4. RESULTS

This section summarizes the findings of the study's analysis of how cyberbullying affects learning motivation, divided by the factors of gender, educational attainment and guardian educational level. The key results are summarized in [Table 2](#) which includes arithmetic means and standard deviations of the study sample's responses to various areas of the motivation towards learning scale as well as the overall scale.

The presentation of these results allows for the assessment of the impact of cyberbullying on motivation towards learning among different subgroups within the study population providing insights into potential variations based on these variables. This information is crucial for understanding the nuances of the relationship between cyberbullying and motivation towards learning in the context of the study's parameters.

Table 2. Means and standard deviations of study sample.

Variables	Classification	Number	Mean	SD
Gender	Male	153	42.72	8.42
	Female	183	39.31	7.82
Stages	Primary	104	39.15	7.12
	Medium	124	41.55	7.72
	Secondary	108	41.29	7.75
Guardian educational level	Less than secondary	154	40.02	6.92
	Secondary	134	39.92	6.82
	Bachelor	48	38.01	6.42

[Table 2](#) demonstrates that there are noticeable differences in the arithmetic means of the study sample members' responses to the motivation towards learning scale across three study variables: gender, educational stage

and the educational level of the guardian. These differences favored males with an arithmetic mean of 42.72, the preparatory stage with an arithmetic mean of 41.55 and guardians with an educational level below secondary school indicated by an arithmetic mean of 40.02.

The study evaluated the statistical significance of these variations in arithmetic means using multivariate analyses of variance (MANOVA). The results of this analysis are presented in Table 3. The MANOVA allows for a deeper understanding of the relationships between these variables and the motivation towards learning, shedding light on the extent to which cyberbullying influences these aspects of students' lives.

Table 3. ANOVA results by the stage

Source of variance	Domain	Sum of squares	Df	Mean of squares	F	Sig.
Sex (S)	Self-confidence	3.030	1	3.030	10.484	0.000*
	Responsibility	0.699	1	0.699	1.406	0.025*
	Perseverance	0.755	1	0.755	2.516	0.025*
	Ambition	0.926	1	0.926	1.204	0.015*
Level (L)	Self-confidence	2.691	2	1.345	4.653	0.000*
	Responsibility	4.847	2	2.423	4.875	0.000*
	Perseverance	3.630	2	1.815	6.050	0.000*
	Ambition	4.365	2	2.182	4.652	0.000*
Academic level (AL)	Self-confidence	2.216	2	1.108	3.833	0.375
	Responsibility	0.673	2	0.337	0.678	0.364
	Perseverance	1.155	2	0.578	1.926	0.057
	Ambition	0.569	2	0.284	0.605	0.055
S * L	Self-confidence	0.565	2	0.282	0.975	0.550
	Responsibility	0.266	2	0.133	0.267	0.305
	Perseverance	0.072	2	0.036	0.120	0.385
	Ambition	0.259	2	0.129	0.275	0.652
S * AL	Self-confidence	0.461	2	0.230	0.795	0.377
	Responsibility	0.635	2	0.318	0.639	0.376
	Perseverance	0.185	2	0.092	0.306	0.250
	Ambition	0.625	2	0.312	0.665	0.250
L * LA	Self-confidence	0.395	4	0.098	0.339	0.068
	Responsibility	0.038	4	0.009	0.018	0.069
	Perseverance	0.114	4	0.028	0.093	0.550
	Ambition	0.038	4	0.009	0.019	0.055
S * L * AL	Self-confidence	0.294	4	0.073	0.252	0.058
	Responsibility	0.165	4	0.041	0.082	0.105
	Perseverance	0.185	4	0.046	0.153	0.125
	Ambition	0.158	4	0.039	0.083	0.095
Error	Self-confidence	92.227	319	0.289		
	Responsibility	158.610	319	0.497		
	Perseverance	95.729	319	0.300		
	Ambition	149.652	319	0.469		
Total	Self-confidence	101.879	335	0.319		
	Responsibility	165.934	335	0.495		
	Perseverance	103.825	335	0.309		
	Ambition	125.325	335	0.374		

Note: *Sig. level $\alpha=0.05$.

The findings presented in Table 3 offer valuable insights.

- Gender influence: Statistically significant differences, evident at the significance level of $\alpha = 0.05$ are observed in the arithmetic means of responses within two aspects of the motivation towards learning scale "self-confidence" and "taking responsibility." In both of these aspects, males demonstrate higher motivation compared to females.

- Educational stage impact: The data reveal statistically significant differences again at the significance level of $\alpha = 0.05$ across all dimensions of the motivation towards learning scale. Middle school students consistently show higher motivation levels than their counterparts at other educational stages.
- Guardian's educational level: There are no statistically significant differences ($\alpha = 0.05$) in the arithmetic means of responses across all aspects of the motivation towards learning scale based on the educational level of the guardian.

In a nutshell, these findings indicate that gender and educational stage play substantial roles in influencing students' motivation towards learning within the context of cyberbullying. Males tend to display higher motivation in certain aspects and middle school students show greater motivation compared to their peers in different educational stages. Interestingly, the educational level of the guardian does not appear to significantly impact students' motivation in this regard.

5. DISCUSSION

The study revealed significant differences in motivation towards learning based on gender and educational level among the participants. However, there were no statistically significant differences based on the educational level of the guardian. These findings suggest that cyberbullying negatively impacts students' motivation to learn in Arab societies similar to its effects in Western societies. Previous research has also highlighted this issue (Al-Habashi, 2022; Coy, 2011; Dilmac, 2009; Hillsberg & Spak, 2006; Liang et al., 2007; Minton, 2010). It is crucial for education authorities to address this problem and its consequences on students' social and psychological well-being in Arab communities.

The study found that males show higher levels of cyberbullying compared to females across all aspects of motivation to learn. This difference may be attributed to various factors including biological, hormonal, environmental, cultural and social influences. Research from multiple studies AL-Atal et al. (2021); Banat (2021); Fannakhosrow et al. (2022); Meghar (2022) and Oteer (2019) has consistently highlighted the presence of biological distinctions between males and females which often result in higher confidence and assertiveness in males. Additionally, males tend to display more aggression due to hormonal disparities. Societal norms and upbringing also play a role with boys often encouraged to show strength and courage from a young age. In contrast, girls are generally socialized, more submissive and less prone to extreme emotions. Consequently, cyberbullying facilitated by the widespread availability of electronic devices and social media, tends to be more prevalent among males. Importantly, cyberbullying doesn't require physical strength making it accessible to students regardless of their physical attributes.

Cyberbullying can impact individuals based on their gender. Both males and females may experience cyberbullying but the forms and severity of online harassment can vary. For instance, girls may be more likely to experience relational aggression while boys might face more direct forms of cyberbullying. The psychological and emotional responses to cyberbullying can also differ among genders.

The study revealed statistically significant differences in motivation towards learning based on the school stage variable with middle school students showing lower motivation compared to primary and secondary school students. This suggests that cyberbullying is more prevalent among middle school students which agrees with some studies such as Oteer (2019) and Mohammad (2019). Several factors may contribute to this trend. Middle school students tend to engage in cyberbullying more frequently through various social media platforms. This increased participation might be attributed to their greater familiarity with smart devices, software applications, communication tools, information technology and social networking sites. Middle school students often spend considerable time playing online games and exploring topics that require extensive use of electronic devices. This exposure enhances their electronic proficiency but may also lead to the negative consequences of excessive device use including cyberbullying.

Another contributing factor is the age and hierarchical position of middle school students in the educational system. They are older than primary school students and often have more free time with less academic pressure than secondary school students. This increased availability of free time may lead middle school students to engage in various forms of cyberbullying particularly targeting younger primary school students and those in higher grades who are preoccupied with their academic responsibilities and preparation for high school exams. These factors collectively contribute to the observed differences in cyberbullying tendencies among students at different school stages.

The study found no statistically significant differences in students' motivation towards learning based on the educational level of their guardians and this contradicts the results of some previous studies such as Whang et al. (2003); Kernney (2006); Dilmaç and Aydoğan (2010); Coy (2011) and Wardat et al. (2021). This suggests that the motivation levels of students remain consistent irrespective of their guardians' educational backgrounds. One possible explanation for this finding is that cyberbullying primarily stems from relationships among students within the school environment rather than being significantly influenced by the educational level of the guardians. The proliferation of internet services at affordable prices, coupled with widespread access to the internet has become a fundamental necessity in the current era of technological advancement. This access extends to all regardless of the guardian's educational background.

The impact of cyberbullying may vary depending on the stage of the students. Younger children might be more vulnerable to cyberbullying due to their limited experience dealing with online interactions. In contrast, teenagers who are more active on social media and other online platforms may face different forms of cyberbullying and may have a better understanding of how to handle it. The stage also plays a role in how cyberbullying affects academic performance and emotional well-being.

Additionally, the availability of smart and modern electronic devices plays a crucial role in students' lives, facilitating their educational activities, communication with teachers and peers and access to e-learning resources. These devices also serve as a source of entertainment, reducing boredom through activities such as playing electronic games, watching videos and sharing applications with peers. However, the improper use of these devices, often resulting from inadequate parental supervision can lead to electronic bullying and harm among students.

In a nutshell, cyberbullying has an impact on gender, the stage of the students and the guardians' educational levels. This effectiveness is complex and multifaceted and the impact of cyberbullying can vary from one individual to another based on these factors. It's important to address cyberbullying through a combination of education, awareness and support systems tailored to the specific needs of different genders, the stage of the students and the guardian's educational level.

6. CONCLUSION

The study's results showed statistically significant differences in the means of individuals in the study sample related to the variables (gender and stage of the students) in motivation towards learning. However, the study's results did not show statistically significant differences in the means of individuals in the study sample related to the variable of the guardians' educational levels in motivation towards learning.

The study did not find a significant relationship between guardians' educational levels and students' motivation. It emphasizes the importance of addressing cyberbullying within the school environment and promoting responsible device usage among students to prevent negative consequences.

7. RECOMMENDATIONS

- Inclusion and integration programme: Implement initiatives to involve students who engage in cyberbullying in the school's social, cultural and sports activities. These programs aim to reduce bullying

behaviors, channel negative and aggressive energies and emotions into positive and constructive outlets and promote social integration.

- Monitoring and screen time reduction: Encourage parents to reduce the extended periods their teenagers spend on electronic devices at home. Parents should actively monitor their children's activities ensuring they do not engage in violent programs, inappropriate electronic games or media content that encourages harmful behavior. Employ various monitoring and parental control tools to support this effort.
- Awareness programme: Develop and deliver awareness programs conducted by educational specialists for both students and their parents. These programs should educate them about the dangers and negative consequences of bullying. Promote healthy human and social relationships and emphasize the importance of refraining from engaging in cyberbullying behaviors.
- Media campaigns: Collaborate with the media and communication channels to raise public awareness about the adverse effects of cyberbullying. Emphasize the importance of upholding authentic Arab and Islamic values such as dialogue, understanding, tolerance, citizenship, belonging, community participation and civic responsibility. Positive role models and stories that exemplify these values.
- Further research: Encourage and fund additional studies and research projects related to cyberbullying in Arab societies. Investigate its impact on various aspects, including academic achievement, enthusiasm for learning and other relevant variables. This research can provide deeper insights into the phenomenon and inform future interventions and policies.

These recommendations aim to address cyberbullying comprehensively by targeting students, parents, schools, media outlets and researchers. Society can work collectively to combat cyberbullying and its negative consequences by implementing these strategies.

Funding: This research is supported by King Faisal University (Grant number: 5085).

Institutional Review Board Statement: The Ethical Committee of the Al-Huson University College, Al-Balqa Applied University, Jordan has granted approval for this study on 1 October 2022 (Ref. No. ERS_2022_8870).

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: Conceptualization, M.T. and Y.W. and R.A.; methodology, M.T.; software, Y.W. and K.A.; validation, R.A. and M.T.; formal analysis, M.T.; investigation, Y.W.; resources, R.A.; data curtail, M.T.; writing—original draft preparation, K.A. and M.T.; writing—review and editing, Y.W. and M.T.; visualization, R.A.; supervision, M.T.; project administration, M.T.; funding acquisition, K.A. All authors have read and agreed to the published version of the manuscript.” “Conceptualization, M.T. and Y.W. and R.A.; methodology, M.T.; software, Y.W. and K.A.; validation, R.A. and M.T.; formal analysis, M.T.; investigation, Y.W.; resources, R.A.; data curtail, M.T.; writing original draft preparation, K.A. and M.T.; writing—review and editing, Y.W. and M.T.; visualization, R.A.; supervision, M.T.; project administration, M.T.; funding acquisition, K.A. All authors have read and agreed to the published version of the manuscript.

REFERENCES

- Abu EL Ela, H. (2017). The effectiveness of selective counseling in reducing the level of cyberbullying among a sample of adolescents. *Scientific Journal of the Faculty of Education/ Assiut University*, 33(6), 527-563.
- Abu Sahloul, M. (2017). *The reality of the phenomenon of school bullying among secondary school students in Khan Yunis Governorate and ways to confront it*. Palestine: Scientific Research Council, Ministry of Education and Higher Education.
- Adams, N., & Conner, B. (2008). School violence: Bullying behaviors and the psychosocial school environment in middle schools. *Children and Schools*, 30(4), 211-222.
- Akbulut, Y., & Eristi, B. (2011). Cyberbullying and victimisation among Turkish university students. *Australasian Journal of Educational Technology*, 27(7), 1155-1170. <https://doi.org/10.14742/ajet.910>
- AL-Atal, M., AL-Ajame, M., & AL-Shamare, A. (2021). Cyberbullying for basic education students in the state of Kuwait and its relationship with some variables. *Journal of Studies and Educational Researches*, 1(2), 219-254.

- AL-Habashi, N. (2022). Cyber bullying and its relationship to emotional intelligence among AL-Baha University female students. *Journal of Educational Science*, 8(1), 95-129.
- AL-Qahtani, N. (2008). *Bullying among middle school students in the city of Riyadh: A survey study and a proposal for counter-intervention programs in proportion to the school environment*. Unpublished Doctoral Dissertation, King Saud University.
- AL-Zahraa, S. (2014). The reality of bullying in the Algerian school, the middle school stage. *Al-Basira Center for Research, Consultation and Educational Services, University of Algiers*, 11(11), 1-48.
- American Medical Association. (2002). *Bullying and the American medical association*. Retrieved from https://www.d181.org/uploaded/SELAS/SEL_and_Child_Development/SEL_Article2_BULLYING.pdf
- Banat, S. (2021). Cyberbullying among university students in Jordan. *Educational Journal- Souhag University*, 91(8), 3520-3551.
- Black, S. A., & Jackson, E. (2007). Using bullying incident density to evaluate the olweus bullying prevention programme. *School Psychology International*, 28(5), 623-638. <https://doi.org/10.1177/0143034307085662>
- Coy, J. (2011). The role of social skills and life satisfaction in predicting bullying among middle school students. *Elementary Education Online*, 9(3), 1159-1173.
- Darwish, O., Tashtoush, Y., Bashayreh, A., Alomar, A., Alkhaza'leh, S., & Darweesh, D. (2023). A survey of uncover misleading and cyberbullying on social media for public health. *Cluster Computing*, 26(3), 1709-1735. <https://doi.org/10.1007/s10586-022-03706-z>
- Dilmac, B. (2009). Psychological needs as a predictor of cyber bullying: A preliminary report on college students. *Educational Sciences: Theory and Practice*, 9(3), 1307-1325.
- Dilmaç, B., & Aydoğan, D. (2010). Values as a predictor of cyber-bullying among secondary school students. *International Journal of Computer and Systems Engineering*, 4(3), 225-228.
- Fannakhosrow, M., Nourabadi, S., Ngoc Huy, D. T., Dinh Trung, N., & Tashtoush, M. A. (2022). A comparative study of information and communication technology (ICT)-based and conventional methods of instruction on learners' academic enthusiasm for L2 learning. *Education Research International*, 2022. <https://doi.org/10.1155/2022/5478088>
- Gropper, N., & Froschl, M. (2000). The role of gender in young children's teasing and bullying behavior. *Equity & Excellence in Education*, 33(1), 48-56. <https://doi.org/10.1080/1066568000330108>
- Hillsberg, Y., & Spak, A. (2006). Bullying and psychiatric symptoms among school –age children. *Child and Neglect*, 22(4), 707-717.
- Ibrahim, F. (2020). Mediator role of gender in the relation between emotional intelligence and electronic bullying of high school students. *AL-Ostath Journal*, 59(3), 249-280.
- Juvonen, J., & Gross, E. F. (2008). Extending the school grounds?—Bullying experiences in cyberspace. *Journal of School Health*, 78(9), 496-505. <https://doi.org/10.1111/j.1746-1561.2008.00335.x>
- Kerrney, P. (2006). Does bullying cause emotional problems? A prospective study on young teenagers. *British Medical Journal*, 323(73), 1-13.
- Liang, H., Flisher, A. J., & Lombard, C. J. (2007). Bullying, violence, and risk behavior in South African school students. *Child Abuse & Neglect*, 31(2), 161-171. <https://doi.org/10.1016/j.chiabu.2006.08.007>
- Litwiller, B. J., & Brausch, A. M. (2013). Cyber bullying and physical bullying in adolescent suicide: the role of violent behavior and substance use. *Journal of Youth and Adolescence*, 42, 675-684. <https://doi.org/10.1007/s10964-013-9925-5>
- Meghar, A. (2022). School bullying and its relationship to school achievement among students in the first year of middle education (A field study in middle education institutions in the municipality of Azzaba, Skikda). *Journal for Educational and Psychological Studies*, 8(1), 261-273.
- Minton, T. (2010). Bullying and psychiatric symptoms among elementary school age children. *Child Abuse & Neglect*, 22(4), 705-717.
- Mohammad, T. (2019). The reality of electronic bullying phenomenon among the secondary school students in Fayoum governorate a field study (and Ways to Confront It). *Journal for Educational and Psychological Studies- Fauom University*, 12(2), 181-247.

- Oteer, R. (2019). The reality of cyberbullying in the secondary government schools in the Tulkarm Governorate. *International Journal for Educational and Psychological Studies*, 6(9), 65-90.
- Rasheed, N., & Tashtoush, M. (2021). The fertility and its relation with some demographic, economic and social variables in Jordan. *Turkish Journal of Computer and Mathematics Education*, 12(11), 5088-5095.
- Rasheed, N., & Tashtoush, M. (2023). The impact of cognitive training program for children (CTPC) to development the mathematical conceptual and achievement. *Journal of Higher Education Theory and Practice*, 23(10), 218-234. <https://doi.org/10.33423/jhetp.v23i10.6196>
- Robert, M. (2010). Latin America: School bullying and academic achievement. *Academic Journal*, 10(4), 37-48.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67. <https://doi.org/10.1006/ceps.1999.1020>
- Sezer, M., Sahin, I., & Akturk, A. O. (2013). Cyber bullying victimization of elementary school students and their reflections on the victimization. *Online Submission*, 7(12), 1942-1945.
- Smith, P. (2004). Bulling: Recent developments. *Child and Adolescent Mental Health*, 9(3), 98-103.
- Storey, K., & Slaby, R. (2008). *Eyes on bullying what can you do?* Newton: Education Development Center.
- Trolley, B., Hanel, C., & Shields, L. (2006). Demystifying and deescalating cyber bullying in the school. A resource guide for counselors, educators and parents. In (pp. 1-25). USA: Booklocker.com Incorporated.
- Wardat, Y., Jarrah, A. M., & Stoica, G. (2021). Understanding the meaning of the equal sign: A case study of middle school students in the United Arab Emirates. *European Journal of Educational Research*, 10(3), 1505-1514.
- Whang, L. S.-M., Lee, S., & Chang, G. (2003). Internet over-users' psychological profiles: A behavior sampling analysis on internet addiction. *Cyberpsychology & Behavior*, 6(2), 143-150. <https://doi.org/10.1089/109493103321640338>
- Willard, N. (2007). Cyberbullying and cyberthreats: responding to the challenge of online social aggression, threats and distress. In (pp. 5-10). Champaign, IL: Research Press.

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