

**Cyber Bullying and its Relation to the
Level of Awareness of Digital Practices
in a Sample of Secondary School
Students in the Northern Border Regions**

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Dr. Mohammad Bin Salal Aldhalaan*

Abstract: The study aimed to identify the level of cyber bullying and digital practices in the light of some variables, and to know the relationship between digital practices and cyber bullying in the northern border region. The study sample consisted of (368) male and female secondary school students. The results showed that the level of cyber bullying was medium, while the level of digital practices came to a great extent. There were statistically significant differences in the level of both cyber bullying and digital practices due to the gender variable in favor of males and to the course variable for the course of natural sciences. The results showed a statistically significant negative relationship between cyber bullying and positively digital practices, and a statistically significant positive relationship between cyber bullying and negative digital practices, and those negative digital practices predict cyber bullying.

Keywords: cyber bullying, digital practices, secondary school, northern borders.

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التنمر الإلكتروني وعلاقته بمستوى الوعي بالممارسة الرقمية لدى عينة
من طلبة المرحلة الثانوية بمنطقة الحدود الشمالية

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الملخص: هدفت الدراسة إلى تعرف مستوى التنمر الإلكتروني والممارسات الرقمية في ضوء بعض المتغيرات، ومعرفة العلاقة بين الممارسات الرقمية والتنمر الإلكتروني في منطقة الحدود الشمالية، وتكونت عينة الدراسة من (٣٦٨) طالباً وطالبة من طلبة المرحلة الثانوية. أظهرت النتائج أن مستوى التنمر الإلكتروني جاء بدرجة متوسطة، بينما جاء مستوى الممارسات الرقمية بدرجة كبيرة. ووجود فروق دالة إحصائية في مستوى كل من التنمر الإلكتروني والممارسات الرقمية تعزى لمتغير الجنس لصالح الذكور، وفي متغير المسار الدراسي لصالح مسار العلوم الطبيعية؛ بينما الصف الدراسي كانت الفروق لصالح الصف الثالث ثانوي. وأظهر النتائج وجود علاقة سلبية دالة إحصائية بين التنمر الإلكتروني والممارسات الرقمية الإيجابية، وعلاقة إيجابية دالة إحصائية بين التنمر الإلكتروني والممارسات الرقمية السلبية، وأن الممارسات الرقمية السلبية متبئ بالتنمر الإلكتروني.

الكلمات المفتاحية: التنمر الإلكتروني، الممارسات الرقمية، المرحلة

الثانوية، الحدود الشمالية.

Introduction

The technological invasion of human lives made people live in a multimedia rich environment, and this has increased their interest in exploring what is new in the world of technology regardless of the age group and the social level of individuals around the world. The use of the electronic machines goes beyond the boundaries of schools to become a source of concern and a threat to students such as using the risky internet that has become an important factor not only for cyber bullying but also to communicate online and take over children. Adolescents tend to use the Internet more interactively; making them more vulnerable to being targeted by individuals with bad intentions. Misuse and lack of controls may be seen as a negative influence on users in general and on adolescents in particular because they are the youth of tomorrow, and they are the backbone of the future and hope of the nation.

Because of the multitude use and the diversity of its services, like other modern means, it is double-edged sword; it may be positively used such as distance learning, e-mails, entertainment and other services which make the Internet a useful tool to develop the user's abilities and skills in practical and scientific life. The Internet may be a negative tool and result in physical, psychological or social harm to the user and become a tool to destroy and acquire ideas contrary to the ideas and traditions of the user.

The internet is now a strong competitor to the traditional institutions of social upbringing such as the family, the school, the mosque and other institutions, and as we live in the era of rapid social change and in the time of the new technological influences such as the computer and the Internet; this change was not limited to a specific age group, in the transition of the individual from

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childhood to adulthood through the changes in the various manifestations of physical, psychological, social and other, where this stage of renewal and change and the attraction of the teenager behind the new as the Internet that spread in communities (Bouabdallah, 2016).

Today; almost 93% of adolescents use the Internet which makes the socialization of peer-to-peer relationships appears to be not positive in nature (Lenhart, Madden, Macgill, & Smith, 2007). Students may be concerned about the residual effects of these personal attacks (Willard, 2007). (9%) of Internet users under the age of 18 experienced online harassment, and 11% were cyber bullying (Ybarra, Mitchell, Finkelhor & Wolak, 2007).

Study Problem

The problem of the study is highlighted by the development of social media and its rapid and wide spread among all groups of society, especially adolescents who have a digital skill acquired by virtue of their approach to technology since childhood. The percentage of cyber bullying is increasing with the emergence of applications on a continuous basis, such as Instagram, Twitter and Facebook. Most modern psychological studies link the phenomenon of severe depression in adolescents to electronic bullying. These are the results of researches and studies on the phenomenon of electronic social communication. Adolescent abuse on the Internet has become easier. The majority of teenagers, even children, carry smartphones that contain all modern applications.

The problem arises when things get out of control, as a large proportion of them fall into the problem of addiction to these new things, and the figures show their excessive use for these websites and the problem of being exposed to situations that do not fit their age and are unable to deal with them in the right way. They may

realize the importance of maintaining privacy and avoiding those situations that harm them. They also watch photos and videos that are not suitable for their ages without any censorship which harms them morally, psychologically and socially so they reach a satisfactory stages where they cannot control themselves as they need their smart phones or electronic devices with them at all times.

Study objectives

The study sought to achieve a set of objectives as follows:

1. Identify the cyber bullying level and digital practices from the students' point of view.
2. To detection the differences in the electronic bullying and digital practices level depending on the variables of gender, grade, and educational stream.
3. To detect the relationship between digital practices and cyber bullying.

Participants

The study sample consisted of 368 male and female students, of whom 217 were males and 151 females; 104 third secondary students, 136 second secondary students, and 128 first secondary students. Their ages ranged from 16.8 to 18.5 years, with an average age of 17.7 years, with a standard deviation of 0.87. They were selected from public schools in the northern border area. They were a readily available sample

Study Methodology

The present study adopted the relational descriptive approach, being the most appropriate for the objectives of this study. As this approach examines the predictive power of digital practices in cyber bullying, it also examines gender differences, grade levels, and academic stream.

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Study Hypotheses

The present study attempts to answer the following hypotheses:

1. There are differences in cyber bullying level among high school students.
2. There are differences in students' awareness of digital practices.
3. There are statistically significant differences between the study sample responses averages in cyber bullying due to the variables (gender, grade, and academic stream) of high school students.
4. There are statistically significant differences in the awareness of digital practices degree attributable to the variables (gender, grade, and academic stream) of secondary school students.
5. There is a significant correlation between cyber bullying and digital practices awareness among high school students.
6. There is a predictive ability of digital practices to explain cyber bullying among high school students.

Study Limitation

The application scope of the present study is determined by the following:

- Human limitation: a sample of high school students.
- Spatial limitation: the northern border region in the Kingdom of Saudi Arabia.
- Time limitation: the second semester of the academic year 2018/2019.
- Subject limitation: Identify the predictive power of digital practices in cyber bullying.

Study Procedures

The study proceeded according to the following procedures:

1. The study scale was prepared in their final form after verifying the indicators of their sincerity and reliability, and subjecting them to arbitration.
2. The necessary approvals were obtained to conduct the study.
3. The study scale was applied to all high school students in the northern border region of the Kingdom of Saudi Arabia.

Terminology of study

Cyber bullying: It is hurting others by using electronic devices through social media sites intentionally and repeatedly in order to insult or threaten them (Al-Shennawi, 2014), and it is measured to the degree that the student gets on the scale of cyber bullying prepared by the researcher.

Digital practices: the behaviors and processes that an individual performs while using technology and is responsible for it, and it is measured to the degree that the student gets on the scale of digital practices prepared by the researcher.

Study Background

Cyber Bullying

Cyber bullying is an intentional and violent act of an individual or a group of individuals using electronic forms of communication with a victim who cannot easily defend himself (Smith, Mandavi, Carvalho, & Tippett, 2006), It is an extension of traditional bullying and is closely linked as 30% of traditional bullying people being Cyber bullying (Li, 2005).

(42%) of school students exposed to cyber bullying in 2004, while in 2008 it increased to (72%) (Juvonen & Gross, 2008). Arslan, Savaser, Hallett & Balci (2012) reported that 18% of schoolchildren in Turkey were overwhelmed by text messages, chat and e-mail programs,

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(27%) were victims of bullying, 15% were victims and bullying; they were more involved in cyber bullying than female students. In China, the proportion of cyber bullying among high school students was 35% and (57%) were victims of bullying; male students were higher than female than students in cyber bullying (Zhou et al., 2013).

Belsey (2008) defines cyber bullying as the use of information and communication technology to support intentional and repeated hostile behavior by an individual or group of individuals with the aim of harming others. While Willard (2007) defined it as controlling others by sending or disseminating harmful information or engaging in other forms of social bullying using the Internet or other digital technological means such as mobile phones. It is defined as any deliberate and repeated aggressive behavior as a result of an imbalance of power to inflict harm on others (Olweus, 2012).

Willard (2003) points out that cyber bullying involves many forms of defamation, bullying, harassment, discrimination, disclosure of personal information, offensive or insulting comments, or the impersonation of an individual to make harm to them. While Ybarra & Mitchell (2004) pointed out that online anonymity allows individuals to adopt a more aggressive personality than they may express in real life. Passwords theft, sharing private Internet connections with other people, banning or separation of a person from the chat room are common forms of cyber bullying (Erdur-Baker & Kavşut, 2007). While Willard (2007) states that cyber bullying has eight forms: hostile messages, harassment, defamation, impersonation, disclosure of secrets, deception, exclusion, cyber harassment.

Victims and perpetrators of cyber bullying suffer from a series of psychological problems such as

depression, sadness, guilt, self-harm, anxiety and distress (Mishna, Mclukie & Saini, 2009). The bullying causes others psychological problems such as fear of disclosure, anxiety about taking their devices from them or denying them access to the Internet, or fear of widespread abuse (Harcourt, Green & Bowden, 2015).

Al-Zahrani (2015) found that most students avoid cyber bullying; It was found that 27% of students committed cyber bullying at least once or twice, while 57% of students reported that another student was bullying. The results of the study showed that students are exposed to cyber bullying from people who know them only through the Internet. They see cyber bullying is a serious phenomenon, practiced by males more than females, as unmarried students more than married, and the user of his own device is subject to cyber bullying more than the person who uses public or shared devices. Smith et al., (2008) found that cyber bullying occurs outside the school more than inside it. The most common bullying methods are telephone calls, text messages, and mobile videos; bullying occurs often among the students of the same class.

Maqrani (2018) pointed to the emergence of two types of electronic bullying: direct bullying represented by using the Internet and mobile phone for threatening or insulting; or sending files containing viruses on purpose; or sending images or outrageous or threatening graphics. The second type is indirect bullying, which is browsing someone's email, disguising and deceiving them, or spreading abuse to others through email or communication programs.

Cyber bullying is classified into several categories: 1. Written bullying: which is the use of verbal bullying through calls and oral or written communication via text

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and emails; 2. Visual bullying is represented by the use of visual forms and images such as the publication of offensive images; 3. Exclusion bullying which is the removal of an individual from chat groups or electronic conversations; 4. Impersonation bullying: is person's identity theft and access to their personal information, or the use of another person's account (El-Shennawy, 2014).

Digital Practices

Since 2009, the focus has been on digital literacy worldwide through many initiatives that highlight a multi-pronged approach that seeks to raise awareness of using modern technology skills. These projects and initiatives are aimed at the adolescent group (Chaudron, 2015). Many parents see digital and social media as positive issues but difficult and time-consuming, while some parents expect digital practices to be risky. Other parents have no knowledge of the digital practices of children during online conversations (Kumpulainen & Gillen, 2017).

With the proliferation of digital technologies at homes, the dynamics and habits of the family have undergone major changes. Children do many digital practices at an early age, these common digital practices of parents and children may become a routine means of family integration in their daily lives. Children take parents as models in digital practices and technological use (Bakó, 2016).

Berson, Berson and Ferron (2002) noted that 10.8% of teenage girls in the USA conducted risky online activities such as giving up their personal information and sending their pictures to someone they met online or agreed to meet, and a few referred to exchange of sexual or threaten messages. While Ybarra et al., (2007) indicated that the widespread practices of dangerous behaviors such as spreading personal information and dealing with

unknown persons were associated with unwanted online harassment or sexual solicitation.

There are many factors that influence digital practices, including: 1. Parents' socio-cultural background; they are influenced by the availability of technology infrastructure, digital parenting practices, and their level of expertise and technology orientation. Educated parents may encourage their children to acquire more digital practices by providing them with a multimedia-rich environment (Terras & Ramsay, 2016). 2. Parental mediation; significant changes in child behavior have been found over the Internet, reducing the effectiveness of parental control, especially when it comes to digital devices (Lee, 2012). 3. The blurring of the cultural identity of the community and the replacement of real social networks and real citizenship with virtual ones, which affects the idea of Social Capital., 4. Loss of privacy and leakage of private files through the Internet through spyware and hackers, especially for young people who are not embarrassed to send their private pictures or written texts without protection via mobile phones or the transmission of sexual content (Roblyer, 2016) which exposing them to blackmail and threats. 5. Internet addiction; excessive use of technology and social networking platforms may lead to risks of exposure to certain social, psychological and health diseases. An example of the risks associated with the use of social networks is Cyber bullying, which occurs when a child is threatened, humiliated, verbal abused, sexually assaulted, embarrassed by another online child, adolescent or teenager through using social interaction sites (Kim, Colwell, Kata, Boyle & Georgiades, 2017). In a study of 1,450 students between the ages of 12 and 17, Juvonen & Goss (2008) found that 77% of the sample had

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experienced at least one incident of cyber bullying. Examples of the misuse of technology are digital drugs (i-Dosing), which represent listening to strange passages of music with certain frequencies that cause excretion of stimulants that cause a false sense of ecstasy and lead to addiction to listening (Roblyer, 2016). 7. The thefts of scientific and research across the Internet sites and spread culture of cutting and pasting without the existence of real learning or reliable research. 8. Use illegal software and applications illegally.

The Bakó & Tkkés (2018) study found that parents who lack awareness of digital skills and practices have a negative attitude toward their children's digital practices and ignore the role models for their children. While the study of (Erdur-Baker, 2010) revealed that 32% were victims of cyber bullying, and 26% were threatened and intimidated. And those students are more connected to cyber bullying than female students.

Study methodology and procedures

Study population

The study population consisted of high school students in the northern border region in Saudi Arabia during 2019, and they numbered about (3409) male and female students.

The study sample

The sample was chosen by the stratified random method through analysing the original community of the study sample, and this is done by searching for the characteristics and proportions of each characteristic in this society, and then random selection based on the characteristics of the original community. The number of the sample population was about (368) male and female students, and Table (1) shows the characteristics of the sample.

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

Variables	Categories	Frequency	Rate
Gender	Male	217	59%
	Female	151	41%
	Total	368	100%
Class	1st secondary class	128	34.8%
	2nd secondary class	136	37%
	3rd secondary class	104	28.3%
	Total	368	100%
Academic stream	Natural sciences	191	51.9%
	Religious science	177	48.1%
	Total	368	100%

Study Tools

In this study, the researcher used two measuring tools, the first is the cyber bullying scale, and the second is the digital practices scale. Below is a description of each scale and the procedures that were followed in extracting the truth and reliability of each.

First: Cyber Bullying Scale.

The researcher referred to the literature and previous studies related to the sources of cyber bullying, such as a study (Gençdoğan & Çikrikci, 2015), and the study of Hussein (2016), and a study (Topcu & Erdur-Baker, 2010), in order to prepare an cyber bullying scale. Where the scale is in its primary form of (36) paragraphs distributed over five dimensions: cyber harassment and has (8) paragraphs are (1-8), threat and blackmail and has (10) paragraphs which are (9-18), non-verbal bullying and has (4) Paragraphs (19-22), and cyber disguise has (10) paragraphs, which are (23-32), and cyber self-learning, and it has (4) paragraphs are (33-36).

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Scale Validity

The researcher verified the scale content validity by presenting the scale to (8) arbitrators who specialize in education and psychology techniques at the University of Northern Borders for reference in terms of linguistic formulation, clarity of meaning in the paragraph, overlap, and the appropriateness of paragraphs for each dimension to which it belongs, and their suitability for students. The amendments were made based on the opinions of the arbitrators, where some of the paragraphs were modified, and the agreement between the arbitrators was (82%). This indicates the apparent honesty of all sub-dimensions and the scale as a whole.

The researcher also conducted the construction validation process in the current study by applying the scale in its current final form, as it was applied to a survey sample consisting of (47) students. Correct correlation coefficients were calculated for each dimension and Table (2) shows the correlated correlation coefficients for each dimension of the cyber bullying scale.

Table 2: The values of the coefficients of the cyber bullying items

Online harassment		Threat & blackmail		Nonverbal bullying		Electronic stealth		Cyber self-learning	
No.	Correlation coefficient	No.	Correlation coefficient	No.	Correlation coefficient	No.	Correlation coefficient	No.	Correlation coefficient
1	0.52	9	0.66	19	0.47	23	0.33	33	0.36
2	0.32	10	0.69	20	0.32	24	0.55	34	0.53
3	0.67	11	0.55	21	0.49	25	0.58	35	0.42
4	0.31	12	0.47	22	0.63	26	0.67	36	0.57
5	0.40	13	0.63		27	0.66			
6	0.31	14	0.58		28	0.60			
7	0.40	15	0.71		29	0.40			
8	0.45	16	0.31		30	0.58			
		18	0.56		32	0.64			

It is noted from Table (2) that the correlation coefficients for the overall scale ranged between (0.30-0.71), and the values of the correlation coefficients of the cyber disturbance dimension ranged between (0.31-0.67), while the threat and extortion dimension ranged between the values of the correlation coefficients between (0.31-0.71) , And in the non-verbal bullying dimension, the values of the correlation coefficients ranged between (0.32-0.63), While the dimension of cyber disguise, the values of the coefficients of the paragraphs correlation ranged between (0.33-0.67), and finally, the dimension of cyber self-learning, the values of the coefficients of the paragraphs ranged between (0.53-0.57). All of them are statistically significant values, and the researcher has adopted a criterion for accepting the paragraph that the coefficient of its correlation with the scale as a whole should not be less than (0.30). Based on this criterion, all the paragraphs of the scale were accepted.

Scale Stability

The researcher verified the stability of the scale in two ways: The first is by applying it to a prospective sample of (37) students, and the coherence coefficient of alpha Kronbach was calculated for the dimensions, where these values ranged between (0.64-0.86) and the tool as a whole amounted to (0.72), The second method is stability of the method by applying it to the same exploratory sample, and it was re-applied two weeks after the first application, and these values ranged between (0.71-0.88), and the tool as a whole amounted to (0.77). The researcher believes that these values are appropriate to use the list for the purposes of the current study, and Table (3) shows that.

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Table 3: *Coefficient of internal consistency according to the Cronbach alpha equation to measure cyber bullying, its dimensions and the stability of repetition*

Dimension	Cronbach alpha	Stability of repetition
Online harassment	0.68	0.71
Threat and blackmail	0.86	0.88
Nonverbal bullying	0.59	0.67
Cyber disguise	0.64	0.72
Cyber self-learning	0.84	0.85
Total	0.72	0.77

Scale Correction

The cyber bullying measure included (36) items in its current final form, to which it is answered with a pentagonal gradation that includes alternatives: (Strongly opposes when the scale is corrected one degree; I oppose when the scale is corrected two degrees; neutral and given three degrees, I agree that when the scale is corrected four degrees; Strongly agree, given five degrees). Thus, the degrees of the total scale range between (36-180), so that the higher the degree, the more indication that the rise in cyber bullying.

Second: Digital practices scale.

The researcher referred to the literature and previous studies related to digital practices, such as the study of Tawalbeh and Karasneh (2018), the study (Aranda, Sánchez-Navarro, Martínez-Cerdà & Meneses, 2018), and the study (Bakó & Tóké, 2018), in order to prepare the scale of Digital practices. Where the scale in its primary form is (25) paragraphs distributed over seven dimensions: positive digital practices and negative digital practices.

Scale Validity

The researcher verified the content scale validity by presenting the scale to (8) arbitrators who specialize in

education and psychology techniques at the University of Northern Borders for reference in terms of linguistic formulation, clarity of meaning in the paragraph, overlap, and the appropriateness of paragraphs for each dimension to which it belongs and their suitability for students. And some of the paragraphs in which the agreement between the arbitrators was modified by (76%). Where the number of paragraphs of the scale in its final form became (25) paragraphs, this indicates the apparent honesty of all sub-dimensions, and the scale as a whole.

The researcher also conducted the validity of the study construction by calculating the correlation of the dimensional paragraphs parameters with the total degree of the dimension to which it belongs in a sample consisting of (47) students from outside the study community, and then the corrected correlation coefficients for the paragraphs of each dimension were calculated. Table (4) shows the values of the correlation coefficients for the Paragraph 4 of the Parameters.

Table 4: Correct correlation coefficient values for digital practice scale dimension paragraphs

Positive digital practices				Negative digital practices	
No.	Correct correlation coefficient	No.	Correct correlation coefficient	No.	Correct correlation coefficient
1	0.51	8	0.54	16	0.51
2	0.46	9	0.53	17	0.47
3	0.52	10	0.42	18	0.46
4	0.56	11	0.48	19	0.41
5	0.44	12	0.42	20	0.43
6	0.45	13	0.55	21	0.52
7	0.54	14	0.44	22	0.49
		15	0.41	23	0.49
				25	0.64

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It is noted from Table (4) that the correlation coefficients for the overall scale ranged between (0.41-0.64), and the values of the correlation coefficients of paragraphs for the dimension of positive digital practices ranged between (0.41-0.56), while the dimension of negative digital practices ranged between (0.41-0.64) And the researcher has adopted a criterion for accepting the paragraph that the coefficient of its correlation with the scale as a whole should not be less than (0.30). Based on this criterion, all the paragraphs of the scale have been accepted.

Scale stability

The researcher verified the stability of the scale in two ways: the first by applying it to a survey sample of (47) male and female students, and the coherence factor coefficient was calculated Cronbach alpha for dimensions where these values ranged between (0.78-0.86) and the tool as a whole amounted to (0.82), and the second method is the stability by applying it to the same exploratory sample, and it was re-applied two weeks after the first application, and these values ranged between (0.81-0.89), and the tool as a whole amounted to (0.85). The researcher believes that these values are appropriate to use the list for the purposes of the current study, and Table (3) shows that.

Table 5: Coefficient of internal consistency according to the Cronbach alpha equation To measure digital practices, dimensions, and consistency of repetition

Dimension	Cronbach alpha	Stability of repetition
Positive digital practices	0.78	0.81
Negative digital practices	0.86	0.89
Total	0.82	0.85

Scale Correction

The scale of digital practices included (25) paragraphs in its current final form, to be answered by a five-stage scale that includes alternatives: (Strongly opposed, it is given one degree when correcting the scale; Strongly agree, given five degrees). As for the reverse paragraphs, they take (always given when the scale is corrected one degree; often when the scale is corrected two degrees; sometimes three degrees are given, rarely given when correcting the scale four degrees; never given five degrees), which are the following paragraphs (16-25). Thus, the total scale scores range between (25-125), so that the higher the score, the more that the digital practices will rise.

Study Procedures

The sample was determined from the students of the first and second grades to ensure the validity and consistency of the two measurement tools, then the schools to which the questionnaire was applied were identified. The questionnaire was distributed to the students inside the classrooms and the instructions related to each scale were explained on their own.

Initially, students were given a general idea of the study's goals and significance, and they were assured that their participation is voluntary, and that the data they will be presented with will be treated in strict confidence. It should be mentioned that this measure of social phobia is not mentioned but rather of personality traits, in order not to have a negative impact on their responses. All of their questions were answered while answering the questionnaire.

Questionnaires were collected from the members of the study sample, incomplete and randomly completed questionnaires were excluded; after that, they were entered

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into the SPSS statistical analysis program and the results of the current study were extracted.

Study Variables

The study included the following variables:

1. Cyber bullying: It has five dimensions (cyber harassment, threat, blackmail, nonverbal bullying, cyber disguise, cyber self-learning)
2. Digital practices: it has two dimensions (positive practices, negative practices)
3. Gender: It has two categories (male, female).
4. Specialization: It has two categories (Natural Sciences, religious Sciences).

Statistical procedures

The statistical means and standard deviations of the sample for both cyber bullying and digital practices. To determine the gender and grade differences, and the educational stream on both cyber bullying and digital practices, three-way ANOVA was used. The correlation coefficients between cyber bullying and digital practices were also calculated. A multi-step regression analysis was also used to detect the potential of both digital piracies and cyber bullying in both genders.

Results

Below are the results for each of the questions that the study attempted to answer.

Q 1: What is the level of cyber bullying among high school students?

To answer this question, the means and standard deviations of students' scores were calculated on the scale as a whole and on each dimension as indicated in table (5).

Table 5: The means and standard deviations of students' scores on the scale as a whole, and on each dimension

No.	Rank	Dimensions	M	SD	Level
1	1	Cyber Harassment	3.62	0.65	Medium
2	3	Threat and extortion	3.53	0.61	Medium
3	4	Nonverbal bullying	3.41	0.68	Medium
4	2	Electronic Incognito	3.59	0.74	Medium
5	5	electronic self-learning	3.38	0.79	Medium
		Total	3.51	0.64	medium

Table (5) shows that the degree of cyber bullying is medium, with the mean of the scale as a whole (3.51) and the standard deviation (0.64). In the dimensions, the cyber harassment was ranked first with a mean of (3.62) with a standard deviation of (0.65) with a medium degree, followed by cyber concealment with a mean of (3.59) and a standard deviation of (0.74) with a medium degree, followed by threats and blackmail with a mean of (3.53) and deviation of (0.61) with a medium degree. Then nonverbal bullying with a mean (3.41) and standard deviation (0.68) and medium grade and finally self-learning with a mean (3.38), a standard deviation (0.79) and a low degree.

Q 2: What is the level of students' awareness of digital practices?

To answer this question, the mean and standard deviations of the students' scores were calculated on the scale as a whole, and on each dimension as indicated in Table (6)

Table 6: The mean and standard deviations of students' scores on the scale as a whole, and on each dimension

No.	Rank	Dimensions	M	SD	Level
1	1	Positive digital practices	3.89	0.57	High
2	2	Negative digital practices	3.64	0.68	Medium
		Total	3.77	0.63	high

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Table (6) shows that the mean of digital practices as a whole was (3.77), and the standard deviation (0.63) was high. In the dimensions, positive digital practices ranked first with a mean of (3.74) with a standard deviation (0.57) with a high degree, negative digital practices with a mean of (3.41) and a standard deviation (0.68).

Q 3: Are there statistically significant differences between the mean responses of the study sample in electronic bullying due to the (gender, grade, and track) variables of secondary students?

To answer this question, the mean and standard deviations of the cyber bullying scale as a whole were calculated according to the study variables. Table (7) shows this.

Table 7: Statistical averages and standard deviations of the cyber bullying scale as a whole according to the study variables

SV	Level	M	SD	SV	Level	M	SD
Gender	Males	3.72	0.56	Educational Stream	Sciences	3.87	0.63
	Females	3.64	0.51		Religion	3.76	0.71
	Total	3.98	0.54		Total	3.82	0.66
Grade	1 st secondary class	3.70	0.52				
	2 nd secondary class	3.67	0.57				
	3 rd secondary class	3.78	0.61				
	Total	3.72	0.62				

Table (7) shows the existence of apparent differences between the means of the cyber bullying scale according to the study variables on the scale as a whole. To detect the significance of these differences, three-way ANOVA was used to detect differences at the scale level as a whole, table (8) shows that.

Table 8: Analysis of the triangular variance to detect differences on the cyber bullying scale as a whole according to the study variables

SV	SS	df	MS	F	Sig.
Gender	1.415	1	1.415	5.014	0.000
Educational Stream	1.843	1	1.843	7.415	0.000
Class	4.875	2	2.438	6.972	0.000
Error	49.427	366	0.135		
Total	60.628	367			

That table (8) shows that there are statistically significant differences at the level of significance ($\alpha = 0.05$) on the cyber bullying scale due to gender variable in favor of males, in the educational stream variable in favor of natural science course; In order to identify the differences, the post-comparisons were used in the Scheffe method, and Table (9) shows this.

Table 9: Scheffe comparisons to the degree of cyber bullying are attributed to the class variable

Educational Stage		1 st secondary class	2 nd secondary class	3 rd secondary class
	M	3.70	3.67	3.78
1 st secondary class	3.70			
2 nd secondary class	3.67	0.09		
3 rd secondary class	3.78	*0.36	0.11	

* significant at significance level ($\alpha = 0.05$).

Table (9) shows that there are statistically significant differences ($\alpha = 0.05$) between the means of the first and secondary grades on the one hand and the means of the third secondary grade on the other hand.

Q 4: Are there any statistically significant differences in the degree of awareness of digital practices due to (gender, grade, and educational stream) variables of secondary students?

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To answer this question, the mean and standard deviations of the digital practice scale as a whole were calculated according to the study variables, and Table (10) illustrates this.

Table 10: Means and standard deviations of the digital scale as a whole according to the study variables

SV	Level	M	SD	SV	Level	M	SD
Gender	Males	3.59	0.67	Educational Stream	Sciences	3.82	0.78
	Females	3.61	0.57		Religion	3.68	0.69
	Total	3.60	0.54		Total	3.75	0.64
Grade	1 st secondary class	3.69	0.74				
	2 nd secondary class	3.72	0.61				
	3 rd secondary class	3.83	0.59				
	Total	3.75	0.66				

Table (10) shows that there are apparent differences between the means of the digital practices measure according to the variables of the study on the scale as a whole. To detect the significance of these differences, three-way ANOVA was used to detect differences at the level of the whole scale, table (11) shows that.

Table 11: Analysis of the triangular variance to detect differences on the scale of digital practices as a whole according to the study variables

SV	SS	df	MS	F	Sig.
Gender	1.831	1	1.831	6.427	0.000
Educational stream	1.678	1	1.678	4.986	0.000
Class	5.142	2	2.571	5.834	0.000
Error	54.245	366	0.148		
Total	63.145	367			

Table (11) shows statistically significant differences at the level of ($\alpha = 0.05$) on the scale of digital practices due to the gender variable in favor of males, in the educational stream variable for the favor of natural sciences. In order to identify the differences, the post-comparisons were used in Scheffe, and Table (12) shows that.

Table 12: Scheffe comparisons of the digital practices degree are attributable to the class variable

Educational stage		1 st secondary class	2 nd secondary class	3 rd secondary class
	M	3.69	3.72	3.83
1 st secondary class	3.69			
2 nd secondary class	3.72	0.07		
3 rd secondary class	3.83	0.10	*0.29	

* significant at significance level ($\alpha = 0.05$).

Table (12) shows that there are statistically significant differences ($\alpha = 0.05$) between the means of the second secondary grade on the one hand and the mean of the third secondary grade on the other.

Q 5: Is there a statistically significant correlation between cyber bullying and awareness of digital practices among high school students?

To answer this question, Pearson correlation coefficients were calculated between the scores of the sample on each dimension of cyber bullying and their scores on the digital practice scale, as shown in table (13).

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Table 13: Correlation coefficients between the sample members' scores on the electronic bullying dimensions and their scores on the Digital Practice Scale

Type	Positive practices	Negative practices	Z
Cyber Harassment	-0.17**	0.34**	2.57*
Threat & extortion	- 0.23**	**0.31	0.00
Nonverbal bullying	**0.27-	**0.36	*2.44
Cyber Incognito	**0.26-	**0.30	*1.98
digital self-learning	**0.29-	**0.28	1.17-

0.01 > P** ; 0.05 > P*

Table (13) shows that there is a statistically significant negative relationship between the electronic bullying scale dimensions and positive digital practices. The table also shows that there is a statistically significant positive relationship between the electronic bullying scale dimensions and negative digital practices.

Q 6: What is the predictive power of digital practices in interpreting cyber bullying among high school students?

To answer this question, a multi-step regression analysis was conducted to reveal the extent to which digital practices contribute to predicting cyber bullying in both genders. Table (14) shows the results of this analysis in males.

Table 14: Results of multi-step regression analysis of the extent to which each dimension of digital practice contributes to cyber pulling prediction

The dependent variable	Predictions	B	R	R ²	F	Sig.
	Negative digital practices	0.31	0.57	0.29	134.50	*0.000

0.0001 > P*

Table (14) shows that the negative digital practices of the mother accounted for 29% of the variance, thus contributing significantly to the prediction of cyber bullying at the significance level (P> 0.0001)

Results Discussion

The researcher points out that the level of electronic bullying for students was medium as they, at this stage, are subjected to psychological and emotional pressures greater than others by virtue of adolescence and changes, which makes them resort to the means of social communication to unload their energies in addition to the modern means of communication allow them to hide and bullying away from the legal prosecution of their behavior. The means of social communication also allow interaction with others without verifying their true identity or verifying their age. The means also allow the response and the practice of bullying away from the other party and directly retaliating against it. In addition, students do not have expertise in cyber bullying or attacking a person under a pseudonym who requires school legal proceedings or even judicial proceedings.

The researcher attributes that students' digital practices level is great because students use digital tools as means for social communication in all their life , which reflects this feature of the automatic use of these means as a communicative medium, and a direct and automatic interaction tool for students for their ease or low price, or for fun communicative, And perhaps this is reflected on society as a whole, because the mechanism of communication is embodied by cultural meanings in the human society. This finding can also be explained by the fact that emotional impact and emotional motivation are based on mental perception about digital communication tools and what they may impose from a different reality of practices that inevitably follow students' interests in everyday individual life.

The researcher attributes that males are more likely to be able to express feelings of anger than females, and that many fathers in the Arab world, according to the prevailing

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tradition, allow males to communicate using communication platforms without control, while placing a lot of controls on the communication of their daughters through means Social Media. Males usually allow many strangers to communicate with them but females do not trust strangers and prohibit strangers from accessing their own pages in social networking sites. And females are more afraid of males in the adventure in insulting and attacking others through using social networking, and they do not trust the guarantees of privacy, such as security in social media, as girls are afraid of the community's view to them if some of the problems of communication happened as a result of using these means.

The researcher says that males use digital networks and may explain how these tools bring pleasure, fill the leisure time and entertainment, as they use it for the purposes of social communication and entertainment, especially among males. Where these are considered one of the most needs of male adolescents and the desire to satisfy what they have. In addition to what is required by the methods of family formation in Saudi society that encourage males to be more courageous and independent, as opposed to females who are encouraged to good behaviors and adherence to customs and traditions.

The researcher attributes that the third secondary students are more bullying but these students are the most mobile phone owners that enable them to enter the means of social communication, and they are more communicative and use the means of social communication among them, as communication with each other is through these means. In addition, they are teenagers and are characterized by tension and sometimes they do not control their emotions, which makes them employ social media to bully others.

The researcher attributed that the third-secondary students more digital practice which leads to addiction

because of the attractiveness, and accelerate integration in the media, which affected older students a state of technological addiction due to various uses in many aspects of life. The intensity of their attachment to various means of social communication and preoccupation with them. This may confirm the length of time these students are overwhelmed by these technological tools, unaware of their most important duties, accompanied by enjoyment, integration and lack of sense of time spent while using them.

That negative digital practice is a powerful predictor of cyber bullying because it reflects negative effects on students' behaviors that may reflect subtle and dangerous trends that may lead to a crisis of values that is almost widespread and destroy the students' community. This may also mean that students are not qualified to deal with the technology community and adapt to its consequences in a suitable way. The environment surrounding them and their large interactive numbers provide a student mix of multiple societal and self-different cultures. As well as ease of use and rapid access to such undesirable sites that threaten the security and safety of students and their families and even the whole system of value society.

Conclusion

Guidance programs should be developed to improve the optimal use of modern technology for secondary school students who practice bullying. Supervising services should include providing students with digital affirmative skills, enabling them to achieve their goals, engaging in new attitudes that inspire their attention to good social behaviors, and being able to interact positively with others and reduce the negative activities of technology to which they are accustomed.

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