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The Relationship between Cyberbullying and Mental Health among University Students

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Abstract: Background: The term 'cyberbullying' is linked to traditional bullying, and both refer to oppression. This study aimed to determine the overall effects of cyberbullying on mental health among university students of various ages, and to investigate the extent to which victims (students) directed less attention and focus towards their academic achievement. Methods: The participants in this study were 326 male and female students from King Faisal University in the Al-Ahsa Governorate. The researchers in this study employed the descriptive correlative approach. Results: The study's findings revealed that there were substantial variations in the categories of sex, academic specialty (medical and non-medical students), and family economic status, in relation to cyberbullying surveys. In addition, there was a significant negative relationship between cyberbullying and mental health. Conclusions: It is highly recommended that, in order to prevent cyberbullying, people of all generations need to be made aware of it via specific programs in different public areas, for example, in schools, colleges, and malls, and on social media.

Keywords: cyberbullying; mental health; university students; Al-Ahsa; Saudi Arabia

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1. Introduction

Bullying is an aggressive behavior that is intentionally and repeatedly directed at individuals who have less power than the attacker does. Bullying may take many forms, including physical, verbal, and social bullying [1]. In its physical form, bullying includes hitting, pushing, spitting, and other physical acts. Bullying in the oral form includes mocking, name-calling, and threatening. In its social form, it consists of spreading rumors (slander), exclusion from peer groups, and other forms. When dealing with perpetrators, these three forms of bullying most commonly occur face to face [2].

Both cyberbullying and cyber victimization research have grown in popularity in recent years in various countries. Traditional forms of bullying, such as school bullying and school victimization, are still prevalent among children. The phenomenon of cyberbullying has gained scientists' attention because it is a new form of bullying in the digital era. Individuals can now use new media to intimidate others [3]. Bullying has also grown as information and communications technology has advanced [3,4]. This situation makes sense, because indirect intimidation is considered the safest and most convenient approach, compared to traditional bullying. Bullying victims can be easily intimidated without their names being revealed [5]. Even the perpetrators can use digital media to quickly publicize intimidation acts to the general public. Cyberbullying has a more dangerous effect than traditional bullying; it can even encourage victims to respond reactively to accidents and deaths. This type of cyberbullying often happens in the educational setting, particularly among students [3].

Cyberbullying refers to humiliation, threats, sexual harassment, or social exclusion using information and communication technology [6]. For example, posting pictures or embarrassing comments about someone, or posing as someone dangerous. Cyberbullies attack victims by sending demeaning or threatening messages, and delivering images using websites, instant messages, blogs, chat rooms, cell phones, e-mails, and personal online profiles [7,8]. As such, it can be understood that cyberbullying is different from traditional bullying. This situation creates new challenges for educators involved in the learning process in schools and colleges. Teachers must recognize changes in student behavior in the digital age. Additionally, teachers are faced with the challenge of keeping students safe in school both in physical space and in virtual space, which has become a hazardous environment. Until now, there has been no regulation and supervision of security in the virtual room.

Many studies have investigated the prevalence of cyberbullying and cyber victimization, the relationship of cyberbullying with other antecedent factors (such as personal and contextual factors), motives for participation in cyberbullying actions, and the practice of effective cyberbullying prevention and intervention [9]. In addition, bullying often occurs in an educational setting, and it is extremely disruptive to the learning environment. Teachers are concerned about the impact of cyberbullying, which has the potential to cause serious issues at school. Teachers realize that they are unable to oversee students' use of information and communication technologies on a one-on-one basis [10]. Students can bully without their names being revealed. Anyone, at any time, may view bullying content that is publicized by the perpetrators. Traditional bullying can have a more severe impact on mental health and academic issues than cyberbullying. In certain countries, fatalities such as suicide have occurred [3].

Victims of cyberbullying frequently suffer issues related to social skills and peer relations. Although information and communication technologies serve as a means of communication between users, students with offline relationship problems are more likely to be victims of cyberbullying [9]. This means that students need to be taught outstanding social skills at school/college. Thus, teachers need to understand the phenomenon of cyberbullying that occurs in the school environment. This includes how cyberbullying can occur, the impact that it has on students, and how preventive measures can be taken. Teachers may utilize this information to influence student behavior at universities. It also allows teachers to develop curricula and learning strategies to help students improve their social skills, both offline and online. This literature review study aims to discuss the definition of cyberbullying, its causes and impacts, and protective factors [11].

Cyberbullying is associated with the expansion of the internet. The phenomenon is growing in Italy and other European and non-European countries. Cyberbullying causes psychopathological symptoms of anxiety, sadness, and social phobia in young people, which can lead to extreme acts, including suicide [12]. The pressure, the experience of isolation, and the weaknesses that result from cyberbullying have an additional effect on the victim's family and their own circle of relatives. Cyberbullying is a form of bullying that takes place online, is generally anonymous, and attempts to harm and make fun of victims [13]. There are numerous types of cyberbullying, and each leads to particular responses and results. Even so, few types of research have centered on young adults' perceptions regarding cyberbullying. Teenagers regularly interact in competitive behavior, even by avoiding emotions and responses associated with victimization. According to several studies, the positive connection between exposure to violent video games and aggressive conduct among university students is moderated by the trait of anger. [14,15].

The technological ecosystems for adolescents and young adults have been altered, in the twenty-first century, by a dramatic shift in the technological environment. There are more mental health hazards associated with technological innovation. This research presents a narrative assessment of current cyber dangers confronting adolescents and young adults [16]. Not only that, but it also highlights the risks and consequences of cyberbullying, media platforms, cyber interpersonal violence, abuse of women, cybersex,

online harassment, online dating, cyberstalking, and phishing scams, with a focus on raising awareness and encouraging assertive initiatives to solve these societal problems as the digital era evolves [17].

After reading many literature reviews on cyberbullying in the age groups of 8–13 and 9–17, we decided to focus our study on college students, namely those aged 18 and above. This is a focus that differentiates our study from other, similar research. The goal of the current study was to determine the overall impact of cyberbullying on mental health. We also wished to investigate whether there was a substantial difference in mental health between males and females at King Faisal University, Saudi Arabia.

However, every generation has its view of cyberbullying, including teachers, some of whom are judged on their appearance, or due to racism and prejudice, among other things. Even when the bullying has ceased, cyberbullying can have long-term emotional consequences. Cyberbullying may also cause mental health problems, including tension and worry, sadness, aggressive behavior, and low levels of self-esteem.

The current research aimed to investigate the overall impact of cyberbullying on the mental health of college students of different age groups. Moreover, we also aimed to study the extent to which victimized persons (students) direct less concentration/less focus towards their academic performance.

Objectives:

1. To explore whether there is a relationship between cyberbullying and emotional mental health, i.e., depression, anxiety, and stress.
2. To evaluate the differences between males and females, as well as students at medical and non-medical colleges, with regard to the impact of cyberbullying on psychological disorders.
3. To explore whether there is a significant relationship between academic performance and mental health in relation to cyberbullying.

2. Literature Review

Today's teenagers are completely connected in their everyday lives. Aboujaoude (2015) refers to today's teenagers as completely wired, since they are constantly switching from one type of media to another [1]. Ongoing technological growth has brought about the continuous development of the concept of relationships. Non-mandatory entry to social networks and online communities suggests instant presence broadcasting over the network [18].

Cyberbullying, also known as electronic bullying, is a well-known risk of technological evolution; it involves purposed and repeated actions toward at least one individual, using electronic devices [19]. Cyberbullying, like traditional bullying, is dependent on an asymmetrical relationship between the person who make the cyberbullying and the targeted person [20]. The main feature of cyberbullying is the anonymity guaranteed by the internet, which makes victims feel weak and lonely. [21].

The rates of cyberbullying vary significantly across studies conducted in European and non-European countries, with values ranging from 6.5% to 72% for cyber victimization [22]. For instance, according to a 2017 Brazilian survey conducted in the United States, between 33.8% and 39% of adolescents have reported being victims of cyberbullying at some point in their lives. Rates of cyber victimization in China span from 14% to 57%, and cyber violence from 3% to 35%, according to research published between 2013 and 2018 [23].

2.1. Cyberbullying and Mental Health

Victims of cyberbullying use alcohol and narcotics more often than other students in schools, and are more likely to be absent from school (United Nations Children's Fund) [24]. In addition, they are more likely to perform poorly and have problems with self-esteem and health [25]. When it comes to cyberbullying, adolescents usually hesitate to confide in adults. Cyberbullying presents with the same symptoms as a post-traumatic stress disorder, and suicide can result from these symptoms [26]. Harassment and cyberbullying are frequently linked to anxiety and depression. [27].

2.2. The Psychological Effects of Cyberbullying

Cyberbullying has the potential to harm the victim's mental health. Victims experience increased levels of anger, helplessness, unhappiness, and fright [28]. The most significant emotional and non-physical results of cyberbullying include anger, helplessness, grief, and anxiety. Students who experience cyber victimization can develop symptoms of depression [29]. However, traditional bullying has a stronger link to depressive symptoms, as compared to cyberbullying [30]. Other research has revealed that victims of cyberbullying suffer from increased levels of depression than victims of traditional bullying [31]. In addition, cyberbullying has a stronger link to anxiety symptoms than traditional bullying [32].

When students do not know who is intimidating them, the negative impacts intensify, leaving victims feeling helpless and afraid. This is highly understandable, given that cyberbullying is often carried out anonymously by perpetrators [33]. In comparison to those instances when the victim knows who is committing the cyberbullying, anonymity generates heightened feelings of disordered anxiety: that is, in instances when the victim is unaware of the perpetrator's identity. The anonymity factor can make the victim feel less secure, resulting in a more pronounced power imbalance in cyber victimization than in traditional victimization [32].

2.3. Reactive Behavior

Cyberbullying victims may exhibit reactive behaviors, such as suicide attempts. This condition occurs due to ongoing depression, which eventually leads to the formation of suicidal ideation and attempts [34]. Several studies have found that cyberbullying has more severe consequences than traditional bullying. Cyberbullying has a greater incidence of depression, drug use, self-injury, suicidal ideation, and suicide attempts, compared to traditional bullying [35]. The researcher states that involvement in cyberbullying, whether as a bully or a victim, functions as a predictor for symptoms of depression and thoughts of suicide, in a way that traditional forms of intimidation (physical, verbal, relational) do not [35]. Victims attempt suicide, and cyberbullying has been shown to have a direct influence on suicide attempts [35]. Young individuals who experience traditional bullying or cyberbullying, either as perpetrators or victims, have greater rates of suicidal thoughts and are more likely to attempt suicide than those who have not experienced any form of aggression from their peers [36].

2.4. Difficulties in Social and Academic Development

Another problem caused by cyberbullying is the inability to make friends [37]. Cyberbullying enables victims and attackers to avoid facing social communications and building connections, which can have harmful emotional implications. [37]. Furthermore, perpetrators of cyberbullying have lower levels of conscience [37]. Additionally, cyberbullying can also obstruct students' academic development [37]. Feelings of pressure and shame discourage students from focusing on educational activities. Victims find it challenging to develop their academic, social, and emotional capacities [37].

2.5. The Role of the School Environment

Cyberbullying must receive serious attention from school stakeholders and must be addressed by teachers, parents, and peers [38]. Various protective strategies may be implemented to avoid cyberbullying, and education is an important component of cyberbullying prevention and response. Educators must devise innovative techniques to engage young people in meaningful discussions regarding the use of accessible technology. In this context, they can create lessons that teach students to express their opinions appropriately on social media [39]. An encouraging school environment plays a vital role in reducing the occurrence of cyberbullying [40]. Previous studies have revealed that a positive school climate [3,37] and school safety [3] can protect children from the victimization and oppression of cyberbullying [41].

2.6. The Role of the Family

Cyberbullying victims frequently have the lowest level of family support [42]. Parents can assist in anti-cyberbullying interventions by providing: (a) emotional and practical support for students, (b) knowledge of ICT safety, and (c) a structured environment, characterized by warm involvement and control of behavior, combined with discussions of and participation in children's online lives, to promote critical thinking, respect, and finally autonomy [5]. Some types of social support can protect against cyberbullying. Specifically, perceived social support from the family and teacher reduces the likelihood of depression and anxiety symptoms, and a higher level of social support from the family increases the probability of a greater level of subjective well-being among children who are victims of cyberbullying [43].

2.7. The Role of Peers

A positive community can protect children from cyberbullying. Information and communications technology may be used as a medium for communication between users [6]. However, students who have offline relationship problems are more likely to become victims of cyberbullying [9]. Therefore, the role of positive interaction and peer support is vital to reducing the incidence of cyberbullying [43]. Previous studies revealed that positive peer influence and peer support are linked to decreased cyber victimization [3]. Furthermore, choosing a positive community is a significant factor in reducing the occurrence of cyberbullying.

2.8. Individual Role

Protective measures against cyberbullying not only rely on situational factors but also on personal factors [6]. Students are thought to play a vital role in protecting themselves against cyberbullying. Prosociality is expected to prevent cyber victimization and cyberbullying by lowering the frequency of technology usage, among other individual factors [3]. Additionally, social competence, intelligence, and problem-solving can protect against victimization [3,6].

Furthermore, the ViSC Social Competence Program is also proposed as a cyberbullying prevention program [44]. ViSC is a primary prevention program, with secondary prevention features to minimize violent behavior and intimidation in schools, as well as to promote social and intercultural competency [45]. Given that cyberbullying harms students, the findings of this study provide further evidence that teenage peer aggression must be addressed seriously both at school and at home. In addition, in programs that respond to cyber victimization and cyberbullying in the school setting, both the prevention of and intervention in cyberbullying are critical components [46].

All technological developments provide various benefits and unexpected losses. This includes impacts on the school environment and the way students learn. The downside of technological development is that it might have a bad influence: for example, when technology is used as a tool for cyberbullying [47]. The development of technology has had a significant influence on this new form of bullying. The ease with which people can use the internet, and other technical gadgets such as cell phones, has also contributed to the emergence of new forms of bullying. Individual relationships have been altered by the increased use of technology. Rapid changes in communication and social interaction have significant effects, both positive and negative, including encouraging the emergence of cyberbullying [3].

Cyberbullying refers to humiliation, threats, sexual harassment, or social exclusion using information and communications technology [6]. Perpetrators attack victims by sending demeaning or threatening messages and images using websites, instant messages, blogs, chat rooms, cell phones, e-mails, and personal online profiles [7,8,48]. As a result, it is clear that cyberbullying is different from traditional bullying. This situation creates new challenges for educators in the school/college learning process. In the digital era, teachers must be aware of changes in student behavior. Furthermore, they face the challenge

of keeping students safe at school, both physically and virtually, which has become a hazardous environment. Until now, there has been no regulation or supervision of virtual room security [12].

3. Materials and Methods

Study type: IT Cross-sectional design.

The sample size consisted of 326 students from different colleges of King Faisal University. All the respondents (males and females) were aged 18 and above, and came from different socio-economic backgrounds.

Hypothesis 1 (H1). *There is a significant difference in mental health between males and females, with regard to cyberbullying*.

Hypothesis 2 (H2). *There is a significant difference in mental health between students at medical and non-medical colleges, with regard to cyberbullying*.

Hypothesis 3 (H3). *There is a significant difference in mental health between victimized students and non-victimized students with regard to cyberbullying*.

Hypothesis 4 (H4). *There is a significant relationship between poor academic performances/diminished concentration/poor mental health, and cyberbullying*.

Tools: Two main questionnaires were used. The first of these was the Cyberbullying Scale, which was developed by the Cyberbullying Assessment Instrument [36]. This questionnaire focuses on assessing cyberbullying among college students, and consists of 20 items. The second questionnaire, "Mental Health Questionnaire", was developed by DASS 21, and consists of 21 items that focus on depression, anxiety, and stress.

Procedure: The study was carried out among university students at King Faisal University, Saudi Arabia. The sample size was 326 students, aged 18 and above, and the study was conducted using valid questionnaires through online surveys. The target was focused on students with different levels of socio-economic status, male and female students, and students from both medical colleges and non-medical colleges, at King Faisal University. Two questionnaires were used: DASS-21 and the Cyberbullying Assessment Instrument. The collection of questionnaires was carried out between January and March 2022, during the academic year.

Analysis of data: The data was entered and analyzed using the SPSS program, version 26, with the help of different statistical techniques such as Chi-square, Pearson correlation, and frequency. Chi-square was used to assess the significance level of various factors such as sex, age group, academic level, academic specialty (medical and non-medical students), and the economic level of the family, with regard to the cyberbullying questionnaire. The Pearson correlation was used to determine the existence of a significant relationship between cyberbullying and mental health. Likewise, the frequency technique was used to determine the significance of sex, socio-economic status, and academic level and specialty (non-medical colleges) for mental health.

Ethical Approval: The ethics committee of the university granted and informed IT, giving the researchers consent to carry out the research. The ethical principles were considered with respect to research with human beings.

4. Results

Table 1 shows the demographic percentages: 311 students (95%) were aged 18–25, the highest percentage of the age groups; 2.1% of students were 26–30 years of age; and 2.5% were above 30 years of age.

Table 1. Description of demographic variables.

Variables	Categories	*n*	%
Age	18–25	311	95.4
	26–30	7	2.1
	More than 30	8	2.5
Sex	Female	139	42.6
	Male	187	57.4
Academic year level	1st	77	23.6
	2nd	158	48.5
	3rd	52	16.0
	4th	12	3.7
	5th	9	2.8
	6th	18	5.5
Specialty	Medical colleges	255	78.2
	Non-medical colleges	71	21.8
Family socio-economic level	SAR 5000–10,000	77	23.6
	Less than SAR 5000	56	17.2
	Greater than SAR 10,000	193	59.2

With regard to sex, males comprised 42.6% of respondents and females 57.4%. In terms of different academic levels, 23.6% were in first year; 48.5% second year; 16% third year; 3.7% fourth year; 2.8% fifth year; and 5.5% sixth year. The percentage of students at medical colleges was 78.2%, and the percentage of students at non-medical colleges was 21.8%. In terms of family socio-economic level: SAR 5000–1000, 23.6%; less than SAR 5000, 17.2%; greater than SAR 1000, 59.2%.

Table 2 shows that there is a significant difference level in sex, academic specialty (medical and non-medical students), and economic level of the family, among respondents to the cyberbullying questionnaires.

Table 3 shows that there is a significant negative (−0.687) relationship between cyberbullying and mental health.

Table 4 shows that 15% of the participants mentioned that cyberbullying is a significant/big problem at their college. The majority (84%) of the participants agreed that cyberbullying is on the rise. About one-half (49.1%) of the participants have been cyberbullied in the past three years.

Table 2. Chi-square test results.

Variable	Items	*p*-Value	In Favor of
Sex	Bullying always occurs when you are in which place?	0.000	Females who chose society.
	Bullying is a very big problem in your college.	0.000	Females who are not sure about that.
	How often do you think cyberbullying occurs through cell phone use during school hours?	0.047	Females who think it occurs from time to time.
	I found it hard to wind down	0.009	Females who sometimes found it hard to wind down.
	I experienced breathing difficulty	0.024	Males who never experienced breathing difficulty.
	I found it difficult to work up the initiative to do things	0.016	Females who sometimes found it difficult to work up the initiative to do things.
	I experienced trembling	0.017	Males who never experienced trembling.
	I felt that I was using a lot of nervous energy	0.005	Males who never felt that they were using a lot of nervous energy.
	I felt that I was rather touchy	0.000	Males who sometimes felt that they were rather touchy.

Table 2. *Cont.*

Variable	Items	*p*-Value	In Favor of
Academic year level	Bullying occurs through what place?	0.001	Third-year students who mentioned it occurs through personal profile pages.
	Should we leave the student on the internet without watching him, directing, or guiding him?	0.039	Sixth-year students who mentioned that we should not leave the student on the internet without watching him, directing, or guiding him.
	If the student took a photo of someone else, should he have the right to publish it with permission?	0.006	Third-year student who mentioned that we should take permission to publish the photos.
	I could not seem to experience any positive feeling at all	0.036	Fourth-year students who sometimes could not seem to experience any positive feeling at all.
	I felt I was close to panic	0.031	Fourth-year students who sometimes felt they were close to panic.
Specialty	Bullying always occurs when you are in	0.005	Non-medical students who mentioned that bullying always occurs when they are in college.
	Bullying occurs through	0.000	Medical students who mentioned that it is occurs through personal profile pages.
	Should we leave the student on the internet without watching him, directing, or guiding him?	0.042	Sixth-year students who mentioned that we should not leave the student on the internet without watching him, directing, or guiding him.
	Did they tell their parents about the cyberbullying? Did you tell your parents about bullying via the internet that happened to you?	0.002	Medical students answered that they did not tell their parents about bullying via internet happened to them.
	I tended to overreact to situations	0.026	Non-medical never tended to overreact to situations.
	I found myself getting agitated	0.011	Non-medical students never found themselves getting agitated.
	I was unable to become enthusiastic about anything	0.022	Non-medical students were never unable to become enthusiastic about anything.
Economic level of family	How often do you think cyberbullying occurs through cell phone use during school hours?	0.038	Students who have a family economic level of SAR 5000–10,000 think that cyberbullying occurs through cell phone use during school hours.
	I found it hard to wind down	0.023	Students who have a family economic level of SAR 5000–10,000 found it sometimes hard to wind down.
	I found it difficult to relax	0.016	Students who have a family economic level of SAR 5000–10,000 sometimes found it difficult to relax.

Table 3. The correlation between cyberbullying and mental health.

Variable	Test Name	Mental Health
Cyberbullying	Pearson correlation	−0.687
	p-value	0.001

Table 5 shows the assessment of the mental health of the participants related to different issues, such as anxiety, stress, and depression. The results show that (58.6%) of participants found it hard to calm down after any kind of stress; (20%) reported that this was never an issue; and the remaining (9%) answered 'almost always' in relation to mental health issues. The results show that it is difficult for the participants (university students) to return to a normal mood after experiencing stress. Moreover, regarding the

questions related to overreactions and difficulties calming down quickly in situations such as cyberbullying, (9.5%) of the participants showed overreactions; (31.6%) of respondents reported that tended to overreact to situations was 'never' an issue; (16.6%) of participants responded that it was 'often' the case; and (42.3%) responded 'sometimes' regarding mental health issues.

Table 4. Frequencies and percentages of important items of the cyberbullying questionnaire.

Items	Categories	*n*	%
How many times have you been cyberbullied in the past 3 years	More than 10 times	28	8.6
	1–5 times	118	36.2
	5–10 times	14	4.3
	Never	166	50.9
Cyberbullying is on the rise	Disagree	52	16.0
	Agree	274	84.0
Cyberbullying is a significant/big problem at our college	Disagree	144	44.2
	No	133	40.8
	Yes	49	15.0

Table 5. Frequencies and percentages of important items from the mental health questionnaire.

DAS 21 Items	Categories	*n*	%
I found it hard to wind down	Sometimes	191	58.6
	Never	68	20.9
	Almost always	16	4.9
	Often	51	15.6
I tended to overreact to situations	Almost always	31	9.5
	Never	103	31.6
	Often	54	16.6
	Sometimes	138	42.3
I found it difficult to relax	Almost always	31	9.5
	Never	82	25.2
	Often	66	20.2
	Sometimes	147	45.1
I felt down-hearted and blue	Almost always	40	12.3
	Never	123	37.7
	Often	42	12.9
	Sometimes	121	37.1
I felt I was not worth much as a person	Almost always	19	5.8
	Never	228	69.9
	Often	21	6.4
	Sometimes	58	17.8
I felt scared without any good reason	Almost always	29	8.9
	Never	145	44.5
	Often	38	11.7
	Sometimes	114	35.0
I felt that life was meaningless	Almost always	39	12.0
	Never	156	47.9
	Often	49	15.0
	Sometimes	82	25.2

5. Discussion

The present research aimed to assess the overall impact of cyberbullying on mental health, and the extent to which victims (students) paid less attention to their academic performance.

In terms of cyberbullying, the results of the present study revealed that there was significant differences according to the following variables: sex (p = 0.0001), academic

specialty ($p = 0.039$), medical ($p = 0.0001$) and non-medical ($p = 0.005$) students, and family economic status ($p = 0.038$). In relation to mental health, surveys demonstrate that females ($p = 0.009$) are more stressed than males ($p = 0.007$) when it comes to cyberbullying. When we analyzed the data at different academic levels, we found that third-year students ($p = 0.006$), fourth-year students ($p = 0.036$), and sixth-year students ($p = 0.039$) were more fearful of cyberbullying than first-year and second-year students. This might be due to students gaining experience and maturity as they progress through their academic years. However, aside from demonstrating a major difference between students at medical and non-medical colleges, one unexpected finding from this study is that students are not willing to discuss any problems with their family members. The students imply that no matter what transpired in their social lives, they would never tell their parents about their problems. As a result of the bullying they endure, students are constantly stressed, anxious, and depressed [37].

According to the results of the present study, about one-half of university students (49.1%) say they have been victims of cyberbullying, with the percentage being greater in the case of aggressors. Prior empirical investigations have indicated that prevalence rates for both victims and aggressors are similar [24]. Data have demonstrated that various emotional issues are predictors of being a victim of cyberbullying. Higher percentages of anxiety and stress, in particular, indicate a higher likelihood of being a victim of cyberbullying, although higher depression rates among students predict a greater likelihood of becoming a cyberbully [12,24,37], proving hypotheses 2 and 3 of this research.

Unfortunately, few studies have investigated whether these high levels are the outcome of predictors of cyberbullying in the college environment, making comparisons of the findings of this research very difficult indeed. Even so, the distinctive features of this transition phase may predict psychological issues in the college population as a whole [49]. Moreover, it has been demonstrated that these issues increase the chances of being a victim.

Results of the recent study revealed that there was an overall significant negative relationship between mental health and cyberbullying. These results clarified that cyberbullying has a negative impact on students' well-being, academic performance, and mental health. The results clearly show that victims of cyberbullying experience emotional problems, such as worry, tension, and sadness. Bullies' violent and domineering behavior [12] is associated with sad emotions, dissatisfaction with life, depression, and high levels of irritation. [44,48]

Results of the recent study show that (58.6%) of participants found it hard to calm down after any kind of stress; (20%) responded that this was 'never' an issue; and the remaining (9%) answered 'almost always' in relation to mental health issues. From these results, it is shown to be difficult for participants (college students) to return to a normal mood after experiencing stress. Moreover, with regard to questions related to overreactions and difficulties calming down quickly in situations such as cyberbullying: (9.5%) of the participants overreacted; (31.6%) of participants responded that this was 'never' an issue; (16.6%) of participants responded 'often'; and (42.3%) responded 'sometimes' regarding mental health issues. Here, the results show that there is an anxiety among college students who are victimized.

However, we can also identify from the results based on mental health questions that respondents who are victimized suffered from depression. Questions related to "I am not a deserving/a worthy person" received affirmative responses from (30.1%) of respondents; question based on "meaningless life" from (12%); and questions related to not being able to cope for trivial reasons from (8.9%). These results show that the participants thought that it was useless or of no value to live, felt discouraged by society, experienced discrimination, and felt desperate and lonely. Similar studies also support these results [28,45].

Similar studies were also supported [46], which concluded that there was relationship between victimization and the internalization of problems, whereby being a victim of bullying predicted future emotional problems. At the same time, depression, anxiety, anguish, insecurity, and low self-esteem all predisposed the student to become a victim.

Students who experience cyber-victimization are at greater risk of depressive symptoms [29]. Additionally, traditional bullying has a stronger relationship with depressive symptoms, as compared to cyberbullying [30]. This finding does not follow other studies, which found that victims of cyberbullying have higher rates of depression than victims of traditional bullying [10].

In addition, the present study shows how some university adjustment factors are predictors of becoming a victim. Specifically, personal-emotional adjustment and social adaption were discovered to be predictive factors of becoming a target of bullying, with higher levels of individual and interpersonal adaption reducing the likelihood of becoming a target. Previous research has indicated that students who are victims of cyberbullying experience internalized issues such as stress, discomfort, fear, aloofness, depression, shame, indifference, and low academic performance due to mental health problems [12]. This has a negative impact on university students' academic performance, which supports hypothesis 4 of our study. According to Egeberg (2016), bullies have poor academic performance and a lack of integration in academic and scholastic dynamics [50]. As a result, making positive academic adjustments (the desire to fulfil educational obligations, educational hard work, and educational satisfaction) protects against participating in violent behavior toward peers.

Several types of research have found that victims have poorer social adaptation than non-victims, experiencing challenges interacting with peers, and social difficulties [51]. As a result of the findings of this research, excellent psychological and community adaptation appears to be a preventative measure against being a target of mockery, insults, or bullying via online technology [43,52].

Emotional skills can help students to feel a greater level of understanding for their schoolmates. However, one of the characteristics that cyberbullies frequently mention is a lack of understanding for victims, as they do not seem to feel distressed or guilty as a result of their aggression, and thus are unable to empathize with the victim's emotions or feelings [12]. Bullying is also associated with poor scholarly performance and a lack of collaboration in scholarly interactions [53].

We believe that future studies should focus on determining which factors might aid in a better understanding of cyberbullying. Other variables include social support [54], impulsivity or other features of self-regulation [5], aggressiveness [55], sexual orientation [31], and coping style [56]. As a result, experimental strategies in cyberbullying should be aimed at increasing the levels of these protecting factors [54].

6. Limitations of the Study

Two notable limitations affected the recent study:

1. There was a time limitation.
2. The results would have been better if we had assessed a larger sample size for both males and females.

7. Conclusions

The present research aimed to study the connection between online bullying and psychological health in college students. There was a significant negative relationship between mental health and cyberbullying with regard to gender, age, economic level, specialty, and academic level. Furthermore, this study showed that the higher the educational level, the more likely students were to deal positively with cyberbullying issues. It is highly recommended that, in order to protect them from cyberbullying, people of all generations need to be made aware of it via specific programs in different public areas, for example, in schools, colleges, and malls, and on social media. Moreover, this study gives us a foundation to conduct more studies on cyberbullying, which is understudied in many Arab countries owing to cultural and societal factors.

8. Recommendations

The researchers recommend the following:

1. Providing awareness programs about cyberbullying in order to prevent this behavior in younger generations.
2. Giving counseling to people who have been exposed to cyberbullying.
3. Constructing special units in educational institutions to provide support for people who have been exposed to cyberbullying.
4. Conducting further studies about the relationship between cyberbullying and mental health among different populations, such as high school students.
5. Conducting the same research but using a bigger sample size.
6. Conducting similar studies over longer periods of time.

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