THE IMPACT OF "E-LEARNING " ON PSYCHOLOGICAL DISTRESS AMONG COLLEGE STUDENTS DURING THE COVID-19 PANDEMIC FROM THE STUDENTS' POINT OF VIEW

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ABSTRACT

Background: In late December 2019, COVID-19 was discovered in Wuhan, China, this disease spread in more than 200 countries, and On March 11, 2020, the World Health Organization (WHO) proclaimed it as a worldwide epidemic. As a result, national governments ordered millions of individuals, including researchers, academics, business employees, and students, to keep safe by isolating themselves or instituting a full or partial worldwide lockdown. Physical access to the classroom has been restricted as a result of the long-term use of lockdown.

In Iraq, e-Learning systems has been relied upon as a basis for the study. Thus, the greatest source of psychological concern for students is the dread of losing an academic year. This study aimed to assess psychological distress among university students in relation to"e-Learning" during the coronavirus pandemic which was considered as one of the tools for achieving the effectiveness of the quality of E-learning among university students.

Methods: An online survey was conducted amongst a sample of 500 students from the technical institute of Karbala by using a purposive sampling technique by using a pre-validated questionnaire as Google form and distribution to students by social media.

Results: From all 500 students, who completed the questionnaire, more than half of them (64.4 %) had a positive effect on psychological distress from e-learning. There was a significant relationship between gender and residence with an overall assessment, while there was no association (p-value < 0.05) in grades of the participants.

Conclusions: e-Learning has a considerable favorable effect on 64.4% of student psychological distress, according to research, and the dread of losing an academic year was a major source of psychological hardship during the COVID-19 lockdown.

Keywords: COVID-19 pandemic, e-Learning, Psychological distress, Psychological anxiety.

I.   INTRODUCTION

E-learning is the purposeful use of networked information and communication technology in teaching and learning. This technique of teaching and learning is also referred to by a variety of different descriptions, they include; Virtual learning, distributed learning, networked learning, and web-based learning are all terms used to describe online and virtual learning. It is the process of acquiring information via the use of electronic technology and media. To put it simply, e-learning can described as "Learning that is facilitated electronically". It's usually done over the Internet, so students may access their learning materials at any time and from any location. Online courses, online degrees, and online programs are the most common forms of e-learning [1].

The term e-learning contains a lot more than online education, virtual learning, distributed learning, networked or web-based learning. The letter "e" in e-learning stands for "electronic," it would include any educational activities carried out by people or groups using networked or freestanding computers and other electronic devices, whether synchronously or asynchronously. The digital revolution has led to remarkable changes in how

the content is accesses, discuses, and share the learning by internet. Office workers and housewives equally can enroll in online educational courses at their leisure, based on their availability and comfort. Many individuals choose to learn on weekends [2].

COVID-19 pandemic forced millions of people, including researchers, academics, and students, by their respective governments imposing quarantine to keep safe by isolating themselves or enacting a worldwide lockdown (full or partial).

COVID-19, It's the coronavirus-2 that causes severe acute respiratory syndrome (**SARS-CoV-2**), that was initially discovered in Wuhan, China, in late December 2019 than spread to more than 200 countries [3]. On March 11, 2020, the World Health Organization (WHO) declared the situation to be a worldwide pandemic as of July 5, 2020, there were a total of 11,125,245 worldwide confirmed cases, 203,836 new cases, and 528,204 fatalities reported [4].

In the last few years, and because of e-learning the Medical education officials have raised worry about changes in medical trainees' ethical attitudes and conduct during their education. Traditionally, medical students' high levels of stress were thought to be an essential part of their training for practice [5]. Therefore, we must be aware of how "e-Learning" and "fear of losing an academic year" affect college students' mental health. As a result, the researchers began to investigate the effect of e-learning on the psychological state of undergraduates, as it's the main factor in the extent to which students accept and comprehend the information given to them, on the one hand, and on the other hand, to work to improve the environment of e-learning through the application of education quality standards and its outputs on it. This study was aimed to study the effect of e-Learning on psychological distress among college students during the COVID-19 pandemic from the students' point of view.

II.   METHODOLOGY

Study design: To fulfill the study's goal, a descriptive cross-sectional study was done.

Sample size and sampling technique: An online survey method was used amongst a sample of 500 students out of 1766 students selected randomly from the Technical Institute of Karbala and then using a pre-validated questionnaire, after transformed to Google form to distributed to students by social media. The response rate was 94.3%. In the current study, the Sociodemographic variables of students were considered as independent variables of interest. While Psychological distress was the outcome that could influence the outcome variables.

Ethical consideration: The Research Ethics Committee of the Technical Institute of Karbala granted all necessary clearances and ethical approvals.

Inclusion criteria: Students how completed the Google form.

Exclusion criteria: Students how not completed the Google form.

Statistical analysis: The data were analyzed performed SPSS software version 24, data were presented as numbers (N) and percentage (%), the inferential statistical was done by Chi-Square ($\chi2$) test to find the relationship between some demographic information and the psychological effect of e-learning. P-values <0.05 were considered statistically significant. The impact of *E*-learning on the Psychological status was assessed with 15 questions with answers (Agree, In-betweens & Disagree). Rating and Scaling score determined based on the number of questions answered by the skill score graded as a positive or negative effect, each correct answer assigned (1) point, while wrong responses assigned (0) points then, the sum of the responses for each student to calculated the effects level [6].

III.   RESULTS

A total of 500 college students, ranging in age from 18 to 22, were participating in the study. Table 1 reveals, more than half (63.6%) were male and the remainder (36.4%) were female. In addition, almost half of those who took part (69.4%) reside in urban. 77.6% of students reported in the first- grade level.

Table1: distribution the demographic characteristic

Demographic characteristic	Total(n=500)	
	N0.	%

Gender	Male	318	63.6
	Female	182	36.4
Residence	Urban	347	69.4
	Rural	153	30.6
Grade	First	387	77.4
	Second	113	22.6
Total		500	100

As shown in figure (1) all participating using the internet is for social media (100%), after that communication with friends (68.4%) and the lowest percent (57.4%) was in Educational purpose.
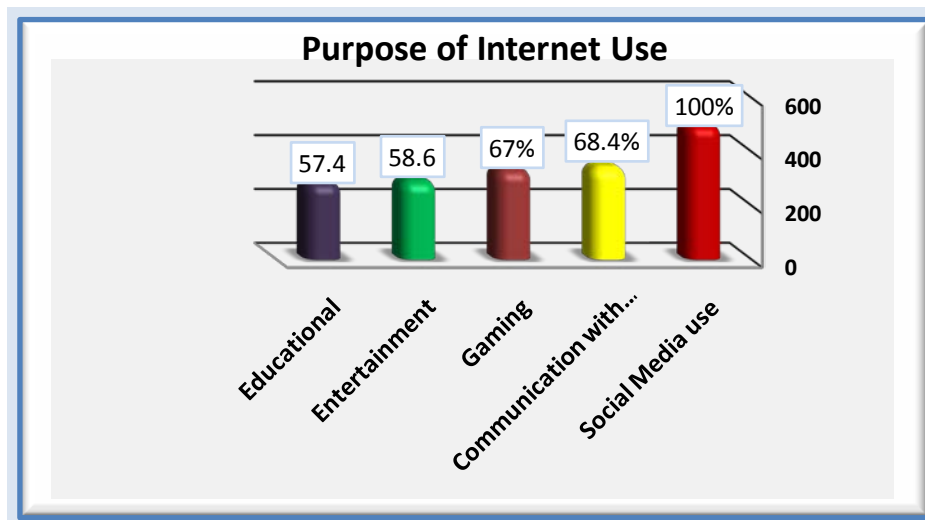

Figure 1: Sample distribution according to Purpose of Internet Use.

Figure 2 : As an overall assessment, the study indicates that (64.4%) had a positive response of psychological distress impact. Nevertheless, the negative impact was 35.6%.
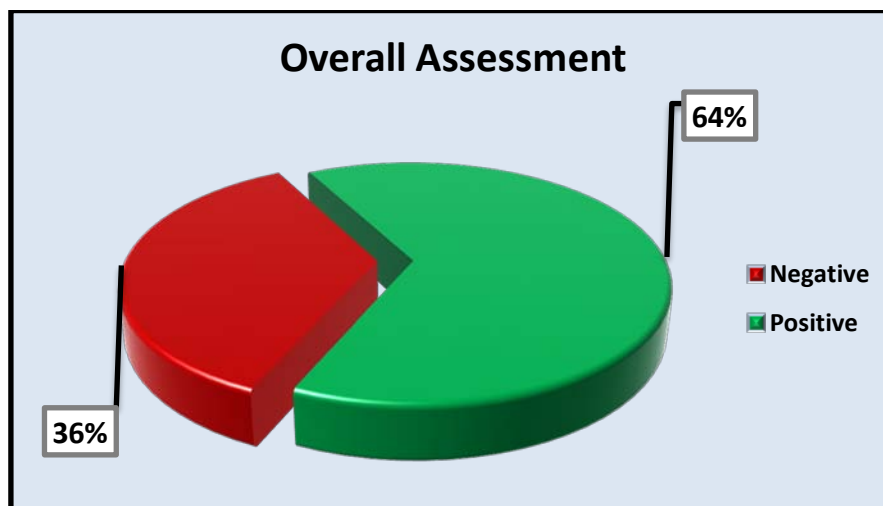

Figure 2: illustrate the Overall Assessment.

Table 2: Reveals to relation between the overall assessment of psychological effect with some demographic characteristics, this table shows a significant relation between gender and   residence. While, there is no relationship with grades by using Chi-Square (χ2) test .

Table 2: Relationship with demographic characteristic

Demographical Characteristics	Main Domains Overall Assessment	*P-value	C.S.

		Negative	Positive	Total		
Gender	Male	125 (63.6%)	193 (36.4%)	318	0.02	S
	Female	53 (29.1%)	129 (70.9%)	182		
Residence	Urban	112 (32.3%)	235 (67.7%)	347	0.01	S
	Rural	66 (43.1%)	87 (56.9%)	153		
Grades	First	135 (34.9%)	252 (65.1%)	387	0.5	NS
	Second	43 (38.1%)	70 (61.9%)	113		

* Chi-Sq. (χ2)

Table (3): The psychological impact of e-learning was assessed by means of the prepared questions that are found in the following table. The overwhelming of the replies were on the positive side. One of the most interesting answers for students, they aware that using the e-learning platform requires learning new skills on the part of the student where it formed 68.8%. Meanwhile, results noted that 42% of the contributor seems that, they find the e-learning platform useful in teaching. Finally, one of the most disappointing answers that showed students' lack of confidence in e-learning that exams conducted as an attendance exam, it's formed 55.8% from all answers.

Table 3:Questions of Psychological effect.

No	General information.	Agree No.	Agree %	In-betweens No.	In-betweens %	Disagree No	Disagree %
	Total participants N=500 (100%)						
1	Using the e-learning platform requires learning new skills on the part of the student.	344	68.	88	17.	68	13.6
2	The e-learning platform helps me complete my homework faster than the traditional method	327	65.	70	14	10	20.6
3	The e-learning platform helps me communicate with teachers	322	64.	96	19.	82	16.4
4	I interact with teachers and colleagues during the lesson using e-learning.	297	59.	115	23	88	17.6
5	I benefit from the information and reports provided by the e-learning platform to perform my duties effectively.	257	51.	112	22.	13	26.2
6	The information and notifications provided by the e-learning platform are easy to interpret.	245	49	149	29.	10	12.2
7	I feel good about using e-learning.	244	28.	96	19.	16	32
8	I have enthusiasm to participate in the lesson using e-learning.	240	48	112	22.	14	29.6
9	I feel bored half an hour after starting the e-learning lesson	234	46.	108	21.	15	31.6
10	The lesson was affected by the use of e-learning because of difficult or special living conditions.	215	50.	159	31.	90	18
11	The use of e-learning strengthens my relationship with teachers.	211	42.	117	23.	17	34.4
12	I find the e-learning platform useful in teaching	210	42	125	25	16	33
13	Despite the weakness of the Internet infrastructure, this does not prevent educational content from reaching me as a student	206	41.	113	22.	18	36.2
14	The information and notices provided by the e-learning platform are adequate.	185	37	160	32	15	31
15	E-learning can be used for the attendance exam	140	28	81	16.	27	55.8

		side by side.						

IV.   DISCUSSION

Since corona virus disease was declared as a global pandemic, about 1.5 billion university students and school pupils became suffering from physical access to the classroom due to enforcing a curfew by institutional closure for a long period of time [7]. This imposing lockdown led to total reliance on e-learning by all its types to prevent academic year loss. Unfortunately, because of these dramatic changes, both novice students with new technology and instructors have many hurdles and problems arose, including many psychological pressures. like fear of academic year loss, home quarantine's stress "Anxiety disorders are known to develop and worsen when interpersonal contact is lacking" inadequate learning approach, and lack of enjoyment at classroom.

There are many factors that affect the quality of e-learning, including its effect on psychological stress and the extent to which it is accepted by both the students and the instructors. Therefore, this study was conducted in order to assess psychological distress among university students in relation to " e-Learning " during the pandemic period from the students' point of view.

The study consisted of 500 college student, ranging in age from 18 to 22 year from the Technical Institute of Karbala, as shows in table (1) more than half of the sample (63.6%) were male and the remainder (36.4%) were female. In addition, almost half of those who took part (69.4%) reside in urban. 77.6% of students were in the first- grade level, these results are consistent with the study conducted by Hasan, N., & Bao, Y. (2020) in China[8] . This study also showed in figure (1) surprisingly, that 100% of the students were using the Internet for the purpose of social media (100%), followed by communication with friends (68.4%) and the lowest percent (57.4%) was in Educational purpose, these results confirm the students' lack of interest in the Internet as a means of learning, or the student's lack of confidence that e-learning is useless, or the reason may be due to teachers being unable to use e-learning platforms well " The way students and instructors carry out the program are critical to the success of e-learning systems. So we must work on, how to make the simplest ways to online teaching, to give it a viable alternative to the traditional classroom". In figure 2, as an overall assessment, the study indicates that more than half of the participants (64.4 %) had a positive psychological distress impact. Nevertheless, the negative impact was 35.6% . This is a good indicator compared toAccording to a survey conducted by Cao et al. (2020) with 7143 college students, almost 25% of students are experiencing significant anxiety as a result of the e-Learning meltdown [9]. Another research (Lee,2020), roughly 83 % of students are in the worst scenario possible, and 26% of pupils are unable to obtain mental health care. [10] .

In table 2, which illustrates the relationship between the overall assessment of psychological effect with some demographic characteristics, the results showed that females are more receptive to e-learning than males, this could be due to the fact that males are more attached to work than females, as they spend most of their time outside the home, or they are more inclined to use the Internet in other ways for the purposes of social communication, gaming, browsing, ...etc.

On the other hand, the urban population showed a positive effect in using e-learning more than the rural population. The reason may be that the city's residents are more attached to modern technology and more use the Internet, so they did not suffer from the use of distance learning methods. As in general, the results shows there is a significant relation between gender and residence with overall assessment. While, there is no relationship with grades.

V.   CONCLUSIONS

 E-Learning has a have a favorable effect on 64.4% of student psychological distress, according to research, and the dread of losing an academic year was a major source of psychological crucial factor during the COVID-19 lockdown.

Recommendations

When a student's learning environment is disappointing, high stress is linked to particular personality traits rather than the student's learning environment. For that, must be work to create an educational environment that is attractive to students, characterized by inclusiveness, clarity, and ease of providing information by an instructor and receiving it by students by conducting training courses on educational platforms before the start of the school year for both instructors and students.

Conflicts of interest: There are no conflicts of interest.

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