Correlation between Perception and Psychological Challenges toward E-learning among Faculty of Nursing Students at Assiut University

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Abstract

Background: Universities and colleges are increasingly using e-learning as a delivery method. Although a growing number of educational institutions are adopting an online teaching and learning approach, some concern has been expressed about the pre-requisites for academic success within this environment. **This study aimed** to assess thecorrelation between perception and psychological challenges toward e-learning among Faculty of Nursing Students. **Subjects and method:** A descriptive research design was used in this study. A Stratified sample was used. The present study included 341 students. **Setting:** This study was carried out at the Faculty of Nursing- Assiut University. **Tools of study:** Included demographic data, Students' Perceptions of e-learning and Psychological challenges of e-learning questionnaire. **Results of the study:** About two thirds of studied students in the age group (from 18-20 yrs old) are females and less than half of them prefer hybrid mode for their learning. Also, less than of nursing students have a negative perceptions regarding e-learning, and more than one third are unmotivated and unsatisfied from e-learning. **Conclusion:** The students' perception regarding e-learning negatively correlated with anxiety, while positively correlated with motivation and satisfaction with e-learning. **Recommendations:** Psychoeductional programs can be designed and administered to nursing students to improve perception and overcome their psychological challenges toward e-learning.

Keywords: E-learning, Nursing students, Perception & Psychological challenges

Introduction

Electronic learning is described as a significant innovation in healthcare professional education. One of the most researched environments in nursing education for developing competencies necessary to accomplish activities related to nursing practice is the educational environment **(Rouleau et al., 2019).** Because nurses require up-to-date information about diseases, medications, and competence, online learning is extremely beneficial to nursing practice **(Kadioglu et al., 2020).**

In this regard, E-learning has been characterized as an educational strategy that facilitates learning via the use of communication and information technology, giving students access to all needed educational programs **(Regmi & Jones, 2020).** Also, e-learning is defined as learning activities actually occur in their synchronous or asynchronous settings using diverse digital equipment (e.g., desktops, laptops, mobile devices, etc.) with network connectivity. Online e-learning may serve as a platform for making the educational processes more student-centeredness, creative, and adaptable **(Singh & Thurman, 2019).**

The benefits of e-learning learning tools for nursing students are well recognized **(Pront et al., 2018).**

Accordingly, various benefits of virtual learning have been highlighted. E-learning lowers education expenses; e-learning information is more consistent and reliable, with an end-to-end learning method and the formation of global groups via an internet connection. E-learning is less expensive to implement than traditional methods, is self-paced (courses may be attended when needed), faster (familiar information can be avoided), and gives higher dependable content **(Sánchez & Karaksha, 2022).** E-learning has also been approved for ongoing professional growth for medicine and nursing students **(Ota et al., 2018).**

There is also the possibility that some learners will reject online education. The knowledge and proficiency of users with computers are essential for the effective operation of e-learning technologies. Users' initial support for computer hardware and their future attitudes about the utilization of web-based learning tools are cited as examples of such aspects **(Sánchez & Karaksha, 2022)**. Additionally, learners are far more likely to adopt this new teaching method when they have a positive outlook toward e-learning **(Zabadi & Al-Alawi, 2016).**

On the other hand, recent research indicates that students of nursing attitudes toward virtual learning are conflicted and negative **(Soriano & Oducato, 2021).** Some nursing students believe that in-person lectures enhance knowledge more than online lectures **(Omolola et al., 2016).**

While e-learning offers many educational benefits to higher education institutions. On the other hand, there are still several barriers and roadblocks that prevent it from being used successfully. The method of incorporating e-learning into education can be a challenging one, with many challenges that are often referred to as barriers or obstacles to e-learning integration **(Mahlangu, 2018)**.The most significant problems facing e-learning in Egypt are a lack of resources, computer/internet illiteracy and unawareness and resistance to change **(El-Zeftawy & Hassan, 2016),** psychological distress with technology **(Costello et al., 2014)**, inadequate digital expertise and lack of institutional assistance (**Button et al., 2014).**

Such students will lack vital motivations for their progression in their education or career. Also, may exacerbate anxiety and depression understandably (**Brooks et al., 2020)**. Also**,** there was a strong association between learner satisfaction and the prevalence of unhappiness, anxiety and tension among undergraduate students who were taught through online platforms **(Fawaz & Samaha, 2021)**. And this, affects nursing students' motivation to learn **(García-González, 2021).**

In this context, one of the key indicators of the intention to use virtual learning, which in turn might affect students' teaching practices, is motivation. Identifying learners' motivation levels allows instructors to provide appropriate e-learning educational materials that will increase students' involvement in e-learning operations **(Kew et al., 2018).** Teachers should incorporate factors that influence student happiness to promote learner adherence. In addition, measuring satisfaction is beneficial to institutions because it may be used to improve courses and programs and, to a certain extent, to anticipate learner attrition rates. According to research, student learning is influenced by learner satisfaction, which results in learner completion (**Blundell et al., 2020).**

Significance of the study:

In light of the current situation in Egypt and in light of the WHO declaration of the outbreak of COVID-19 **(WHO, 2020)** In addition, numerous Arab nations have lifted precautionary measures, including the complete shutdown of schools and universities in others, the Ministry of Higher Education in Egypt has been pushed to adopt virtual learning as a methods of

maintaining the system's continuity **(Sintema, 2020)**. So, each educational organization as nursing colleges has assumed e-learning for the smooth maintenance of teaching learning process **(Sasmal & Roy, 2021).** Students' perceptions of e-learning must be addressed by nursing faculties, so efforts can be geared toward enhancing their educational experience **(Sasmal & Roy, 2021).** Nursing students have specific requirements and their expectations and interactions with online modalities differ **(Bagshaw, 2020).** Despite the advantages of e-learning, it still faces barriers and challenges that obstruct its programs' success **(Al-Fraihat et al., 2017).**

So, identifying the perception of nursing students regarding e-learning and its relation to psychological challenges that may face them during the application of e-learning could positively impact student outcomes specially and the faculty in general. Also, may help overcome the challenges related to e-learning.

Aim of the study
This present study aimed to:
Explore the corrrelation between perception and psychological challenges toward e-learning among faculty of nursing students at Assiut University.

Research questions:
- What are the types of nursing students' perceptions toward e-learning?
- What are the psychological challenges faced by nursing students throughout using e-learning?
- Is there a correlation between perception and psychological challenges toward e-learning among faculty of nursing students?

Subjects & Method
Research design
A descriptive correlational research design was used in this study.

Study setting
This study was carried out at Assiut University's Faculty of Nursing.

Subjects
The study subjects consisted of a stratified sample of 341 male and female nursing students from the four academic years during the academic year 2021/2022.

Sample size
- A Stratified sample was used for this study for the selected group of students from the four academic years during the academic year 2021/2022; the group of each academic year was selected using the random number method.
- A whole number of the sample according to the Epi-info program version 3.0 were (n= 341) divided as follows: 1st year (n= 85), 2nd year (n= 132), 3rd year (n= 77) and 4th year (n= 47). Estimation of sample size: Epi-info program version 3.0 was used to

estimate the subject size, based on the following parameters: Population size=2982 students with a Confidence coefficient of 95%.

Criteria of selection
Students who accept to take part in the study and use online learning

Data collection tools: Consisted of three parts:

Part (1): Demographic characteristics of the students: Developed by the researcher in an Arabic language, it included age, sex, academic years, computer courses are taken, devices for e-learning activities, internet facility at home and which mode of learning you preferred.

Part (2): Students' Perceptions of e-learning questionnaire: This questionnaire was developed by **Khan et al., (2021).** The researcher translated this tool into Arabic and was used to assess the perception of nursing students toward e-learning. It consisted of 14 items, with four sub-domains: Perceived usefulness of e-learning, perceived self-efficacy of using e-learning, perceived ease of use of e-learning and behavioral intention of using e-learning

It is 5-point Likert scale, and the range of responses and scores was from 1 strongly disagreeing to 5 strongly agree. The score of each domain was calculated by summing the mean scores of each statement in each subdomain, Total score was calculated by summing all mean scores of all sub-domains; If the mean scores of the participant were more than or equal to 60 percent; this means positive perception, but if less than 60 percent; this means negative perception (**Khan et al., 2021**).

Part (3): Psychological challenges of e-learning questionnaire:
This tool was constructed and developed by the researcher after reviewing the relevant literature **(Seada and Mostafa, 2017**; **Barak etal, 2016; Bolliger and Halupa, 2012; Kay, 2008; Shee and Wang, 2008; Fowler, 2007)** in an Arabic language**.** It is used to assess psychological challenges toward e-learning among faculty of nursing students. It is 5-point Likert scale and consisted of three parts (21 items); each part 7 items.

Scoring system **(Pimentel, 2010)**

I: Anxiety toward e-learning from "1" (Not at all) to "5" (Extremely)
- 7-14 = Low level of anxiety, 15-21 = Moderate level of anxiety & 22-35 = High level of anxiety

II: Motivation toward e-learning from "1" (strongly disagree) to "5" (strongly agree). The score of the items was summed and the total was divided by the number of the items, giving a mean score, these scores were converted into a percent score. 60% and more = Motivated & Less than 60% = an unmotivated during applying e-learning system.

III: Satisfaction from e-learning from "1" (strongly disagree) to "5" (strongly agree). The score of the items was summed and the total was divided by the number of items, providing a mean score. These scores are converted into a percent score. 60% and more = satisfactory agree level & Less than 60% = an unsatisfactory agree level during applying e-learning system (**Seada & Mostafa, 2017**).

Steps of the study (Method):
Ethical considerations:
The study protocol was approved by the Ethical and scientific Committee, after clarifing the aim of the study, the students who participated in it signed an oral agreement. Participants in the study were informed of their right to refuse or consent to participation. Before beginning data collection, the researcher further informed study participants that their privacy would be respected and that any information acquired would be kept completely confidential. The researcher collected data from the defined study sample.

Administrative phase:
An official permission from the Dean Faculty of Nursing, Assiut University to conduct the study was obtained for data collection and conducting the research. This was communicated to faculty members in charge of the various sections of data collection via official verbal and written letters.

Operational phase:
Tools validity:
In this phase the researcher translated students' perception questionnaire and constructed psychological challenges of the e-learning questionnaire after extensively reviewing the available literature concerning the study topic. Arabic translation of the study tools was done to ensure a better understanding of students.

The validity of the study tool was done by five experts; three experts from the psychiatric nursing department and two experts from the medical field psychiatry department, Assuit University to test content validity. The study tool was modified and rebuilt as needed before it was ready for usage.

Tools Reliability
The reliability was carried out using the Cronbach alpha coefficient test; it was (r = 0.922, 0.931 and 0.937) for anxiety, motivation and satisfaction from e-learning respectively for (psychological challenges of e-learning questionnaire) and (r= 0.84) for students' perceptions of e-learning questionnaire.

The pilot study
A pilot study was conducted on 40 students from the entire sample was done to test and assess the clarity, practicality, and application of the research instruments, as well as to estimate the time required

to gather data. The tools were unchanged; they were also clear and comprehended by the student. As a result, participants from the pilot study were recruited for the study.

Field work:

Implementation phase:

The researcher began collecting data in the second week of October and finished in the first week of November (2021). The researcher planned fieldwork with teaching professionals, who were in charge of the samples taken. The researcher next asked about their preferred time for data collection, which was either the initial or the last part-time of the selected sections. Furthermore, data was gathered in accordance with the researcher's working conditions and the students' study schedules. The researcher introduced herself to the students, explained the significance of the study and its impact on their college's educational process, and assured full confidentiality of data. Students were requested to give their consent and cooperation.

The major components of the tools were clarified by the researcher. Instructions on how to complete the questionnaire were also provided. Following that, the hard copy questionnaire forms were given to each student who agreed to participate in the study, and they were asked to fill them out. Depending on the participant's responses, the average time to complete each questionnaire was 15–25 minutes. The forms were filled out under the guidance of the researcher and the teaching staff, who were in charge of the students during the data collection session.

Statistical analysis:

The data were tabulated, and all statistical analyses were performed using Statistical Package for the Social Sciences, version 20. Categorical variables were expressed as the number and percent, and continuous variables were expressed as the mean and standard deviation. When significant associations among different demographic characteristics and total score of psychological challenges toward e-learning were identified in the independent t-tests and ANOVA, the Pearson correlation coefficient was used to assess the association between continuous variables. It was considered significant when P value was less than 0.05.

Results: The main results of this study were:

Table (1): Distribution of the studied students according to demographic characteristics (N=341)

Demographic characteristics	Studied students (N=341)	
	No	**%**
Age groups: Mean ± SD (range)	**20.18±1.19(18-23)**	
• 18 to less than 21 years	221	**64.8**
• 21 to less than 24 years	120	35.2
Sex		
• Male	119	34.9
• Female	222	**65.1**
Academic years		
• First	85	24.9
• Second	132	38.7
• Third	77	22.6
• Fourth	47	13.8
Computer courses taken		
• Yes	42	12.3
• No	299	**87.7**
Internet facility at home		
• Yes	221	**64.8**
• No	120	35.2
Devices for e-learning activities		
• Computer/Laptop	18	5.3
• Telephone	277	**81.2**
• Both	46	13.5
Which mode of learning you preferred		
• Only face- to-face	154	45.2
• Only online	24	7.0
• Hybrid	163	**47.8**

Students' Perception regarding e-learning
Table (2): The mean scores of sub-domains and total score of students perception regarding e-learning among faculty of nursing students at Assiut University (N=341)

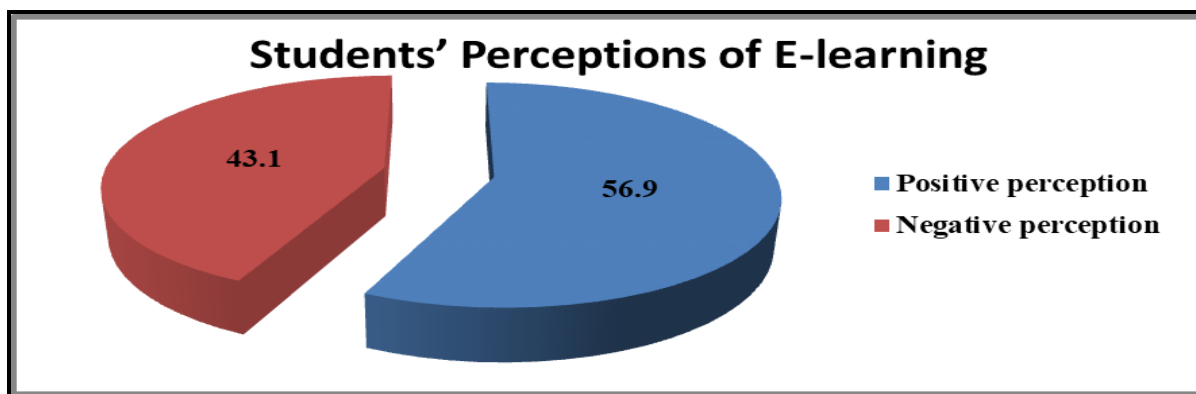| Perception Sub-domains	Mini-Max Score	Mean±SD
Perceived usefulness of e-learning	4-20	12.59±3.62
Perceived self-efficacy of using e-learning	3-15	8.52±3.27
Perceived ease of use of e-learning	4-20	11.90±3.64
Behavioural intention of using e-learning	3-15	9.82±3.07
Total score of students' perceptions of e-learning	**14-70**	**42.83±11.67**

Figure (1): Types of students' perception regarding e-learning among faculty of nursing students at Assiut University (N=341)

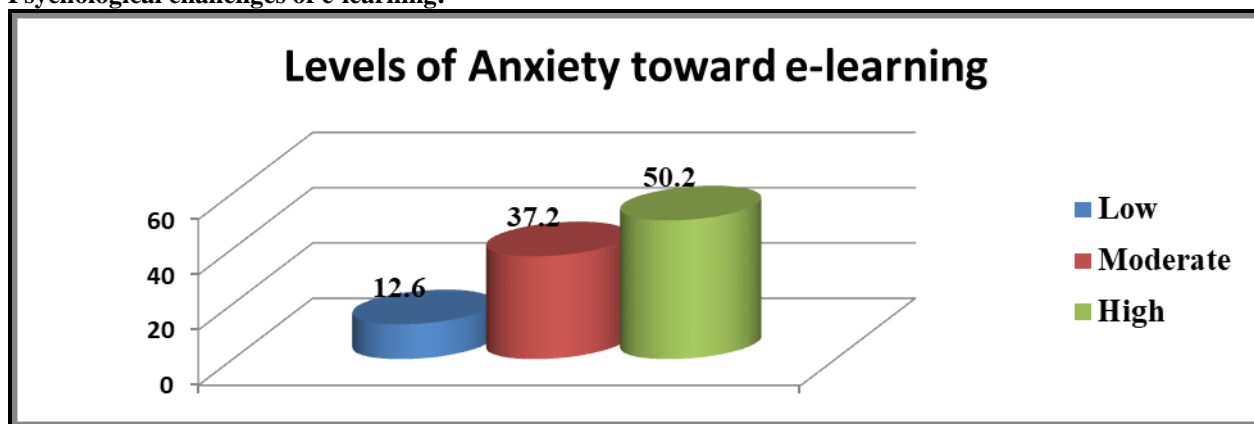**Psychological challenges of e-learning:**

Figure (2): Levels of Anxiety from e-learning among faculty of nursing students at Assiut University (N=341)
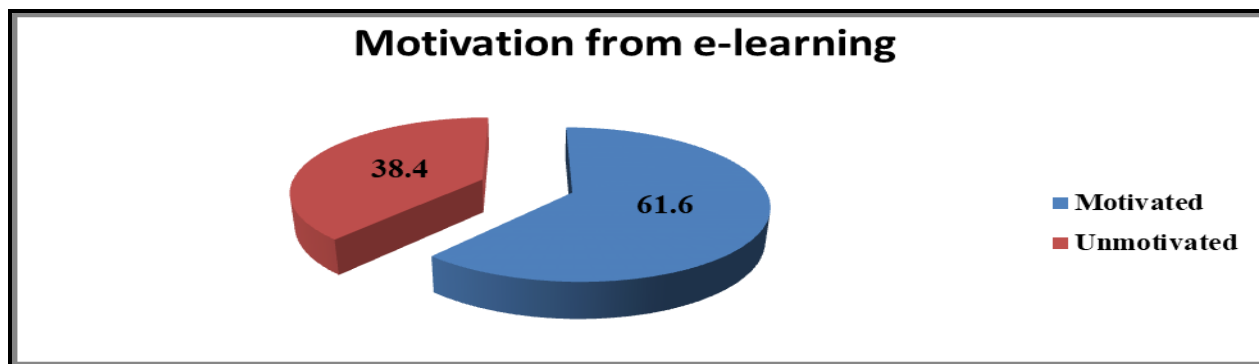

Figure (3): Levels of motivation regarding e-learning among faculty of nursing students at Assiut University (N=341)
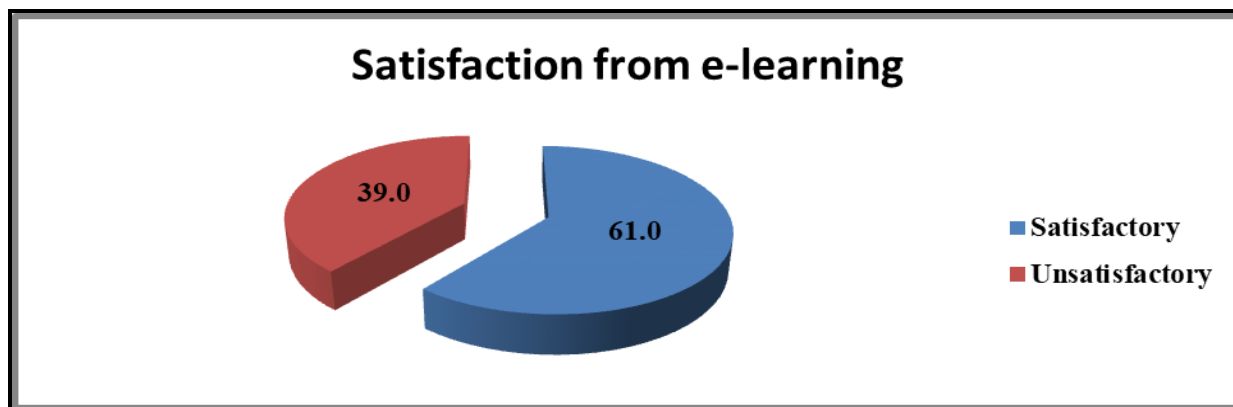
Figure (4): Levels of satisfaction from e-learning among faculty of nursing students at Assiut University (N=341)

Table (3): Correlation between perceptions and psychological challenges toward e-learning among faculty of nursing students at Assiut University (N=341)

Variables		Students' perceptions of e-learning	Psychological challenges		
			Anxiety from e-learning	Motivation toward e-learning	Satisfaction from e-learning
Students' perceptions of e-learning	r	-			
	P value				
Anxiety from e-learning	r	-0.350	-		
	P value	**0.000****			
Motivation toward e-learning	r	0.704	-0.392	-	
	P value	**0.000****	**0.000****		
Satisfaction from e-learning	r	0.680	-0.350	0.769	-
	P value	**0.000****	**0.000****	**0.000****	

Pearson correlation   *** statistically significant correlation (p<0.01)*

Table (4): Relationship between demographic characteristics, perception and psychological challenges toward e-learning among faculty of nursing students at Assiut University (N=341)

Variables	N	Perception toward e-learning	Psychological challenges		
			Anxiety toward e-learning	Motivation toward e-learning	Satisfaction from e-learning
		Mean±SD	Mean±SD	Mean±SD	Mean±SD
Age groups					
18 to less than 21year	221	42.19±12.68	21.70±5.85	21.38±6.64	21.43±6.61
21 to less than 24year	120	44.03±9.48	20.17±5.70	22.29±5.67	22.44±5.66
P. value		0.165	**0.020***	0.201	0.155
Sex					
Male	119	43.66±12.89	19.65±6.52	22.87±7.36	22.11±6.91
Female	222	42.39±10.97	21.97±5.27	21.07±5.60	21.61±5.96
P. value		0.341	**0.000****	**0.012***	0.485
Academic years					
First	85	41.52±14.72	20.68±6.85	21.27±7.41	20.92±7.22
Second	132	42.95±11.53	21.86±5.57	21.39±6.32	21.82±6.60
Third	77	41.45±9.17	21.68±5.20	21.05±4.97	21.36±4.94
Fourth	47	47.15±8.28	19.23±5.17	24.40±5.59	23.94±5.22
P. value		**0.035***	**0.042***	**0.017***	0.058

Variables	N	Perception toward e-learning	Psychological challenges		
			Anxiety toward e-learning	Motivation toward e-learning	Satisfaction from e-learning
		Mean±SD	Mean±SD	Mean±SD	Mean±SD
Computer courses taken					
Yes	42	48.14±8.45	18.98±5.65	25.02±6.23	24.14±6.36
No	299	42.09±11.88	21.47±5.80	21.23±6.20	21.45±6.23
P. value		**0.002****	**0.009****	**0.000****	**0.009****
Internet facility at home					
Yes	221	45.20±11.25	20.16±5.77	22.71±6.23	22.75±5.89
No	120	38.48±11.21	23.00±5.51	19.84±6.09	20.00±6.67
P. value		**0.000****	**0.000****	**0.000****	**0.000****
Devices for e-learning activities					
Computer/Laptop	18	45.61±11.94	18.83±5.60	22.72±7.04	22.44±6.78
Telephone	277	41.79±11.49	21.87±5.58	20.93±5.92	21.31±6.19
Both	46	48.04±11.35	17.78±6.08	25.91±6.75	24.39±6.23
P. value		**0.002****	**0.000****	**0.000****	**0.008****
Which mode of learning you preferred					
Only face- to-face	154	38.39±10.04	22.18±5.34	19.42±5.64	18.78±5.28
Only online	24	43.13±13.62	17.29±7.02	23.33±8.38	24.13±7.61
Hybrid	163	46.99±11.33	20.77±5.84	23.61±5.90	24.28±5.76
P. value		**0.000****	**0.000****	**0.000****	**0.000****

** Highly statistically significant difference (p<0.01)   * Statistically significant difference (p<0.05)

Table (1): Shows the demographic characteristics of the studied students. The results reveal that about two thirds of studied students (64.8%) are in the age group (from 18-20 yrs old) and (65.1%) of studied students are females. Regarding the academic year, (38.7%) of them are in the second year. The majority of them (87.7%) have no computer courses, (64.8%) have internet facility at home, (81.2%) use the telephone for their e-learning and (47.8%) prefer hybrid mode for their learning.

Table (2): Shows that there is a highly statistically significant increase in the mean scores of sub-items of student's perception (p<0.001) and a significant increase in the mean score of total student's perception (42.83±11.67).

Figure (1): Shows that the types of student's perceptions regarding e-learning. The results show that (56.9%) of studied students had a positive perception regarding e-learning. However, (43.1%) of them had a negative perception regarding e-learning.

Figure (2): Shows a classification of students based on their level of anxiety regarding e-learning. According to the findings, (50.2%) of students reported high levels of anxiety, while (37.2%) of them expressed moderate levels of anxiety.

Figure (3): Represent the classification of students according to their levels of motivation regarding e-learning. The results reveal that 61.6% reported that

they are motivated regarding e-learning. However, 38.4% reported that they are unmotivated.

Figure (4): Represent classification of students according to their levels of satisfaction regarding e-learning. The results reveal that, 61% reported that they are satisfied regarding e-learning. However 39.0 reported that they are unsatisfied.

Table (3): Clarifies that, there is a negative and statistically significant correlation between the student's perception and anxiety from e-learning (r= -0.350 & p=0.000). And a positive correlation with motivation and satisfaction from e-learning (r =0.704 & 0.680 & p=0.000) respectively. Also, there is a negative statistically significant correlation between anxiety from e-learning and motivation and satisfaction from e-learning (r= -0.392& -0.350& p=0.000) respectively. While there is a positive correlation between motivation and satisfaction from e-learning (r =0.769).

Table (4): Represents that, there are statistically significant differences among demographic characteristics and student's perception of e-learning except for age and sex (p.value= 0.165 &0.341) respectively. There are statistically significant differences among all demographic characteristics and anxiety toward e-learning. Also, there are statistically significant differences among demographic characteristics and motivation toward e-learning except for age. Moreover, there is the

statistically significant difference among all demographic characteristics and satisfaction from e-learning except age, sex and academic year**.**

Discussion:

The use of e-learning systems in higher education has made it possible for a fundamental change to be made in the way that people teach and learn (**Al-Fraihat et al., 2020**). Despite the growing number of academic systems using an electronic method of education and learning, some concern has been expressed about the personal and technological skills needed for academic accomplishment and satisfaction in this medium (**Ali,2016**).

So, the current study aimed to; explore the correlation between perception and psychological challenges toward e-learning among students from Assiut University's Faculty of Nursing.

The current study noticed that the mean age of students was (**20.18±1.19**). This is because this study was carried out among four years of faculty of nursing students, and this is a suitable age for them. Which is similar to other previous studies reported by (**Diab and Elgahsh, 2020, Seada and Mostafa, 2017&Thapa et al., 2021**) who found that mean age students (**19.34±1.46 &20.78±0.415& 20.91± 1.55**) respectively.

The current study showed that over half of the studied students had a positive perception regarding e-learning. This finding could be explained by the students' concern about being contacted by each other during the pandemic, as well as their previous positive experiences with online learning from previous studies, also; these findings could be linked to the accessibility of online learning. Total benefits and cooperation were high in online learning, which may be due to students' desire to be more included in the learning approach, which gave them more opportunities to gain a higher level of usefulness from the studied courses.

These findings are similar to (**Rana et al., 2021**) who found that more than half of the participants had a positive perception of online learning. But contradictory to the study conducted by (**Abbasi et al., 2020**) who studied the perceptions of students towards e-learning during the lock down in (April 2020) which revealed that about three-quadrant of students had a negative perception. This may be due to the lack of readiness of students to shift forcibly from face-to-face to online classes due to COVID-19 pandemic. Also, this study was conducted very early period of the pandemic (April 2020) and the students were yet to accept and be ready for online learning.

The current study discovered that less than half of the sample had a negative perceptions regarding e-learning; these may be explained as students' resistance and rejection of a quick shift from face-to-face learning to virtual learning. Also, the students are not prepared for the practice of e-learning, which is a novel challenge for them. Furthermore, these findings might be attributed to a lack of experience with e-learning and a challenge to cope with online educational materials, which could raise academic pressure and stress, making teaching time-consuming and less pleasurable (**Muflih et al., 2021**).This finding is similar to (**Rana et al., 2021**) who study the perception of online learning among nursing students in amidst COVID-19 Pandemic and found that less than half of the participants had a negative perception of online learning.

The current study showed that over half of the sample has a significant high level of anxiety toward e-learning. This finding could be explained by the fact that it is more difficult for students to learn new knowledge and, although they only sit close to the computer, they believe physically tired, staying focused on virtual classrooms is difficult, and interruptions at home make it challenging for learners to focus well in their lessons, which causes anxiety and stress toward e-learning. This observation is consistent with (**Sasmal & Roy, 2021**) who stated that more than half of participants reported anxiousness when they heard that e-learning sessions will be conducted, and 58.41% agreed that they felt anxious about the completion of the syllabus. Similar dilemmas were reported by nursing students globally, Almost half of them reported a feeling of being overwhelmed after e-learning (**Morcillo et al., 2020**).

Motivation is one of the most fundamental components of the learning approach (**Kew et al., 2018**), in this respect (**Mayerova & Rosicka, 2015**) mentioned that students who have essential computer abilities will be more motivated and excited to use virtual learning, whereas students who do not have basic computer skills will have a harder time engaging because they must first learn how to use the application.

The current study showed that about two third of the students were motivated toward e-learning. From the researcher's view, participants view that it would be beneficial to record the class lectures so that they may return to them as required, Students mentioned that the virtual learning recordings would help them catch up on everything they forgot during the asynchronous lecture.

Despite this positive finding, there were challenges reported by more than one third of participants were unmotivated toward e-learning, which is similar to (**Kuruvilla et al., 2021**) who found that a lack of motivation was one of the e-learning barriers mentioned by more than half of students.

The current study revealed that about less than two third of the studied students were satisfied with e-learning, this might be because students were able to engage in their studies more flexibly and simply than in conventional face-to-face learning. This finding is consisted with **(Seada & Mostafa, 2017)** who found that most of the studied learners are extremely satisfied with their e-learning experience, demonstrating that e-learning has the potential to save both space and time while also enhancing higher education and they are able to repeat any part of the lesson without limits which increased self-responsibility and self-confident.

Even with these positive findings, there were challenges reported by more than one third of participants who were unsatisfied from the e-learning; this could be explained due the lecturer was not in a real classroom, and students struggled to understand the lessons. Other students complained about a shortage of network access and computers, and some even offered that the university distributes laptops and internet access for free **(Mukasa et al., 2021).** And this finding is near to the study conducted by **(Ali, 2017)** who found that more than half of students were unsatisfied with their experience with online learning experience.

The present study showed that there was a positive statistically significant correlation between the student's perception regarding e-learning and motivation and satisfaction from e-learning. From the view of the researcher that motivation /satisfaction from e-learning depends on students' perception of ease of using e-learning methods, learner satisfaction was influenced by perceived ease of use; perceived ease of use by undergraduate nursing students thus influenced their attitude about e-learning.

Unlike anxiety toward e-learning, it was found that a negative statistically significant correlation between students' perception of e-learning and anxiety toward e-learning scores. This could explain why the more perception of the students regarding e-learning, the less anxiety toward e-learning and vice versa.

The present study demonstrated that there is a statistically significant difference between student's perception of e-learning and the academic year. This observation consisted with **(Al Gamdi & Samarji, 2017)** who found that age is believed to be one of the demographic variables that tend to shape learners' perceptions of e-learning, it is an important independent variable affecting faculty members' perceptions of e-learning and that gender is also a factor that is believed to influence attitudes towards e-learning where females are believed to have a positive attitude towards e-learning, And **(Martha et al., 2021),** who reported that, there was a significant

difference in their students' e-learning perceptions and their academic years at university.

Conclusion
The current study concluded that, there is a negative statistically significant correlation between students' perception and anxiety regarding e-learning, while there is a positive statistically significant correlation between students' perception, motivation and satisfaction from e-learning.

Recommendations:
- Design and implement a psycho-educational program to increase students' awareness and knowledge about e-learning.
- The government must offer financial assistance, infrastructure improvements, and support for electronic resources.
- Further research is necessary from the perspective of faculty members to identify obstacles and their perceptions of e-learning implementation.
- Training programs for qualified technical staff are essential to sustain e-learning and assist scholars and lecturers to overcome technical difficulties

References:
- **Abbasi, S. Ayoob, T. Malik, A. & Memon, SI. (2020):** Perceptions of students regarding E-learning during Covid-19 at a private medical college. Pak J Med Sci.; (COVID19-S4), Vol. (36), No. (4), p.p. 57-61.
- **Al Gamdi, M. & Samarji, A. (2017):** Perceived Barriers towards e-Learning by Faculty Members at a Recently Established University in Saudi Arabia. International Journal of Information and Education Technology, Vol. (6), No. (1).
- **Al-Fraihat, D. Joy, M. & Sinclair, J. (2017):** Identifying success factors for e-learning in higher education, In International conference on e-learning, Academic Conferences International Limited, p.p. 247-255.
- **Al-Fraihat, D. Joy, M. Masa'deh, R. & Sinclair, J. (2020):** Evaluating E-learning Systems Success: An empirical study.Computers in Human Behavior, Vol. (102), p.p.67–86.
- **Ali, G. (2017):** Factors Affecting Nursing Student's Satisfaction with E-Learning Experience in King Khalid University, Saudi Arabia, International Journal of Learning & Development ISSN 2164-4063, Vol. (2), No. (2).
- **Ali, W. (2016):** Nursing students' readiness for e-learning experience. Gynecol Obstet.; Vol. (6), p.p.1-5.
- **Bagshaw, K. (2020):** Student Perceptions about Critical Thinking in Online Psychiatric Nurse

Education. Published doctoral dissertation.College of Education, Walden University.

▪ **Barak, M. Watted, A. & Haick, H. (2016):** Motivation to learn in massive open online courses: Examining aspects of language and social engagement. Computers & Education, Vol. (94), p.p. 49-60.

▪ **Blundell, G. CastaÃ±eda, D. & Lee, J. (2020):** A Multi-Institutional Study of Factors Influencing Faculty Satisfaction with Online Teaching and Learning. Online Learning, Vol. (24), No. (4), p.p. 229-253.

▪ **Bolliger, D. & Halupa, C. (2012):** Student perceptions of satisfaction and anxiety in an online doctoral program. Distance Education, Vol. (33), No. (1), p.p. 81-98.

▪ **Brooks, S. Webster, R. & Smith, L. (2020):** The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. Vol. (395), No. (10227):p.p.912-920.

▪ **Button, D. Harrington, A. & Belan, I. (2014):** E-learning & information communication technology (ICT) in nursing education: A review of the literature. Nurse Education Today, Vol. (34), No. (10), p.p. 1311-1323.

▪ **Costello, E. Corcoran, M. Barnett, J. Birkmeier, M. Cohn, R. Ekmekci, O. & Walker, B. (2014):** Information and communication technology to facilitate learning for students in the health professions: Current uses, gaps and future directions. Online Learning Journal, 18(4), 1-18.

▪ **Diab, G. & Elgahsh, N. (2020):** E-learning during COVID-19 pandemic: Obstacles faced nursing students and its effect on their attitudes while applying it. American Journal of Nursing, Vol.9, No. (4), p.p. 300-314.

▪ **El-Zeftawy, A. & Hassan L. (2016):** Perception of students regarding blended learning implementation of community health nursing course at faculty of nursing, Tanta University, Egypt. Journal of Nursing Education and Practice, Vol.(7),No.(3),p.p. 83-93

▪ **Fawaz, M. & Samaha, A. (2021):** E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. In Nursing Forum Vol. (56) No. (1), p.p. 52-57.

▪ **Fowler, S. (2007):** The motivation to learn online questionnaire, Published Doctoral dissertation, University of Georgia.

▪ **García-González, J. Ruqiong, W., Alarcon-Rodriguez, R. Requena-Mullor, M. Ding, C., & Ventura-Miranda, M. (2021):** Analysis of Anxiety Levels of Nursing Students Because of e-Learning during the COVID-19 Pandemic.

Multidisciplinary Digital Publishing Institute, In Healthcare Vol. (9) No. 3, p. 252.

▪ **Kadioglu, M. Tacgin, Z. & Sahin, N. (2020):** Instructional design and material development progress to e-learning environments: A sample of obstetrical nursing education. Contemporary Educational Technology, Vol.(12),No.(1), p.265

▪ **Kay, R. (2008):** Exploring the relationship between emotions and the acquisition of knowledge. Computers & Education, Vol. (50), p.p. 1269–1283.

▪ **Kew, S. Petsangsri, S. Ratanaolarn, T. & Tasir, Z. (2018):** Examining the motivation level of students in e-learning in higher education institution in Thailand: A case study. Education and Information Technologies, Vol.23 (6), p.p.2947-2967.

▪ **Khan, M. Nabi, M. Khojah, M. & Tahir, M. (2021):** Students' Perception towards E- learning during Covid-19 pandemic in India: An Empirical study, Sustainability2021, 13, 57.

▪ **Kuruvilla, B. Thomas, A. Kalliath, J. Alexander, J. & Brilly, R. (2021):** Perceptions of e-learning among medical students during COVID-19 pandemic in a medical institution, Kerala. Turkish Journal of Public Health, Vol.19 (3), p.p.235-243.

▪ **Mahlangu, P. (2018):** The good, the bad, and the ugly of distance learning in higher education. In M. Sinecen (Ed.), Trends in e-learning. Intech Open.

▪ **Martha, A. Junus, K. Santoso, H. & Suhartanto, H. (2021):** Assessing Undergraduate Students' E-Learning Competencies: A Case Study of Higher Education Context in Indonesia. Educ. Sci.Vol. (11), 189.

▪ **Mayerova, S. & Rosicka, Z. (2015):** E-Learning Pros and Cons: Active Learning Culture? Social and Behavioral Sciences, Vol. (191), p.p.958-962.

▪ **Morcillo, AJ. Costa, C. García, JE. & Martínez, M. (2020):** Experiences of nursing students during the abrupt change from face-to-face to e-learning education during the first month of confinement due to COVID-19 in Spain. Int J Environ Res Public Health; Vol. (17), No. (15):p.p.19-24.

▪ **Mukasa, J. Otim, M. Monaco, B. Al Marzouqi, A. Breitener, P. & Jawahar, L. (2021):** Nursing students' perspectives and readiness to transition to E-learning during COVID-19 in the UAE: A cross-sectional study. Advances in Medical Education and Practice, Vol. (12), 1505.

▪ **Omolola, I. Ayamolowo, S. & Kazeem, O. (2016):** Part-Time Undergraduate Nursing Students' Perception and Attitude to ICT Supports for Distance Education in Nursing in Nigeria.

Malaysian Online Journal of Educational Technology, Vol. (4), No. (2), p.p. 8–21.

▪ **Ota, M. Peck, B. & Porter, J. (2018):** Evaluating a Blended Online Learning Model among Undergraduate Nursing Students: A Quantitative Study. Computer Informatic Nursing, Vol. (36), No. (10), p.p. 507–512.

▪ **Pimentel, J. (2010):** A note on the usage of Likert Scaling for research data analysis. USM R&D Journal, Vol. (18), No. (2), p.p. 109-112.

▪ **Pront, L. Müller, A. Koschade, A. & Hutton, A. (2018):** Gaming in nursing education: a literature review. Nursing education perspectives, Vol. (39), No. (1), p.p. 23–28.

▪ **Rana, S. Garbuja, CK. & Rai, G. (2021):** Nursing Students' Perception of Online Learning amidst COVID-19 Pandemic. Journal of Lumbini Medical College.Vol. (9), No. (1), p.p.1-6.

▪ **Regmi, K. & Jones, L. (2020):** A systematic review of the factors–enablers and barriers–affecting e-learning in health sciences education. BMC medical education, Vol. (20), No. (1), p.p. 1-18.

▪ **Rouleau, G. Gagnon, M. Côté, J. Payne-Gagnon, J. Hudson, E. Dubois, C. & Bouix-Picasso, J. (2019):** Effects of E-Learning in a Continuing Education Context on Nursing Care: Systematic Review of Systematic Qualitative, Quantitative, and Mixed-Studies Reviews. Journal of Medical Internet Research, Vol. (21), No. (10), e15118.

▪ **Sánchez, A. & Karaksha, A. (2022):** Nursing student´s attitudes toward e-learning: a quantitative approach. Education and Information Technologies, 1-15.

▪ **Sasmal, S. & Roy, M. (2021):** Perception of undergraduate nursing students regarding e-learning during COVID-19 pandemic in West Bengal. International Journal of Community Medicine and Public Health, Vol. (8), No. (4), 1892.

▪ **Seada, A. & Mostafa, M. (2017):** Students' Satisfaction and Barriers of E–Learning Course among Nursing Students, Mansoura University. IDOSI Publications, Vol. (3), No. (3), p.p. 170-178.

▪ **Shee, D. & Wang, Y. (2008):** Multi-criteria evaluation of the web-based e-learning system: A methodology based on learner satisfaction and its applications. Computers & Education, Vol. (50), p.p. 894–905.

▪ **Singh, V. & Thurman, A., (2019):** How many ways can we define online learning? A systematic literature review of definitions of online learning (1988–2018). Am J Distance Educ.; Vol. (33), No. (4), p.p.289–306.

▪ **Sintema, E. (2020):** Effect of COVID-19 on the Performance of Grade 12 Students: Implications for STEM Education. Eurasia Journal of Mathematics, Science and Technology Education, Vol. (16), No. (7): em1851.

▪ **Soriano, G. & Oducado, R. (2021):** Shifting the Education Paradigm amid the COVID 19 Pandemic: Nursing Students' Attitude to E-learning. Africa Journal of Nursing and Midwifery, Vol. (23), No. (1), 14.

▪ **Thapa, P. Bhandari, S. & Pathak, S. (2021):** Nursing students' attitude on the practice of e-learning: A cross-sectional survey amid COVID-19 in Nepal. PloS one, Vol. (16), No. (6), e0253651.

▪ **World Health Organization, (2020): Statement on the meeting of the International Health Regulations (2005)** Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV).

▪ **Zabadi, A. & Al-Alawi, A. (2016):** University Students' Attitudes towards E-Learning: University of Business & Technology (UBT)-Saudi Arabia-Jeddah: A Case Study. International Journal of Business and Management, Vol. (11), No. (6), p.p. 286–295.