

Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

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Abstract: Background: perceived e-learning stress is a common experience for university students, stress can have detrimental consequences for university students, such as poor academic performance, and mental or psychosomatic symptoms. The purpose of the study was to assess the correlation between perceived E-learning stress and E-learning acceptance among psychiatric nursing students at Beni-Suef University. **Design:** a descriptive correlational design was used to achieve the purpose of the study. **Setting:** the study was conducted at the Faculty of Nursing Beni-Suef University, Egypt. **Sample:** A purposive sample of 90 fourth-year psychiatric nursing students. **Instruments:** Data were collected using the following instruments, (1) An Interviewing Questionnaire to assess the socio-demographic characteristics of the students. (2) The Perceived Stress Scale (PSS) to assess E-learning related stress. (3) Acceptance of the E-learning scale to assess E-learning acceptance. **Results:** the results revealed about half (48.9%) of the studied subjects had low E-learning acceptance and near to three-quarters (70 %) of them had moderate perceived stress. There was negative insignificant correlation between E-learning acceptance and perceived E-learning stress. **Conclusion:** it was concluded that the studied subjects suffer from perceived E-learning stress and they have low E-learning acceptance. **Recommendation:** Develop a Psychiatric nursing intervention program to reduce the perceived E-learning stress and enhance E-learning acceptance. Routine screening for perceived E-learning stress as a part of the educational process in the university.

Keywords: *Psychiatric nursing students, Perceived E-learning Stress, E-learning Acceptance.*

Introduction

While E-learning has an advantage for students in that they can attend their courses from anywhere at their convenience, allows learners to select learning materials that meet their level of knowledge and interests to perform more effectively, facilitating communication and improving relationships, encouraging students to take personal responsibility for their

learning and helping them to have self-knowledge and self-confidence, and presenting many research opportunities for faculties (Hammad & Zohry, 2020). The sudden disruptive shift to E-learning during the pandemic saw students facing many challenges, which had a strong ability to induce mental health issues among the students (Malik & Javed, 2021)

Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

The COVID-19 pandemic emphasises the psychological status of the students since they changed their learning environment. Both teachers and learners feel stress about E-learning mainly when adequate guidelines are not readily available. (Singh, Steele, & Singh, 2021). They appear to be associated with feelings of frustration and insecurity and have negative effects on mental health and well-being (Vulić-Prtorić, Selak, & Sturnela, 2020). Stress, anxiety, depressive symptoms, sleep problems, and fear have globally increased (Torales, O'Higgins, Castaldelli-Maia, & Ventriglio, 2020).

Academic stress is a common experience for university students, difficulties in E-learning acceptance and time management can also lead to stress for students. Finally, stress can have detrimental consequences for university students, such as poor academic performance, and mental or psychosomatic symptoms, such as dissatisfaction, restlessness, search for distraction, sleeplessness, difficulty concentrating, or listlessness (Goppert & Pfof, 2021).

Nursing educators must have the understanding of the experiences and expectations of the students when faced with this important change, to be able to manage this situation in an imminent future, it is necessary to learn from these experiences and to define the strong and weak points (Morin, 2020). Nursing educators must guarantee that the students meet the academic requirements, and at the same time, recognize the current conditions faced by the health services and the needs of simultaneously satisfying the demands

from students, parents, brothers, partners, and the multiple roles every individual play in their day-to-day lives. (Ramos-Morcillo, Leal-Costa, Moral-García, & Ruzafa-Martínez, 2020).

Significant of study

COVID-19 is the greatest challenge that educational systems have ever coped with (Daniel, 2020). Many governments required educational institutions to switch, almost overnight, to online teaching and distance education. UNESCO suggests that country-wide school closings have been incited in more than 191 countries worldwide, as a result of the COVID-19 crisis. These decisions affected 91.3% of the student population, enrolling almost 1.5 billion students worldwide. s (Drane, Vernon, & O'Shea, 2020).

A study by (Saad Abdallah, Mohamed Abd El-Monem, & Mohamed Osman, 2020) indicate the prevalence of perceived stress among nursing students show that Most participants explained that they were exposed to various stressors during the E-learning experience as they experienced educational difficulties and a lack of direct interaction with teachers.so this study amied to assess the correlation between perceived E-learning stress and E learning acceptance among psychiatric nursing students at Beni-Suef University.

Purpose of the study:

To assess the correlation between perceived E-learning stress and E-learning acceptance among psychiatric nursing students at Beni-Suef University.

Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

Research questions

- 1) What are the levels of perceived E-learning stress among psychiatric nursing students?
- 2) What are the levels of E-learning acceptance among psychiatric nursing students?
- 3) What is the correlation between E-learning acceptance and E-learning stress among psychiatric nursing students

Methods

Research design:

A descriptive correlational design was used to achieve the purpose of the study

Research Setting:

This study was conducted at the Faculty of Nursing Beni-Suef University.

Sampling

Based on the previous studies that examine the same outcome and found significance differences, sample size was calculated using the following equation $n = (Z^2 \times q) / D^2$ at power 80% and CI 95% the average sample size were (90)

A purposive sample of 90 fourth year psychiatric nursing students at Beni-Suef University.

Inclusion criteria:

- Students of the psychiatric nursing department at the Faculty of Nursing Beni-Suef University of both sex.
- Agree to participate in the study

Exclusion criteria

Free from any history of psychiatric illness, other chronic physical illness or neurological disorders because these

illnesses may lead to depression and anxiety that could interfere with the results.

Instruments of data collection:

Data collection was conducted by using four instruments as follows:

The Instrument I: Interview Questionnaire:

Socio-demographic interviewing sheet designed by the researcher, which includes items such as gender, place of residence and the financial status of parents and their education, the number of e-learning courses in this semester, number of e-learning courses in the previous semesters and availability of home internet, also number of a family member in education.

Instrument II: The Perceived Stress Scale (PSS):

It was translated and modified by the researcher. To measure perceived E-learning stress. It consists of 10-item question. Each item requires participants to respond on a 3-points Likert scale, ranging from 0-2 scores, where 0 = never, 1 = sometimes, and 2 = yes.

The scoring system of the Perceived Stress Scale (PSS):

	No of items	Min-max score	Mild	Moderate	Severe
PSELS	10	0-20	0-6	7-13	14-20

Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

Instrument III: Acceptance of e-learning scale (ELA):

It was adopted from (Ngampornchai & Adams, 2016), It is a self-reported scale that measures university students' acceptance of E-learning. It consists of 18 items. Each item requires participants to respond on a 3-points Likert scale, ranging from 0-2 scores, where 2 = never, 1= sometimes, and 0= yes.

The scoring system of Acceptance of the e-learning scale (ELA):

	No of items	Min-max score	Low	Moderate	High
ELA	18	0-36	0-11	12-23	24-36

Content validity

Before starting, the data collection instruments were translated into Arabic and back to English and tested for content validity by 7 experts in the field of psychiatric nursing, medicine and psychology they were from different academic categories, i.e., professor and assistant professor. To check the relevance, coverage of the content and clarity of the questions. The required modification was carried out accordingly.

Instrument reliability

All instruments used in this study were tested for their reliability using test-retest reliability and all tools proved to be strongly reliable.

	No of items	Cronbach's Alpha
PSELS	10	0.719
ELA	18	0.918

Ethical consideration

Approval:

A written letter was issued to the Dean of the Faculty of Nursing, Beni-Suef University and the president of mental and psychiatric nursing to obtain official approval to collect the study data. The objectives and the nature of the study are explained and then it is possible to carry out the study. Official approval from the ethical committee of scientific research at the Faculty of Nursing, Menoufia University, Egypt was obtained.

Informed consent was taken from the students after explaining the purpose and the importance of the study. The students who agreed to participate in the study were assured of confidentiality and anonymity of the study. They were informed about their right to withdraw from the study at any time without giving a reason

Pilot study:

A pilot study was taken after the development of the instruments and before starting the data collection. It conducted (10%) of the total students using tools (1), (2), and (3). The purpose of the pilot study is to test the applicability, feasibility, and clarity of the instruments. In addition, it served to estimate the approximate time required for interviewing the students as well as to find out any problems that might interfere with data collection. After obtaining the result of the pilot study, the necessary modifications of the instruments(excluded questions, added questions & revised) were done then the final format was developed under the guidance of supervisors.

*Relationship between E-learning Acceptance and Perceived E-learning Stress
among Nursing Students at Beni-Suef University*

Data collection procedure:

Before data collection administrative approval was obtained after explaining for them the purpose and importance of the study. The researcher revised all psychiatric nursing department lists of students to identify the number of students who enrolled in the class.

The researcher introduces himself to the students. The students who have the criteria for the study were requested to participate in the study after establishing a trusting relationship and clarifying the purposes of the study.

The procedure sustained until the wanted number (90 students) was reached. The researcher gave the recruited students the instruments of the study to assess the stress perceived from E-learning and their learning acceptance. This was applied through interviewing questionnaires, each student took 20-30 minutes to complete them.

The data were collected; through specific two days per week (Wednesday and Thursday) from 1 pm to 2 pm. Guidance and instructions were given to every student during data collection. The data collection consumed 3 months carried out during the period from the 2nd of March 2022 to the 9th of June 2022.

Statistical analysis:

All data were collected, coded, tabulated and subjected to statistical analysis. Statistical analysis was performed by statistical package for social sciences (SPSS version 20.0). Descriptive statistics were applied in the form of mean and standard deviation for quantitative variables and frequency and percentages for

qualitative variables... Correlation coefficient was used to measure the direction and strength of the correlation between variable, Statistical significance at p-value $p \leq 0.05$, and considered highly statistically significant at p-value $p \leq 0.001$.

Results

Table (1): shows that more than two-thirds (67.8%) of the studied subjects are females. About three-quarters (72.2%) of the studied subjects live in rural areas, and two-thirds (60%) of studied subjects and their family income is just enough for living. Less than half fifty (46.7%) of the studied subjects' fathers have a diploma education and regarding the mothers also less than half (44.4%) are illiterate and elementary or have a diploma. Nearly all of the studied subjects (97.8%) have current and previous E-learning classes, and the majority of them (86.7%) have home internet. And more than two-thirds (64.4%) have 3 or less than 3 family members in education (Mean \pm SD 3.06 ± 1.43).

Figure (1): presents that about half (48.9%) of the studied subjects have low E-learning acceptance, around one-third (31.1%) of them have moderate E-learning acceptance, and the fifth have high E-learning acceptance (20%).

Figure (2): shows that there near to one-quarter of the studied subjects have mild perceived stresses from E-learning (23.3%). Near to three-quarters (70%) of them have moderate perceived stress and a minority (6.7%) have severe perceived stress level from E-learning.

Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

Table (2): indicates that there is a statistically negative insignificant correlation between the mean score of Perceived Stress from E-learning Scale

and the mean score of E-learning Acceptance Scale among the studied subject.

Table (1): Sociodemographic Characteristics among Studied Subjects. (N=90)

	No.	%
Gender		
Male	29	32.2
Female	61	67.8
Residence		
Rural	65	72.2
City	25	27.8
Family income		
Enough and exceed	29	32.2
Enough	54	60
Not enough	7	7.8
Father's education		
Illiterate and Elementary	29	32.2
Diploma	42	46.7
University	18	20
High study	1	1.1
Mother's education		
Illiterate and Elementary	40	44.4
Diploma	40	44.4
University	7	7.8
High study	3	3.4
Current E-learning class		
Yes	88	97.8
No	2	2.2
Previous E-learning class		
Yes	88	97.8
No	2	2.2
Home Internet		
Yes	78	86.7
No	12	13.3
Family members		
3 or less than 3	58	64.4
4 to less than 6	30	33.3
6 or more	2	2.3
Mean±SD	3.06±1.43	

Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

Figure (1): Levels of E-learning Acceptance among Studied Subjects.

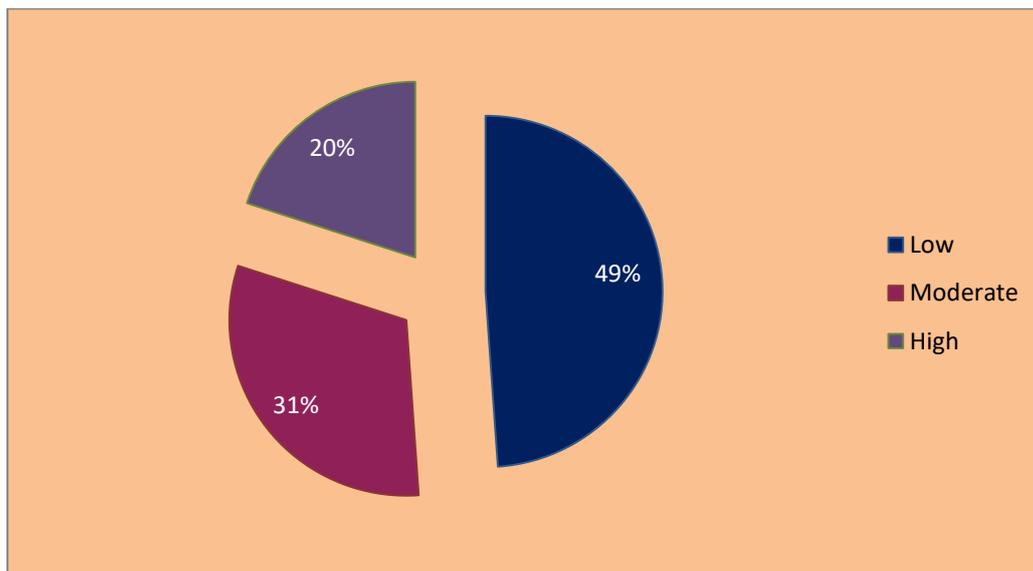


Figure (2): Levels of Perceived Stress from E-learning among Studied Subjects.

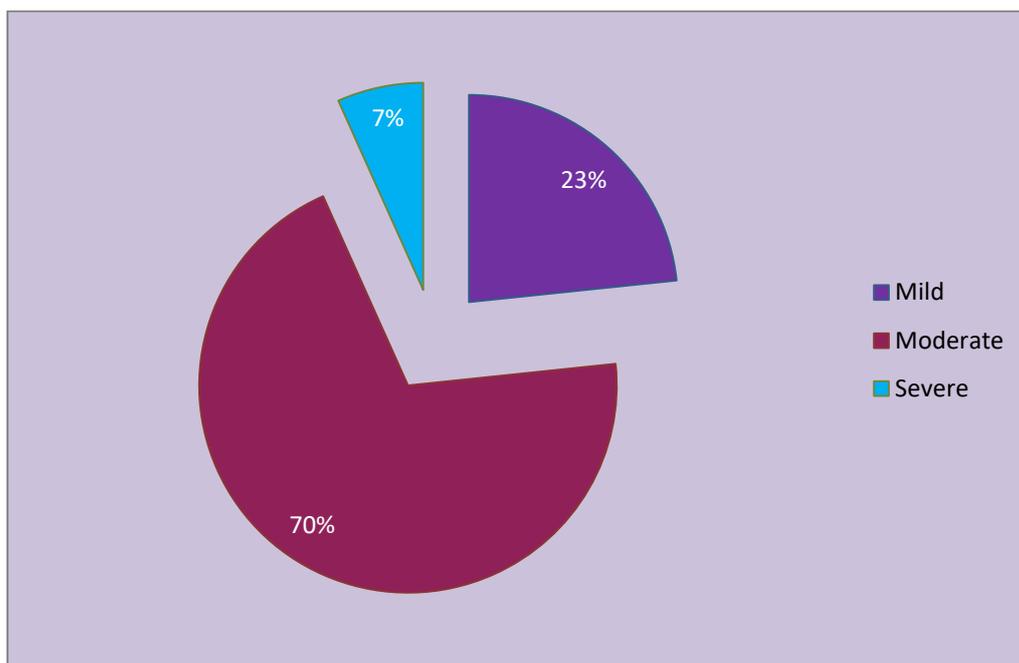


Table (2): The Correlation between mean Scores of E-learning Acceptance Scale and mean score of Perceived Stress from E-learning Scale among the studied subject

		E-learning Acceptance Scale
Perceived Stress from E-learning Scale	r Sig.	-.031 (0.773)

Discussion

The pandemic adversely affected people's well-being worldwide and the students' education at all levels. Many teachers and students struggled because of the lack of experience and expertise in operating electronic devices and the application of E-learning tools. Besides, the syllabi and curricula needed to be appropriately revised and adapted for E-learning. Students' perceived stress experience due to this sudden shifting towards E-learning and added to the mental health problems that the coronavirus already created (Kabir, Nasrullah, et al., 2021). The present study revealed that more than two-thirds of the studied subjects are females. In my opinion, this may be due to the traditional thoughts in Egypt that the nursing field is just for females, a few years ago only males started to choose nursing as a career. This is consistent with (Malik & Javed, 2021) who studied "Perceived stress among university students in Oman during COVID-19-induced E-learning", they reported that the respondents comprised 84.4% females (n = 815) and 15.6% males (n = 151).

About three-quarters of the studied subjects live in rural areas, and two-thirds of studied subjects and their family income is just enough for living. In my point of view, this might be attributed to the idea that the nursing field is not for high-class people or rich individuals, where those persons live in modern cities, while most of the rural people with limited income, try to enhance their income by choosing a career, give them a job with a stable income. This result contradicted with

(Abdulghani, Sattar, Ahmad, & Akram, 2020) who researched "Association of COVID-19 Pandemic with Undergraduate Medical Students' Perceived Stress and Coping". They reported that nearly all students (94.7%) were from urban areas.

Regarding education, Less than half of the studied subjects' fathers have a diploma education and regarding the mothers also less than half are illiterate and elementary or have a diploma. In my opinion, individuals of limited income try to enhance their economic status by finding a job with a stable income to help their families so they either leave their education in the early stages or take only a diploma and then go to find their day's food. These results agreed with (Kabir, Nasrullah, et al., 2021) who studied "Perceived E-learning stress as an independent predictor of E-learning readiness: Results from a nationwide survey in Bangladesh". In terms of parents' education level, more than one-third of the participants' parents (43.63%) were at least graduates.

Regarding E-learning classes, nearly all of the studied subjects have current and previous E-learning classes, and the majority of them have home internet. In my point of view, this is because they are all in the same class as each other and the government applied E-learning because of the coronavirus.

And more than two-thirds have 3 or less than 3 family members in education (Mean \pm SD 3.06 \pm 1.43). In my opinion, the Egyptians like to have many children, so, it's normal to find

***Relationship between E-learning Acceptance and Perceived E-learning Stress
among Nursing Students at Beni-Suef University***

more than two children in different stages of education

Concerning levels of E-learning Acceptance Scale among the studied subjects; this study reveals presents that about half of the studied subjects have low E-learning acceptance, around one-third of them have moderate acceptance, and the fifth have high acceptance. This could be due to lack of readiness, lack of knowledge about E-learning, lack of experience and expertise in operating electronic devices and the application of E-learning tools also lake of availability of interment in student's home and lacke of family incme. This was supported with (Thapa, Bhandari, & Pathak, 2021) who studied " Nursing students' attitude on the practice of E-learning: A cross-sectional survey amid COVID-19 in Nepal". They reported that the majority (81.7%) of the respondents found it difficult due to internet problems followed by technical issues (65.5%) and reduced interaction with the patients (55.1%) and most of the respondents felt that E-learning does not help achieve better results.

Regarding the levels of Perceived Stress from E-learning among Studied Subjects; the study revealed that, Near to one-quarter of the studied subjects have mild E-learning perceived stress, near to three-quarters have moderate Elearning perceived stress and a minority have severe E-learning perceived stress levels. This could be due to lake of coping with E-learning , internet problems and economic ststus The current finding was supported by a study done by (Kabir, Hasan, & Mitra, 2021) they researched" E-learning readiness and perceived stress among

the university students of Bangladesh during COVID-19: a countrywide cross-sectional study". reported that nearly all students reported moderate to higher levels of perceived E-learning stress, whereas more than half of them were at the sub-optimum level of readiness. Furthermore, it was found that students with the sub-optimum level of readiness compared to the optimum had a significantly higher chance of reporting a moderate and high level of perceived E-learning stress. Also, supported by, (Ali Abdelhamid Eltrass, AbuBakr, & Elias Abdel-Aziz, 2022) there research about " E-Learning Experiences and Stressors of Nursing Students during COVID-19 Pandemic: A Phenomenological Study" They reported that " The lived experience of E-learning and its related stressors among nursing college students in the current study is presented in seven major themes; living in uncertainty, psychological suffering, privileges of e-learning vs. traditional method, educational difficulties, challenges of e-learning, and stress management techniques used with e-learning"

Regarding correlation between E-laring acceptance and perceived E learning stress the result show negative insignificant correlation this could be due to small sample size. From my ownpoint of view it is important to provide psycho-educational program focused on E-learning skills and coping to enhance E-learning acceptance among students and reduce stress levels. This result is contradicted with (Malik & Javed, 2021) who studied Perceived stress among university students in Oman during COVID-19-

***Relationship between E-learning Acceptance and Perceived E-learning Stress
among Nursing Students at Beni-Suef University***

induced e-learning, their result was a significant negative correlation between perceived stress and the students' academic performance.

Conclusion

Depending on the results of this study it can be concluded that half of the studied subjects suffer from perceived E-learning stress and they have low E-learning acceptance.

Recommendations

- Developing a psychiatric nursing program focused on E-learning skill and coping to enhance e learning acceptance and reduce stress levels among students
- Stress management and assertiveness training should be given to all students to enhance psychological well-being.
- Routine screening for E-learning skill as a part of the educational process in the university to enhance e learning acceptance and reduce E-learning stress.
- Availability health professionals support to help students to enhance E-learning acceptance and cope with perceived E-learning stress.

Further researches:

- 1) This study should be replicated using a larger probability sample from different geographical areas to help with the generalization of the results.
- 2) Psycho-educational program for students' families to promote beneficial attitudes towards e-learning and decrease feelings of stress.

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Relationship between E-learning Acceptance and Perceived E-learning Stress among Nursing Students at Beni-Suef University

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