Effect of Psycho-Educational Program on Perceived E-learning Stress and Coping Strategies among Nursing Students at Beni-Suef University

Maaly El-Malky[1], Gehan A. Abed[2], Safaa D. Abdel Wahab[3], Saida El-Sayed[4], Asmaa A. Rabie[5]

[1,2,3] *Department of Psychiatric Mental Health Nursing, Faculty of Nursing, Shebin El-Kom, Menoufia University, Egypt*

[4,5] *Department of Psychiatric Mental Health Nursing, Faculty of Nursing, Beni-Suef, Beni-Suef University, Egypt*

Abstract: Background: Perceived E-learning stress is associated with a wide range of psychological distress. Individuals with high perceived stress are less likely to engage in healthy behaviors. The purpose of the study was to evaluate the effect of the psycho-educational program on perceived E-learning stress and coping strategies among psychiatric nursing students at Beni-Suef University. **Design**: A quasi-experimental research design two groups (study and control pre/ post-test) was used to achieve the purpose of the study. **Setting**: The study was conducted at the Faculty of Nursing Beni-Suef University, Egypt. **Sample**: was a purposive sample of 90 students of fourth-year students in the psychiatric nursing department divided randomly into two equal groups (study and control group). **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). (3) Coping with E-learning Problems Scale. **Results**: the results revealed that (70%) of the students had E- learning stress there was a statistically significant reduction in the level of perceived E-learning stress and enhancement of the coping strategies for stress in the study group immediately after the application of the psychoeducational program compared with the control group. **Conclusion:** it was concluded psychoeducational program had a positive effect on reducing the level of perceived E-learning stress among students. And enhancing coping levels. **Recommendation:** psychoeducational program for reducing the perceived E-learning stress should become an integral part of the total management of perceived E-learning stress. Assertiveness training and stress management techniques should be given to all students with perceived E-learning stress to help them to cope with stress and enhance their psychological well-being.

Keywords: psychoeducational program, perceived E-learning stress, coping strategies.

Introduction

Perceived E-learning stress is a common experience for university students, difficulties in time management can also lead to stress for students (e.g., balancing time for learning with time for other activities, including paid work. Additional, 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 & Pfost, 2021).

The COVID-19 pandemic significantly disrupted every aspect of human life including the educational system. It

caused chaos compelling educational institutions to suspend their regular activities (Thapa, Bhandari, & Pathak, 2021) The closure of schools and universities affected more than 1.5 billion students and youths across the globe. The pandemic COVID-19 brought many additional sources of stress, and all these stressful normative transitions are grouped as COVID-19-related stressors: concerns about one's health risks and those of loved ones, abnormally reduced social contact with others, separation from friends and family, loss of freedom, closure of universities, online education, etc. 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).

Applying E-learning in high-education institutions was the ultimate method for imparting education to students in the aftermath of COVID-19. As a result of the nationwide lockdown teachers were compelled to run their classes online, primarily by using Zoom, Google Meet and several other methods that involve the internet. E-learning is important for facilitating the educational process (Hoq, 2020). The adoption of e-learning in higher educational institutions has several advantages to both students and the teaching staff, which are decreasing social contact, which can eliminate the spread of coronavirus infection, focusing on the learners' specific needs and requirements, offering plenty of teaching resources, providing cost-effectiveness than traditional learning, saves time and money and offering learning opportunities for the maximum number of learners with no need for many buildings (Mostafa, 2021).

Styles of coping with stress are determined by gender, education, age, health, well-being, the nature of the stressful situation, personality factors, and others. Efficient use of emotions allows for more effective problem-solving while venting anger and frustration and denial of reality are potentially destructive reactions to stress. Expressing emotions might also lead to lower depression and hostility levels in stressful situations. (Babicka-Wirkus, Wirkus, Stasiak, & Kozłowski, 2021)

Psychiatric mental health nursing is a specialized area of nursing practice that uses theories of human behavior as a scientific framework and requires the purposeful use of self as its art of expression. Nurse educators in health care have a vital role as clinical experts; role models, mentors change agents and supporters, 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. Understanding the experiences and expectations of the students when faced with important change and helps them to cope (Dewart, Corcoran, Thirsk, & Petrovic, 2020)

Significance of the 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, (Drane, Vernon, & O'Shea, 2020). the prevalence of perceived e-learning stress reported during COVID-19 in Oman was 96.9% (moderate stress = 82.5% and high stress = 14.4%).(Malik & Javed, 2021). Another study by (Kabir, Hasan, & Mitra, 2021) in Bangladesh, their result indicated that nearly 91% of students reported moderate (76.07%) to the higher level (14.85%) of perceived e-learning stress. While in Egypt a study done by (Ali, Mohammed Elsayed, El-Gilany, & Mahmoud Boughdady, 2022) reported that (moderate stress = 52.5% and high stress = 38.1%) levels of perceived stress towards online learning among the studied gerontological nursing students. So the aim of this study was to evaluate the effect of a psycho-educational program on perceived e-learning stress and coping strategies among psychiatric nursing students

Purpose of the study

To evaluate the effect of a psycho-educational program on perceived e-learning stress and coping strategies among psychiatric nursing students at Beni-Suef University.

Research hypotheses

The students who receive the psycho-educational program will have a lower level of perceived E-learning stress and higher coping strategies than those who don't receive the psycho educational program.

Research design:

A quasi-experimental research design on two groups (study and control group pre/ post-test) was used to achieve the purpose of the study.

Research Setting:

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

Sampling: Sample size:

Based on the previous studies that examine the same outcome and found significance differences , sample size was calculated using the following equation : n=(Z2 ×q)D2 at power 80% and CI 95% the average sample size were (90) divided into two equal (group study and control group 45 for each one)

Sample technique:

A purposive sample of 90 fourth-year psychiatric nursing students from psychiatric nursing department at the Faculty of Nursing Beni-Suef University divided into (two equal group 45 for each one) who fulfill the following inclusion and exclusion criteria was been selected:
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, both sex and agree to participate on the study

Instruments of data collection:

Data collection was conducted by using three instruments as follows:

The Instrument I: Interview Questionnaire:

Socio-demographic interviewing sheet designed by the researchers based on scientific review of literatures, it 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 originally developed by (Cohen, Kamarck, & Mermelstein, 1994) and translated and modified by the researcher to measure the perception of E-learning stress . It consisted 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

Instrument III: Coping with E-learning Problems Scale:

It was originally developed by Holahan & Moos (1987), then modified by Spitzberg & Copach (2008) and Hamby et al., (2013) and translated and modified by the researcher to measure coping appraisal and behaviours for different concern. It was consisted of 13 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 Coping with E-learning Problems Scale:

	No of items	Min-max score	Low	Moderate	High
CELPS	13	0-26	0-8	9-17	18-26

Content validity:-

Before starting, the data collection tools 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 instrument used in this study were tested for their reliability using test-retest reliability and all instruments proved to be strongly reliable.

	No of items	Cronbach's Alpha
PSELS	10	0.719
CELPS	13	0.770

Ethical consideration

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 was explained and then it was 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.

A pilot study was taken after the development of the tools 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 was to test the applicability, feasibility, and clarity of the tools. 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 tools (excluded questions, added questions & revised) were done then the final format was developed under the guidance of supervisors.

Procedure of data collection

The study was done through four phase:

Phase one: Assessment phase:

The researcher started data collection by introducing herself to the students. Tools of the study were distributed individually to the study subjects and were asked to fill the questionnaire in the presence of researcher for any clarification and filling the questionnaires ranged from 20-30 minutes. This phase aimed to determine the study subject's needs as a base line of the program. Brief description about the aim of the study and the type of questionnaire required to fill was given to each students of the sample.

Phase two: Designing phase (development of the psychoeducational program):

This phase include planning for psychoeducational program on perceived E-learning stress and coping strategies based on the result obtained from the assessment tools and review of literature, through setting educational objects, preparing the

psychoeducational program and designing the methodology (power point, media and hand out,), also the teaching place was assessed and planned also booklet was developed to be distributed to the students for enforcement and as a reference, it was conducted in Arabic language to be easily understood and it was revised and approved by the supervisors to ascertain its content, appropriateness ,applicability and the required modification and corrections were carried out.

The psychoeducational program purpose was to reduce perceived E-learning stress symptoms and enhance coping strategies among psychiatric nursing students at Beni-Suef University. The psychoeducational program consists of theoretical and practical sessions in which each one of them had set of general and specific objectives for each session

General objectives of the program:

At the end of the psycho educational program the students should be able to cope with E-learning stress positively and feel less stress.

Specific objectives:

At the end of the psycho educational program the students should gain theoretical knowledge & practices about: -
- E-learning stress (concept, causes, signs, symptoms, problems faced by students with e learning and strategies for management of this problem).
- Apply steps to practice skills including (time management, relaxation technique, deep breathing, problem solving, and assertiveness skill).

Phase three: Implementing phase:

The psycho educational program was implemented in 12 sessions, the first

one is introductory session and performs (pre-test) and three of them were theoretical sessions (basic information about E-learning stress , knowledge about causes and stress symptom, knowledge about coping) and eight of them were practical sessions (skills about decreasing stress emotion, develop self-dialogue strategy, design personal plan for managing negative emotion, train the students to practice daily life skills) and the final session was summary for all previous sessions and performs (post-test).

Implementation of the program:

The implementation of the program consumed 3 months carried out during the period from the 2nd of March 2022 to the 9th of June 2022; through specific days (Wednesday and Thursday) from 1 pm to 2 pm. Participating students were assigned into two groups, one group composed of (22) and the other group 23 students. Each group attended 12 sessions; each session was about (45-60 minutes)

The researcher was the initiator, provider and teacher was encouraged the students to participate in the discussion and practice activity through motivating them by positive reinforcement and at the end of the program, the booklet were printed and distributed to the study sample.

Specifically:

▪ The theoretical session was implemented by using lecture, handout and group discussion to promote active involvement in the discussion and asking the students to share their experiences. Lecture was given in a clear, simple manner using attractive power-point presentation which prepared by the researcher in a simplified Arabic languages

▪ Lecture, group discussion were used as method of teaching as well as, handout, white paper and power-point was used as media of teaching.

▪ Each session was started with summary of what was given at the previous session and the objectives of the new session were mentioned taking into consideration using simple languages to suit all students to be ensure that student understand the content of the program

▪ In the practical sessions, the researcher used role play, demonstration, re-demonstration as method of teaching for practical skills. Also used lecture, video and group discussion. Role play exercise was carried out between students them- selves and the researcher. Handout papers about simulated situations and scenario were distributed to all studied students at the beginning of each session.

▪ The researcher allowed the students to think critically and give wide range of their own responses to the different situations and analyzed each one, after that the researcher presented the most appropriate response at the end of each situation discussion and give rationale for each choice.

▪ The researcher also made a summary at the end of every session , give them homework and informed them about the time of the next session

Phase four: Evaluation phase:

Evaluation of outcome of the program was carried out by the researcher through post-test after implementation of the program to estimate the effect of psychoeducational intervention program on perceived E-learning stress and coping strategies among psychiatric nursing students at Beni-Suef University

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 25.0). Descriptive statistics were applied in the form of mean and standard deviation for quantitative variables and frequency and percentages for qualitative variables. Qualitative categorical variables were compared using chi-square test. 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 significance at p-value $p \leq 0.001$.

Table (1): Reveals that there is no statistically significant difference between the study and control group regarding sociodemographic characteristics. more than (62.2%) of the study group and about three-quarters (73.3%) of the control group are females. More than a third (37.8%) of the study group and nearly a third (26.7%) of the control group are males. More than three-quarters (75.6%) of the study group and more than two-thirds (68.9%) of the control group live in rural areas, about two-thirds (57.8%) of studied subjects and slightly above two-thirds (62.2%) in control group their income is just enough for living. Less than half (46.7%) of the studied subjects' fathers in the study and control group have a diplom education, and regarding the mothers less than half (46.7%) of the study group and about fifty (42.3%) of the control group are Illiterate and Elementary. Nearly all of the study group and control group (97.8%) & (97.8%) respectively have current and previous

E-learning classes, and the majority of the study and control group (86.8%) & (86.8%) respectively have home internet. And more than two-thirds of study and control (64.4%) & (64.4%) respectively have 3 or less than 3 Family members in education (Mean ± SD 3.06 ± 1.43).

Figure (1): Shows that there is no statistically significant difference between levels of Perceived Stress from E-learning among Studied Subjects (Study and Control Group) Pre-program. Near to one-quarter of the study group and control group have mild perceived stress (24.4%) and (22.2%) respectively. Nearly three-quarters (71.1%) of the study group has moderate stress and more than two third of the control group has moderate stress.

Figure (2): Presents that there are highly statistical significant differences between levels of Perceived Stress from E-learning among Studied Subjects (Study and Control Group) Post-Program. Where all the studied subjects of the study group (100%) has mild perceived stress compared with less than a quarter (22.2%) of the control group.

Figure (3): Show Levels of Coping with E-learning among Studied Subjects (Study and Control Group) Pre-program, this figure reveals that there is no statistically significant difference between the levels of Coping with E-learning among Studied Subjects (Study and Control Group) Pre-program. , more than two third of studied subjects (study group and control group) have moderate coping (62.2%) and (68.9%) respectively. And a minority of the study group and the control group have high coping (8.9%) & (8.9%) respectively

Figure (4): Illustrates that there is a statistically significant difference between levels of Coping with E-

learning among Studied Subjects (Study and Control Group) Post Program. The majority of the study group (80%) have high coping compared with a minority (4.4%) only of the control group.

Table (2): Shows that, for the pre-program, there is negative insignificant correlation between perceived stress from E-learning and coping with E-learning problems, while post-program there is a negative insignificant correlation between perceived stress from E-learning and coping with E-learning problems.

Table (1): Socio-demographic characteristics among the studied subjects (study and control group) (N =90):

	Study Group N1= 45		Control Group N2= 45		X^2 (Sig.)
	No.	%	No.	%	
Gender:					
Male	17	37.8	12	26.7	1.272
Female	28	62.2	33	73.3	0.259
Residence:					
Rural	34	75.6	31	68.9	0.498
City	11	24.4	14	31.1	0.480
Family income:					
Enough and exceed	16	35.6	13	28.9	0.590^{FE}
Enough	26	57.8	28	62.2	0.801
Not enough	3	6.7	4	8.9	
Father's education:					
Illiterate and Elementary	14	31.1	15	33.3	1.034^{FE}
Diploma	21	46.7	21	46.7	0.793
University	9	20.0	9	20.0	
High study	1	2.2	0	0.0	
Mother's education:					
Illiterate and Elementary	21	46.7	19	42.3	1.719^{FE}
Diploma	20	44.5	20	44.4	0.633
University	2	4.4	5	11.1	
High study	2	4.4	1	2.2	
Current E-learning class:					
Yes	44	97.8	44	97.8	0.000^{FE}
No	1	2.2	1	2.2	1.000
Previous E-learning class:					
Yes	44	97.8	44	97.8	0.000^{FE}
No	1	2.2	1	2.2	1.000
Home internet:					
Yes	39	86.7	39	86.7	0.000
No	6	13.3	6	13.3	1.000
Family members in education:					
3 or less than 3	29	64.4	29	64.4	0.000^{FE}
4 to less than 6	15	33.3	15	33.3	1.000
6 or more	1	2.2	1	2.2	
Mean±SD	3.02±1.44		3.09±1.44		

X^2 Chi-square test

^{FE} Expected cell count less than 5, Fisher's Exact test was used.

Figure (1): Levels of Perceived Stress from E-learning among Studied Subjects (Study and Control Group) Pre-program.
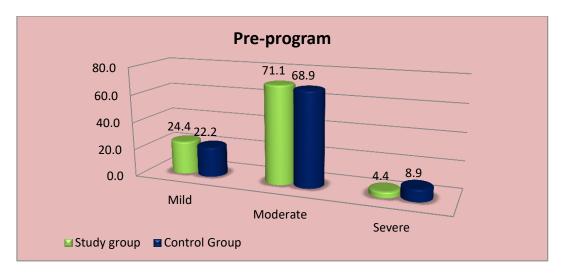

Figure (2): Levels of Perceived Stress from E-learning Scale among Studied Subjects (Study and Control Group) Post Program.
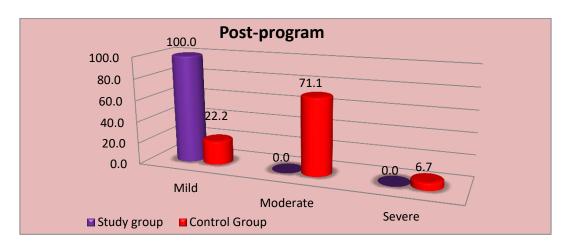

Figure (3): Levels of Coping with E-learning Scale among Studied Subjects (Study and Control Group) Pre-program.
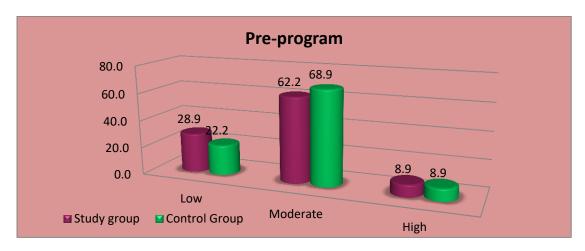
Figure (4): Levels of Coping with E-learning among Studied Subjects (Study and Control Group) Post Program.
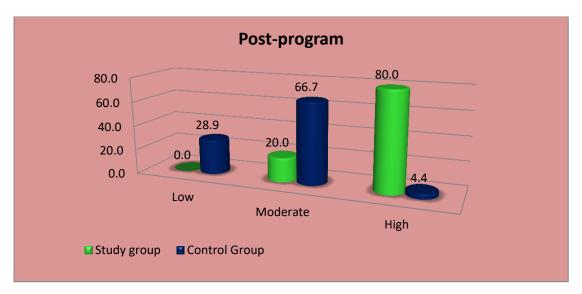

Table (2): Correlation between the Mean score of Perceived Stress from E-learning and the Mean score of Coping with E-learning Problems among Study Group, Pre and Post Program.

Study Group	Perceived Stress from E-learning Scale Preprogram	Perceived Stress from E-learning Scale post program
Perceived Stress from E-learning Scale	-	-
Coping with E-learning Problems Scale	0.287 (0.056)	-0.167 (0.273)

Discussion

E-learning was an alternative way of continuing teaching-learning activities in the current crisis of the COVID-19 pandemic which represents a challenge for university teachers and students, a non-normative educational transition, such as the shift to remote E-learning and other changing life circumstances

related to the pandemic are stressful. Due to the need to adapt to these new forms of learning, it is likely that students' perceived stress (von Keyserlingk, Yamaguchi-Pedroza, Arum, & Eccles, 2022).

The purpose of this study was to evaluate the effect of a psycho-educational program on perceived e-learning stress and coping strategies among psychiatric nursing students at Beni-Suef University.

Research hypotheses

The students who receive the psycho-educational program (study group) will have a lower level of perceived e-learning stress and higher coping strategies than those who don't receive the psycho educational program (control group).

The present study revealed that more than two-thirds of the study group and about three-quarters of the control group were females. About forty of the study group and about thirty of the control group were males. In my opinion, this could 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 carrier. 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).

More than three-quarters of the study group live in rural areas, and nearly three-quarters of the control group live in rural areas also. About two-thirds of the study group their income was just enough for living and more than two-thirds of the control group their income was just enough for living. In my point of view, this might be attributed to the fact that most of the rural people had

limited income, try to enhance their income by choosing a carrier give them a job with a stable income. This result contradicts (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, nearly half of the studied subjects' fathers in the study and the control groups had a diplom education, and nearly half of their mothers were Illiterate and Elementary. 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 diplom 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", reported that A higher proportion of the respondents had a monthly family income of more than 30,000 BDT (354 USD) (51.26%). In terms of parents' education level, more than one-third of the participants' parents (43.63%) were at least graduates.

Regarding e-learning class, nearly all of the study group and the control group had current and previous E-learning class, almost of study and the control group had home internet. In my point of view, this was because they were all in the same class as each other and the government applied e-learning because of the coronavirus.

And more than two-thirds of the study and the control had 3 or less than 3 Family members in education (Mean ± SD 3.06 ± 1.43). in my opinion, the

Egyptians like to had many children, so, it's normal to find more than two children in different stages of education. Additionally, there was no significant statistical relationship between the study and the control group related to socio-demographic characteristics, this reflects that the study and the control group had the same inclusion criteria and they were homogenous sample.

Regarding the levels of Perceived Stress from E-learning among Studied Subjects (Study and The Control Group) Pre-program. The study showed that there was no statistically significant difference between the study and the control groups in the pre-program where p≤0.01. Nearly one-quarter of the study group and the control group had mild perceived stress, near to three-quarters of the study group had moderate stress and more than two third of the control group had moderate stress levels. This indicate that the study and control group were homogenous sample and these results could be due to lack of readiness and preparation to e-learning education The current finding was supported by a study done by (Kabir, Hasan, et al., 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 was 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".

In concern to levels of Perceived Stress from E-learning among Studied Subjects (Study and The Control Group) Post Program. The study presented that there was a highly significant statistical difference between the two groups. Where all the study group had mild perceived stress compared with less than a quarter of the control group where p≤0.01. More than three-quarters of the control group had moderate to severe stress levels. This indicates the effectiveness of the program content and session which was within the need and interest of the students, the students were taught how to manage and regulate emotions and use strategies against negative emotions such as anger, sadness, anxiety and frustration. This study was supported by (Mazalová, Gurková, & Štureková, 2022), who researched" Nursing students' perceived stress and clinical learning experience". Reported that " There is a significant relationship between the clinical learning environment and the perception of academic stress. The attitude of the teacher and the medical staff can thus be important in influencing the level of stress in nursing students". This study was also supported by (Hu et al., 2022), whose research was about " E-learning intention of students with

anxiety: Evidence from the first wave of COVID-19 pandemic in China". The study demonstrates that the Technology acceptance model (TAM) is powerful in explaining the e-learning intention among college students with general anxiety. Besides, all effects associated with perceived usefulness (PU) are reinforced while those associated with perceived ease of use (PEOU) are attenuated in the anxiety group. The study suggests that instructors and higher education institutions should take advantage of the significant PU-intention relationship by providing quality e-learning, which is paramount to coping with the general anxiety among students.

Concern with the levels of Coping with the E-learning Scale among Studied Subjects (Study and The Control Group) Pre-program. The study indicated that less than two third of the studied subjects (study group and the control group) had moderate coping levels. A minority of the study group and the control group had high coping, also there was no statistically significant difference between the Total mean score of Coping with E-learning among Studied Subjects (Study and The Control Group) Pre-program where p≤0.01. This is could be due to lack of knowledge and practice of how to use e learning and that the two groups are homogenous sample . This study agreed with (Majrashi, Khalil, Nagshabandi, & Majrashi, 2021), in their study " A Phenomenological Study of the E-Learning Experiences and Stressors of Nursing College Students during COVID-19 Pandemic", Indicated that " 244 nursing students discovered that COVID-19 increased worries and failed to cope with, not just about this disease but also about the disruption of their daily routines, financial

challenges, spending much time away from their friends and family, and the new paradigm of moving academics online with remote E-learning ". Additionally, the study is in the same line with (Majrashi et al., 2021), who researched "Sources of Stress and Coping Strategies Among Undergraduate Nursing Students Across All Years". Their study showed that " The sources of stress differed according to a year of study and related significantly to the specific novelty of that year. For first-year students, their stress was related to their academic courses. High clinical performance expectations and a lack of time for their personal lives was a main source of stress for second-year students. The prospect of graduating and transitioning into the work environment caused stress for students in their final year. Students across all years of study utilized similar coping strategies".

Regarding the levels of Coping with E-learning among Studied Subjects (Study and The Control Group) Post Program, the study indicated that there was a statistically significant difference where p≤0.01. Most of the study group had high coping compared with a minority of the control group. This could be due to the effect of the program, techniques and skills that the students applied through the training program; such as relaxation techniques such as deep breathing exercises, progressive muscle relaxation and meditation effects on reducing muscle tension, and emotional distress and improving psychological well-being, this reduced stress and its negative consequences for students. This study agreed with (Abd Elaziz & Shehata, 2015), there study was " Perceived Stress and Coping Strategies among Nursing Students at Ras Al Khaimah Medical and Health Science University

in the United Arab Emirates", their study indicated that The majority of nursing students had low to moderate levels of stress and only about ten had high stress. The students adopted active coping strategies rather than avoidant ones and sought professional support coping strategies.

This study is also in the same line with (Chaabane et al., 2021), who studied " Perceived stress, stressors, and coping strategies among nursing students in the Middle East and North Africa: an overview of systematic reviews". Reported the stress coping strategies that nursing students use to deal with stress.: 19 studies report the use of problem-focused coping, 20 studies the use of emotion-focused coping, and 17 studies the use of dysfunctional coping. The most widely used problem-focused stress coping strategies was active coping".

There was negative insignificant correlation between perceived stress from E-learning and coping with E-learning problems, while post-program there was a negative insignificant correlation between perceived stress from E-learning and coping with E-learning problems. This could be due to sample size or limited duration of the program. This result disagreed with (Wang, Liu, Zhang, Xie, & Yang, 2021) who researched Online Learning Stress and Chinese College Students' Academic Coping during COVID-19: The Role of Academic Hope and Academic Self-Efficacy, results showed that online learning stress was negatively associated with approach academic coping and social support seeking, and the associations were mediated by academic hope. On the other hand, online learning stress was positively associated with avoidance academic coping, which was not mediated by academic hope. The

mediation effects of academic self-efficacy were all non-significant.

Conclusion

The psycho-educational program had a positive effect on reducing stress and enhancing coping strategies among students with perceived e-learning stress. There was a significant reduction in the total mean score of perceived e-learning stress and enhancing in the mean score of coping strategies after the psycho-educational program among the study group compared with the control group.

Recommendations

1) Routine screening for perceived e-learning stress as a part of the educational process in the university
2) Workshops about e-learning should be done to learn students about; how to use e-learning platforms, different methods of exams by using e-learning, common problems of e-learning and how to manage it.
3) Psychiatric nursing intervention in reducing perceived e-learning stress should become an integral part of the total management of perceived e-learning stress in the university.
4) Assertiveness training and stress management are helpful attitudes towards reducing the stress effect resulting from e-learning and enhancing psychological well-being.
5) Availability of local support group runs by health professionals to help students cope with perceived e-learning stress.
6) Availability of online community support groups which enhance improving psychological well-being and coping mechanisms among students to cope with

perceived e-learning stress and raising public awareness about it.

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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