Intervention Strategies Regarding Perceived Anxiety and Health Complaints among Newly Admitted Nursing Students

Fathyea Said Sayed & Faten Mohamed Ahmed

Lecturers of Psychiatric and Mental Health Nursing, Faculty of Nursing, Benha University

Abstract: Background Anxiety is an important construct today, especially in the lives of students, as it affects their mental, physical and social wellbeing. **This study aimed to** evaluate the effect of intervention strategies regarding perceived anxiety and health complaints among newly admitted nursing students. **Design:** A quasi-experimental design was utilized to achieve the aim of the study. *Setting: -* The study was carried out at the Faculty of Nursing, Benha University. *Sample:* -A systematic random sample was chosen as one every fifth. It included 100 students from the total number (500) of first- grade nursing students enrolled in the academic year 2019-2020. *Tool of Data Collection:* The tool was divided into three tools: *Tool one:* -A structured interviewing questionnaire. *Tool two:* Health Complaints Questionnaire. *Tool three:* Anxiety scale for undergraduate students. *The main findings of the study:* More than two-thirds of the studied sample has mild total health complaints and decrease the level of anxiety of them post- intervention strategies. Positive correlation between total anxiety scale, its dimensions and total health complaints pre and post-interventions strategies. *Conclusion:* Based on the findings of the present study, it was concluded that intervention strategies had a positive effect regarding perceived anxiety and health complaints among newly admitted nursing students. *Recommendation:* A comparison of anxiety among newly admitted nursing students and other students in various other colleges.

Keywords: Interventions Strategies*, Anxiety, Health Complaints, Nursing Student.*

INTRODUCTION

Professional experience among newly admitted nursing students often lays the foundation for what will hopefully be long-term professional satisfaction. The transition to professional practice can be exciting and challenging, it can also be a time of high anxiety; especially when the realities of work do not meet existing expectations and feelings of fatigue or isolation have set in **(Afolayan et al., 2018).**

Duchscher, (2019)has conducted extensive research surrounding the role and transition shock in nursing, describing it as the person "jumped into the deep end of the pool" while not being prepared for the reality of the transition's effects on their personal and professional self-concepts. Feelings of shock at new-found and unexpected realities can have negative implications on aspects of physical well-being, social development, intellectual capabilities and psychological response.

Anxiety is a set of responses that includes a complex combination of the feeling of fear excessive worry, depression, nervousness and irrelevant thinking, to a class of stimuli from an individual's experience of assessment and outcome. Excessive anxiety occurs in response to an actual or anticipated situation or as a pathological state. Adolescence is more vulnerable to anxiety, especially students. Nursing students experience a variety of stresses during their nursing education program which in turn ignites anxiety in them **(Mohamed & Youssef, 2014).**

According to DSM-1V, approximately 3% of people will develop an anxiety disorder during a given year and 5% of people will have anxiety at some point in their life. A college environment proved to produce anxiety in some individuals. First-year of the baccalaureate nursing program is proved to be a period of stressors and anxiety as they face a situation of being new in the nursing profession well as facing excessive anxiety in their initial clinical posting. Persistence of anxiety for a prolonged time can adversely affect the self-esteem levels**(Stuart, 2017).**

Common sources of anxiety students most often mention first experiences at anew clinical site, fear of making mistakes, concerns about performing clinical skills and using hospital equipment, angst about faculty evaluating skills, and lack of support of nursing personal. Students also find it difficult to close the gap from theory to practice. Anxiety can increase if there is a theory gap which is defined as an inconsistency between what is taught in the classroom and what is practiced in the clinical setting **(Moscaritolo, 2018).**

Clark &Zeldow (2016)reported in their study that, anxiety is often accompanied by health complaints such as palpitations, chest pain and/or shortness of breath. In a moderate level, anxiety stimulates anticipatory and adaptive responses to challenging and stressful events. It's also accompanied bya number of unexplained, nonspecific gastrointestinal symptoms such as nausea, abdominal pain, bloating, excess gas, cramping, dyspepsia, or other stomach or upper GI discomfort **(Tricia,2017).**

University students feel a wide assortment of symptoms, referred to as self-reported symptoms, health complaints, psychosomatic symptoms, or health strains or burdens. Such complaints include back pains and shoulder pains, various headaches, many gastrointestinal symptoms, psychological

symptoms, psychiatric episode(s) and mental health issues including depression and anxiety, sleep disturbances, and circulatory/breathing complaints (e.g., dyspnoeic symptoms, tachycardia, excessive perspiration, and menstruation disorders) as manifestations of anxiety **(Lee et al., 2014).**

Nursing education requires placement in a variety of clinical settings to gain hands-on experience and to apply theory to practice. Preparation for practice entails more than developing skills in the on-campus lab. It requires developing an ability to provide safe and effective care to other human beings in various clinical settings. This aspect of developing expertise as a student nurse can be very stressful to nursing students and create anxiety. High levels of anxiety can affect student's learning, performance and in some cases retention within a nursing program **(Moscaritolo,2018).**

So, the negative impact of anxiety may be reduced when faculty acknowledges anxiety and provide a supportive learning environment for nursing students where mistakes are accepted as a part of the learning process. Educating nursing faculty regarding teaching strategies that decrease anxiety will both promote a positive and safe learning environment for students and build trusting relationships between faculty and students **(Purfeerst, 2017).**

SIGNIFICANT OF THE STUDY

Many people in the population may experience transient symptoms of anxiety or state anxiety, but do not meet diagnostic criteria for an anxiety disorder. By measuring anxious mood state, found a significant positive correlation between anxiety disorders and health complaints such as abdominal problems, headache, sleep problems, backache and circulatory /breathing complaints **(Harter et al., 2018).**

It is important for clinical nursing faculty to be aware of the heightened sense of anxiety students may experience during their clinical rotations. Strategies found in the literature to help reduce anxiety in nursing students include providing consistent clinical placement, peer mentoring, counselling, faculty role modelling, and developing positive student and staff relationships **(Bell,2019).**

Aim of the study:
This study aimed to evaluate the effect of intervention strategies regarding perceived anxiety and health complaints among newly admitted nursing students**.**
It was achieved through:
1. Assessing the anxiety and health complaints for newly admitted nursing students.
2. Designing; implementing and evaluating the effect of intervention strategies regarding perceived anxiety and health complaints among newly admitted nursing students.

Research hypothesis:
To fulfil the aim of this study the following research hypothesis were formulated:
H1: Nursing students who undertake the interventions strategy will exhibit a reduced level of anxiety and health complaints.

H2: There will be a positive correlation between anxiety and health complaints among nursing students.

SUBJECT AND METHODS

Research design:
A quasi-experimental design was utilized to achieve the aim of the study.

Setting:
The study was carried out at the Faculty of Nursing, Benha University.

Sample type & size:
A systematic random sample was chosen as one every Fifth. It included 100 students from the total number (500) of first-grade nursing students enrolled in the academic year 2019-2020 at the Faculty of Nursing, Benha University was the target of this study.

Tools of Data Collection:
The following three tools were used for data collection. Arabic translation of all the tools by the researcher and retranslation into English and tested for their translation.

Tool One: - A structured Interviewing Questionnaire: It was designed by the researchers after reviewing the related literature, it was written in the Arabic language.
Based on **Cheung et al., (2016).**It comprised of two parts:

Part I: It was concerned with socio-demographic characteristic of the studied sample which consists of age, sex, residence and residence during the study. (3 MCQs and 1 open-end question).This tool used pre-implementation of the intervention strategies.

Part II: Health status of the studied sample: such as weight, height, smoking, chronic illness and general health status. (2 open-end questions; 2closed-end questions and 1 MCQs).This tool used pre-implementation of the intervention strategies.

***Tool (2):-* Health Complaints Questionnaire was adopted by El Ansari et al., (2014).**This questionnaire aims to measure the arrange of health complaints. This is containing 22 items. " (4-point response scale, 1=never, 4= very often). This questionnaire consists of 4 subscales:
1. **Health complaints related to psychological state (9 items)** such as Depressive mood; Nervousness; Mood swings; Difficulties to concentrate.
2. **Health complaints related to blood circulation/breathing (5 items)** such as Trembling hands; Trembling; Speech impediment; Rapid heartbeats; Breathing difficulties.
3. **Health complaints related to the digestive system (3items)** such as Diarrhea; Constipation; Abdominal problems.
4. **Health complaints related to pain or ache (5 items)** such as Back pain; Neck and shoulder pain; Fatigue; Stomach trouble; Headaches.

This tool used pre and post-implementation of the intervention strategies.
Tool (3):-Anxiety scale for undergraduate students was adopted by Singhal, (2015):A scale to measure anxiety

status among newly admitted students. It consists of 50 items, each item provided Strongly Disagree, Disagree, Undecided, Agree and Strongly Agree, as alternatives for responding. This tool used pre and post-implementation of the intervention strategies.

The scoring was as follows for the positive items:
- Strongly Disagree 1
- Disagree 2
- Undecided 3
- Agree 4
- Strongly Agree 5

Negative items were scored in the reverse:
- Strongly Disagree 5
- Disagree 4
- Undecided 3
- Agree 2
- Strongly Agree1

These groups of items were framed into four dimensions or factors were defined as follows:

1. **Competitive Environment** (12 items) – means the anxiety due to the competition for jobs, career, studies, rising population and increasingly competitive environment.
2. **Modern Societal Pressure** (13 items) – was the anxiety due to pressure of society in friendship with the opposite sex, desire for modern luxuries, to be in fashion, about one's appearance, of trying to do multitasking (many things at the same time).
3. **Worry about the Future** (10 items) – was the anxiety due to being insecure about the future, future outcome of events and the anxiety of being unsuccessful.
4. **Psychological Manifestations** (15 items) – The resulting physical and mental manifestations of anxiety, through psychological symptoms like anger, irritation, loneliness and purely physical symptoms like crying, shouting and not sleeping.

Content Validity:

The tools were tested for content validity by a jury of five experts in the field of Psychiatric and Mental Health Nursing speciality to ascertain relevance and comprehensiveness. The tools proved to be valid.

Reliability of the tools:

Reliability was applied by the researcher for testing the internal consistency of the tool, by the administration of the same tools to the same sample under similar conditions on one or more occasions. Answers from repeated testing were compared (Test-re-test reliability).

Standardized tools	Cronbach's Alpha	No of Items
Health complaints Questionnaire	0.87	22 items
Anxiety scale for undergraduate students	0. 90	50 items

Administrative Approval:

The researchers have obtained permissions from the Dean of Faculty of Nursing, Benha University to conduct the study. The objectives and the nature of the study were explained and then it was possible to carry out the study with minimum resistance.

Ethical considerations:

Before conducting the study, students were assured that the data will be collected from the questionnaires will remain confidential and that no personal identification was needed by any means. Students were informed that they could refuse to participate in this study, or withdraw from it at any time and then acceptance of the student to participate in the study was taken**.**

Pilot study:

A pilot study was conducted on 10 students (10% of the sample) to test by the designed assessment tool and its applicability on the sample and in order to estimate the time needed to fill in the sheets and to identify obstacles or problems in data collection and accordingly necessary modifications were done. Subjects who shared in the pilot study were included in the study sample.

Fieldwork:

- The researchers have obtained permissions from the Dean of Faculty of Nursing, Benha University to conduct the study.
- The aim and the nature of the study were explained and then it was possible to carry out the study with minimum resistance.
- The researchers collected all students to be acquainted with them, explained to them the objectives of the study and its expected outcomes.
- The researchers met each student after introducing their selves and explained to them the purpose of the study to seek participants' cooperation and emphasizing that all collected information is strictly confidential to obtain oral consent from them.
- The study was carried out from the beginning of October 2019 to the end of December 2019 for two days/week.
- The study was carried out at the Faculty of Nursing, Benha University.
- Systematic random samples of 100 students were included in the study.

Procedures:

The intervention strategies comprised of the following phases:

A- Assessment Phase:

- A comfortable, private place was chosen for the interviewers. Orientation was done about the researcher's name, purpose, significance, content of the study. Samples were interviewed where the assessment was done using socio-demographic characteristic, health complaints questionnaire and Anxiety scale for undergraduate students.
- The researchers completed the questionnaire (pre-intervention) from students for two days a week. This process took one month (October 2019). Data was collected using the interview and observational method. The sheet was filled individually by the researchers for

each student. This interview took about 15 to 20 minutes.

B-Implementation phase:

The general objective of the study was to evaluate the effect of the intervention strategies regarding perceived anxiety and health complaints among newly admitted nursing students.

The specific objectives of the intervention strategies include the following:

- Define of anxiety, causes, levels and its symptoms of the anxiety such as psychological and somatic symptoms.
- Teaching the methods about how to control anxiety.
- Training on relaxation exercises strategy.
- Apply yoga exercises strategy for students.
- Training about how to take care of your health.
- Training the students on a strategy of problem-solving skills.

Content of the intervention strategies was designed by the researchers according to the previously mentioned objectives. The theoretical content of the intervention strategies included the definition of anxiety, causes, levels and its symptoms; Teaching the methods about how to control anxiety.

The practical content of the intervention strategies was included: Training on relaxation exercises strategy; Apply yoga exercises strategy for students; training about how to take care of your health; Training the students on a strategy of problem-solving skills.

The intervention strategies /theoretical and practical training included six sessions two for theory and four for practices. The sessions were carried out from (Beginning of November to end December 2019). Students were classified into 5 groups; each group consists of 20 students. The contents were repeated for each group by the researchers. Each session takes from 20-30 minutes for theory and 30-40minutes for practical. The teaching methods used were lectures and discussions as teaching methods for theory, however, role play, demonstration and re-demonstration, Data show, video were used as practical skills. As regards the teaching media used, they were booklet. At the end of every session, students were discussed to correct any misunderstanding, which has happened this through making conclusion and taking feedback from students about the content of the session and orienting them about the content of the next session.

C- Evaluation Phase:

Immediately after implementation of the intervention strategies, each student in the study was asked to evaluate health complaints questionnaire and Anxiety scale for undergraduate student(post-test). The results were compared to the pre-test results.

Statistical analysis:

The calculated data for this study were analyzed and the collected data was organized, coded, computerized and tabulated and analyzed by using (SSPS) programs version 20. Data analysis was accomplished by the use of the number, percentage distribution, mean and standard division, Paired "t" test was used to test the significance of some variance, and correlation coefficient was used determine statistically significance relations significant p < 0.05.

RESULTS

Table (1): Frequency distribution of the studied sample regarding socio-demographic characteristics (N=100).

Socio-demographic characteristics	No	%
Age		
18-	72	72.0
19-	22	22.0
20	6	6.0
Mean ±SD	**18.34±0.58**	
Sex		
Male	60	60.0
Female	40	40.0
Residence		
Rural	88	88.0
Urban	12	12.0
Residence during study		
With family	92	92.0
University city	8	8.0
Total	100	100.0

Table (1): Illustrates that, socio-demographic characteristics of the studied sample. More than two thirds (72.0%) were 18 years old and their mean age was18.34±0.58 years and more than half (60.0%) were male, the majority (88.0%) of the studied sample were living in rural areas and (92.0%) of them had a residence with family during the study.

Table (2): Mean and standard division of the studied sample regarding weight, height and body mass index (N=100).

	Minimum	Maximum	Mean ±SD
Wight	6.00	90.00	63.12±14.56
Height	146.00	193.00	167.36±9.73
Body mass index	18.26	31.14	23.17±3.28

Table (2): Reveals that, Mean and standard deviation of the students regarding weight, height and body mass index were (63.12±14.56, 167.36±9.73 and 23.17±3.28) respectively.

Table (3): Frequency distribution of the studied sample regarding their health status (N=100).

Health status	No	%
Smoking		
No	90	90.0
Yes	10	10.0
Chronic illness		
No	98	98.0
Yes	2	2.0
General health status		
Bad	20	20.0
Good	54	54.0
Very good	22	22.0
Excellent	4	4.0
Total	100	100.0

Table (3): Illustrates that, health status of the studied sample. Majority (90.0%, 98.0%) respectively were no smoking and no chronic illness. More than half (54.0%) of them had good general health status.

Table (4): Comparison of the studied sample regarding their health complaints pre and post – intervention strategies (N=100).

Health complaints	Pre				Post				X^2	p-value
	often	Sometimes	Rarely	Never	Often	Sometimes	Rarely	Never		
Health complaints related to psychological state										
Depressive mood	12.0	42.0	24.0	22.0	2.0	10.0	54.0	34.0	40.94	<0.001**
Nervousness	22.0	46.0	14.0	18.0	3.0	8.0	59.0	30.0	71.92	<0.001**
Mood swings	20.0	34.0	30.0	16.0	2.0	6.0	62.0	30.0	49.71	<0.001**
Difficulties to concentrate	30.0	36.0	22.0	12.0	3.0	24.0	53.0	20.0	39.30	<0.001**
Fear/Phobia	18.0	14.0	28.0	40.0	2.0	8.0	32.0	58.0	18.00	<0.001**
Nightmares	6.0	14.0	38.0	42.0	3.0	10.0	38.0	49.0	2.205	.531 n.s
Weight gain /Weight loss	6.0	22.0	42.0	30.0	5.0	6.0	36.0	53.0	16.06	.001**
Lack of appetite	12.0	30.0	26.0	32.0	5.0	18.0	46.0	31.0	11.45	.010*
sleep disorder	14.0	34.0	18.0	34.0	3.0	16.0	41.0	40.0	23.05	<0.001**
Health complaints related to blood circulation / breathing										
Trembling hands	6.0	12.0	14.0	68.0	3.0	1.0	22.0	74.0	12.33	.006*
Trembling	6.0	8.0	12.0	74.0	2.0	2.0	19.0	77.0	7.24	.065 n.s
Speech impediment	4.0	6.0	26.0	64.0	2.0	2.0	21.0	75.0	4.06	.254 n.s
Rapid heartbeats	12.0	10.0	34.0	44.0	3.0	2.0	33.0	62.0	13.80	.003*
Breathing difficulties	10.0	10.0	28.0	52.0	4.0	10.0	21.0	65.0	5.01	.171 n.s
Health complaints related to the digestive system										
Diarrhea	4.0	24.0	28.0	44.0	4.0	2.0	28.0	66.0	23.01	<0.001**
Constipation	4.0	20.0	30.0	46.0	7.0	18.0	28.0	47.0	1.003	.008 *
Abdominal problems	14.0	30.0	30.0	26.0	1.0	8.0	43.0	48.0	32.85	<0.001**
Health complaints related to pain or aches										
Back pain	8.0	40.0	26.0	26.0	3.0	6.0	41.0	50.0	38.34	<0.001**
Neck and shoulder pain	14.0	28.0	26.0	32.0	2.0	11.0	38.0	49.0	22.22	<0.001**
Fatigue	6.0	32.0	22.0	40.0	3.0		6.0	91.0	61.99	<0.001**
Stomach trouble	12.0	32.0	24.0	32.0	3.0	7.0	39.0	51.0	29.34	<0.001**
Headaches	32.0	34.0	22.0	12.0	3.0	22.0	43.0	32.0	42.47	<0.001**

(n.s) Not Statistically Significant (*) Statistically Significant at ≤0.05   (**) Highly Statistically Significant at ≤0.001   (SD) Standard Deviation

Table (4): Shows that, there were statistically and highly statistically significant differences between pre and post – intervention strategies related to all items regarding to health complaints. While there were no statistically significant differences between pre and post-intervention strategies related to Nightmares, Trembling, Speech impediment and Breathing difficulties.
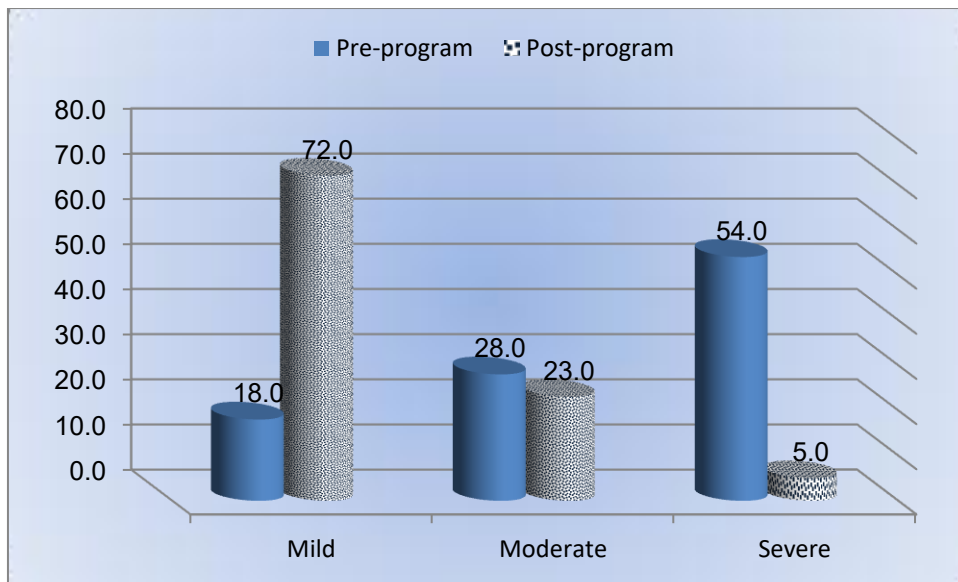
Figure (1): Comparison of the studied sample regarding total health complaints pre and post –intervention strategies.

Figure (1): Portrays that, more than two thirds (72.0%) have mild total health complaints post –intervention strategies.

Table (5): Mean and standard division of studied sample regarding anxiety scale dimensions pre and post – intervention strategies(N=100).

Anxiety Scale Dimensions	Pre		Post		Paired t –test	p-value
	Mean	± SD	Mean	± SD		
Total Competitive Environment	32.40	±8.10	24.40	±5.35	22.04	<0.001**
Total Modern Societal Pressure	39.08	±10.02	29.10	±6.28	22.30	<0.001**
Total Worry about the Future	31.40	±8.23	23.44	±5.02	18.34	<0.001**
Total Psychological Manifestations	38.94	±11.30	29.26	±6.90	18.65	<0.001**

(**) Highly Statistically Significant at ≤0.001   (SD) Standard Deviation

Table (5): Reveals that, there was a highly statistically significant difference in Anxiety scale dimensions means score pre and post – intervention strategies.
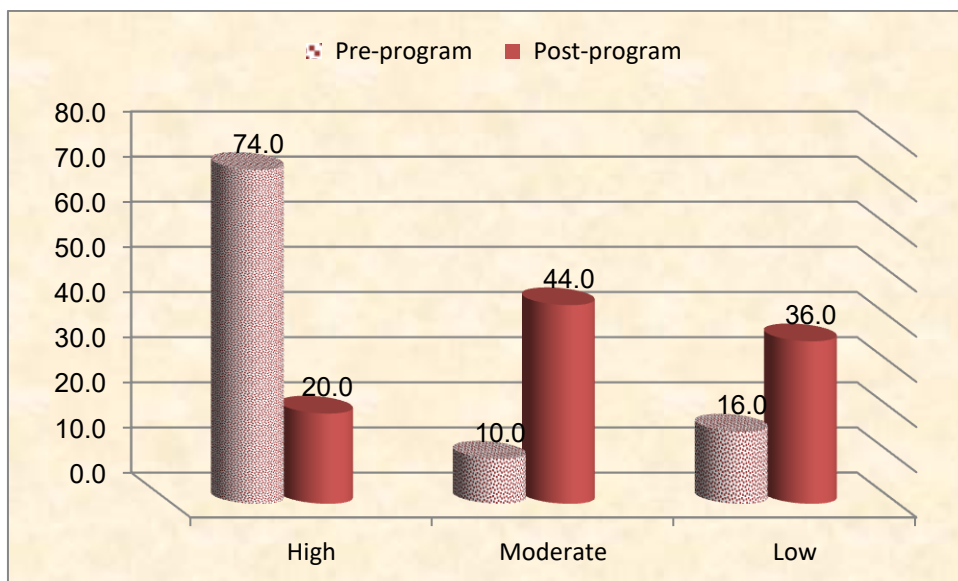

Figure (2): Comparison of the studied sample regarding total anxiety scale pre and post –intervention strategies.

Figure (2): Shows that decrease the levels of total anxiety of the studied sample post– intervention strategies.

Table (6): Correlation between total anxiety scale, its dimensions and total health complaints pre-intervention strategies.

		Total health complaints		Total Competitive Environment	Total Modern Societal Pressure	Total Worry about the Future	Total Psychological Manifestations	Total anxiety scale
Total health complaints	r	1		.728[**]	.685[**]	.707[**]	.638[**]	.775[**]
	p-value			.000	.000	.000	.000	.000
Total Competitive Environment	r	.728[**]		1	.722[**]	.691[**]	.732[**]	.880[**]
	p-value	.000			.000	.000	.000	.000
Total Modern Societal Pressure	r	.685[**]		.722[**]	1	.672[**]	.673[**]	.871[**]
	p-value	.000		.000		.000	.000	.000
Total Worry about the Future	r	.707[**]		.691[**]	.672[**]	1	.756[**]	.874[**]
	p-value	.000		.000	.000		.000	.000
Total Psychological Manifestation	r	.638[**]		.732[**]	.673[**]	.756[**]	1	.907[**]
	p-value	.000		.000	.000	.000		.000
Total anxiety scale	r	.775[**]		.880[**]	.871[**]	.874[**]	.907[**]	1
	p-value	.000		.000	.000	.000	.000	

Table (6): Clarifies that, positive correlation between total anxiety scale, its dimensions and total health complaints pre-intervention strategies.

Table (7): Correlation between total anxiety scale, its dimensions and total health complaints post –intervention strategies.

		Total health complaints		Total Competitive Environment	Total Modern Societal Pressure	Total Worry about the Future	Total Psychological Manifestations	Total anxiety scale
Total health complaints	r	1		.440[**]	.435[**]	.367[**]	.407[**]	.490[**]
	p-value			.000	.000	.000	.000	.000
Total Competitive Environment	r	.440[**]		1	.602[**]	.585[**]	.690[**]	.847[**]
	p-value	.000			.000	.000	.000	.000
Total Modern Societal Pressure	r	.435[**]		.602[**]	1	.610[**]	.606[**]	.843[**]
	p-value	.000		.000		.000	.000	.000
Total Worry about the Future	r	.367[**]		.585[**]	.610[**]	1	.580[**]	.804[**]
	p-value	.000		.000	.000		.000	.000
Total Psychological Manifestation	r	.407[**]		.690[**]	.606[**]	.580[**]	1	.871[**]
	p-value	.000		.000	.000	.000		.000
Total anxiety scale	r	.490[**]		.847[**]	.843[**]	.804[**]	.871[**]	1
	p-value	.000		.000	.000	.000	.000	

Table (7): Clarifies that, positive correlation between total anxiety scale, its dimensions and total health complaints post – intervention strategies.

DISCUSSION

Anxiety is a psychological and physiological state characterized by physical, emotional, cognitive, and behavioral components. It is considered to be a normal response to stress. It may help an individual to cope with the demands of life but in excess it may be considered as anxiety disorder (**National Institution of Mental Health, 2015).**

Newly admitted students are moving into and through a major developmental period of transition. As they grapple with increased academic, personal, social, and moral pressures in their lives, these stressors may lead to increased anxiety, depression, headaches, sleep disturbances, gastrointestinal symptoms and sometimes suicidal ideations. Health anxiety is also an important aspect that affects college students' lives and studies. With regards to nursing students, the literature regarding mental health distress has focused on academic and personal sources of stress and coping efforts, with an emphasis on the stress and anxiety associated with clinical practice (**Zhang et al., 2014).**

Therefore, the aim of the present study was to evaluate the effect of the intervention strategies regarding perceived anxiety and health complaints among newly admitted nursing students. This aim was achieved throughout the study findings and the research hypothesis was accepted.

The result of the present study revealed that More than two-thirds of the studied subjects were 18 years old and their mean age was18.34±0.58 years this is because it is the normal age for entering university on Egypt and more than half were male, majority of studied subjects were living in rural areas. This is might be due to the geographical location of benha university it is near from the rural areas and majority of them had residence with family during study this is might be due to the rural community maintains its children by living close to their families and not far from them. These findings were similar to the study done by **Prabhuswami et al., (2016)** found that the demographic data of maximum students belong to the age of 18 years; the majority of them from a rural area and staying with their families. Also, this result in agreement with **Mohamed & Youssef , (2014)** their results revealed that the age of nearly half of the students ranged between 18 years and the meanage was (19.34 ± 1.54) years. The majority of students

were singles; two-thirds of them were residing in rural areas and living with their families.

Regarding the health status of the studied subjects, the findings of the current study showed that the majority of them were no smoking and no chronic illness. More than half of them had good general health status. This may be due to the majority of studied subjects were live with their families as the rural culture prevents them from smoking, keeps their sons and cares for their health and takes care of them so they had good general health. This results supported by **Ramadan & Ahmed, (2015)** they found the majority of students were no smoking and with good general health status. Furthermore, this result was consistent with **Cheung et al.,(2016)** only five respondents were current smokers. Most respondents perceived their physical and mental health as good.

The result of the present study revealed that there was statistically and highly statistically significant differences between pre and post-intervention strategies related to all items regarding to health complaints. This result indicated the efficacy of the Intervention Strategies in reducing health complaints among nursing students. These findings were similar to the study done by **Ilankoon&Warnakulasooriya, (2015)**they found that there was an association between anxiety and the physical wellbeing factors: feeling tired easily, getting nervous, poor sleep and chest tightness, loss of appetite, reduced or increased psychomotor speed, weight changes and loss of libido. And relieving these health complaints after implementation nursing program contains of deep breathing exercises.

Also, the result of the current study clarified that there were no statistically significant differences between pre and post-nursing intervention strategies related to Nightmares, Trembling, Speech impediment and Breathing difficulties. This might be due to limitation of the session time and the students need more sessions these findings were similar to the study done by **Singh et al., (2016)** they found no improvement on some items of physical health after implementation of coping strategies used by nursing interns.

Apparently, the current study finding indicated that there was a highly statistically significant difference of Anxiety scale dimensions means score pre and post –intervention strategies. This may be due to College nursing students have additional stressors other college students do not have to face. In addition to the intense theoretical learning encompassed in a nursing program, nursing students are required to perform clinical and critical thinking skills. Nursing students are thrust into the professional environment while still developing their knowledge base, which can be a great source of anxiety and after the implementation of the nursing intervention strategies, the level of anxiety decreased. This finding was consistent with **Riet et al., (2015)** who revealed that using stress management and mindfulness program had significant effects on all Anxiety scale dimensions including environmental, Societal Pressure and Psychological Manifestations

The present study illustrated that decrease the level of anxiety of the studied sample post -intervention strategies. This indicated that the provided intervention strategies were effective. This finding was supported by **Manpreet & Maheshwari, (2015)** they found a decreased level of depression, anxiety and stress among postgraduate nursing students after implementation of psycho-educational program. Also, this result supported by **Behrozian & Nematpour, (2017)** they found that stress management training based on the meditation could significantly reduce the anxiety level of the nursing students in the intervention group compared to before the intervention.

Furthermore this study showed that, there are a positive correlation between total anxiety scale and total health complaints pre- and post-intervention strategies. From researchers' points of view this is may be due to anxiety is often accompanied by health complaints such as palpitations, chest pain and/or shortness of breath, diarrhea, constipation, abdominal problems**,** back pain, neck pain, fatigue and others symptom's. The less anxiety a student has the less physical symptoms they will complain about. These findings were in accordance with **Malinski&Todaro-Franceschi, (2017)**reported in their study that, anxiety is often accompanied by health complaints and these complaints decreased after Exploring co-meditation as a means of reducing anxiety and facilitating relaxation in a nursing school. Also this result in agreement with **Davazdahemami et al.,(2019)** who found that positive correlation between anxiety and symptom of hyper and hypo thyroidism pre- and post- stress management training.

ACKNOWLEDGEMENT

CONCLUSION

Based on the findings of the present study, it is concluded that intervention strategies had a positive effect regarding perceived anxiety and health complaints among newly admitted nursing students.

RECOMMENDATIONS

In the light of the findings of the current research, the following recommendations are suggested:

- A comparison of anxiety among newly admitted nursing students and other students in various other colleges.
- Planning of effective interventions and policies are very important to limit the psychological health issues among nursing students.
- Early recognition of anxiety and related problems are essential, and initiation of stress management programs expanding counseling activities for nursing students are warranted.
- Longitudinal studies are warranted to observe time-series changes in mental health aspects among nursing students.

REFERENCES

[1]. **Afolayan, J., Donald, B., Onasoga, O., Babafemi, A. &Juan, A. (2018):** Relationship between anxiety and academic performance of nursing students, Niger Delta University, Bayelsa State, Nigeria. *Advances in Applied Science Research*, 4(5):25-33.

[2]. **Bell, M. (2019).** Learning a complex nursing skill: student anxiety and the effect of preclinical skill evaluation. *Journal of Nursing Education*, *30*(5), 222-226.

[3]. **Behrozian, F.&Nematpour, S. (2017):** Of stressors Coping strategies and their relation to public health students, entrance year 2015-2016 Ahvaz JundiShapur University of Medical Sciences. Medical Journal. 6(3):283–92

[4]. **Clark , D. &Zeldow, P.(2016):** Vicissitudes of depressed mood during four years of medical school. JAMA 2016; 260 (17): 2521-8.

[5]. **Cheung,T., Wong,S.,** Law, L ., Tong, M. & Yip, P.(2016): Depression, Anxiety and Symptoms of Stress among Baccalaureate Nursing Students in Hong Kong: A Cross-Sectional Stud, Int J Environ Res Public Health. 2016 Aug; 13(8): 779.

[6]. **Davazdahemami, M., Roshan, R., Mehrabi, A. & Atari A. (2019):** Stress Management Training Effectiveness of cognitive - behavioral and depression on glycemic control in type 2 diabetic patients. Journal of Endocrinology and Metabolism Iran, Medical Sciences and Health Services martyr Beheshti. 11(4):385–92.

[7]. **Duchscher, J. (2019):** Transition shock: The initial stage of role adaptation for newly graduated Registered Nurses. Journal of Advanced Nursing;65(5): 1103-1113. PMid: 19183235. http://dx.doi.org/10.1111/j.1365-2648.2008.04898.x

[8]. **El Ansari1, W., Oskrochi, R., Labeeb, S. & Stock, C.(2014):** Symptoms and health complaints and their association with perceived stress at university: survey of students at eleven faculties in Egypt,Cent Eur J Public Health; 22 (2): 68–79.

[9]. **Harter, M., Conway, K. &Merikangas, K. (2018).** Associations between anxiety disorders and physical illness. *European Archives* of *Psychiatry and Clinical Neuroscience*, *253*(6), 313-320.

[10]. **Lee, E., Mun, M., Lee, S. & Cho, H.(2014):** Perceived stress and gastrointestinal symptoms in nursing students in Korea: a cross-sectional survey. BMC Nurs. 8; pp: 10-22.

[11]. **Manpreet, K. &Maheshwari, S. (2015).** Depression, anxiety and stress amongpostgraduate nursing students. InternationalJournal ofTherapeutic Applications. 21(2015), 12-18.

[12]. **Malinski, V. &Todaro- Franceschi, V. (2017):** Exploring co-meditation as a means of reducinganxiety and facilitating relaxation in a nursing school setting. *Journal of Holistic Nursing*,29, 242-248. doi:10.1177/0898010111398334

[13]. **Mohamed, I. & Youssef,H. (2014):**Academic stress and anxiety among faculty of nursing students, Journal of American Science 2014;10(3)http://www.jofamericanscience.org.

[14]. **Moscaritolo, L. (2018):** Interventional strategies to decrease nursing student anxiety in the clinical learning environment, *J NursEduc*,Jan; 48(1):17-23.

[15]. **National Institution of Mental Health.(2015):** Anxiety disorders, Department of Health and Human Services, USA.

[16]. **Prabhuswami, H., Vaishali, R., Prakash, N. &Tejas, B. (2016):-** Depression, Anxiety and Stress among Newly Admitted Undergraduate Nursing Student at Krishna Institute of Nursing Sciences Karad International Journal of Health Sciences and Research.

[17]. **Purfeerst ,C. (2017):** Decreasing anxiety in nursing students. Master of Arts in Nursing Theses. Paper 36. ST. Catherine University. St.Paul, Minnesota.

[18]. **Ramadan, N. & Ahmed, A. (2015):-** The Effect of Health Educational Program on Depression, Anxiety and Stress among Female Nursing Students at Benha University IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 4, Issue 3 Ver. IV ,PP 49-56 www.iosrjournals.org

[19]. **Riet, P., Rossiter, R., Kirby, D., Dluzewska, T. & Harmon, C. (2015).** Piloting a stress management and mindfulness program for undergraduate nursing students: Student feedback and lessons learned. Nurse Education Today. 35 (1). 44-49.

[20]. **Singhal, K. (2015):**Development of an Anxiety Scale for Undergraduate Students**,** Thesis Submitted in Fulfilment of the Requirement for the Award of the Degree of Doctor of Philosophy in Education, Formerly Allahabad Agriculture Institute.

[21]. **Singh, C., Sharma, S.& Sharma, R. (2016).** Level of stress and coping strategies used by nursinginterns. Nursing and Midwifery Research Journal. 7 (4). 152-60.

[22]. **Stuart, G.2017):** Michel TL. Principles and practices of psychiatric nursing. 8th ed. Elsevier. 2017. p.305-6.

[23]. **Tricia,M.** (2017): Gastrointestinal Symptoms from Anxiety, available at https://www.livestrong.com/article/182432-anxiety-attack-symptoms-in-women

[24]. **Ilankoon, I. &Warnakulasooriya, S. (2015):-**Perceived stress and associated factors among BSc undergraduates in university of SriJayawerdanapura, Sri Lanka. Proceedings of International Research Conference – 2015, General Sir John KotelawalaDefence University, Sri Lanka. http://www.kdu.ac.lk/proceedings/irc2015/View_page.php?key= 84.

[25]. **Zhang, Y., Zhao,Y., Mao,S., Li,G. & Yuan,Y.** (2014):Investigation of health anxiety and its related factors in nursing students. Neuropsychiatric Dis Treat. 2014; 10: 1223–1234.