Effect of Cognitive Emotional Regulation Strategies, and Academic Stress on Mental Health of Nursing Students

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Zagazig Nursing Journal
Vol. 21; Issue. 2
July 2025
Received: 19/5/2025
Revised: 20/6/2025
Accepted: 15/7/2025

ABSTRACT

Background: Students mental health is an issue of concern worldwide. Nursing students face unique pressures and stressors during their academic journey that can significantly impact their mental health and overall wellbeing. **Aim of the study:** This study aimed to assess the effect of cognitive emotional regulation strategies and academic stress on nursing students' mental health. **Subjects and methods: Research design:** Cross-sectional descriptive research design. **Setting:** The study was conducted at Technical Institute of Nursing at Zagazig University, Sharkia governorate, Egypt. **Subjects:** A stratified random Sample of 300 nursing students participated in the study. **Tools of data collection:** Four tools were used. **Tool I**: Youth profile questionnaire. **Tool II**: Cognitive Emotion Regulation Questionnaire - short version. **Tool III**: Academic Stress Scale. **Tool IV**: Mental Health Scale. **Results:** demonstrates that, more than two-thirds of students had a moderate level of cognitive emotional regulation strategies, more than half of them had high level of academic stress, and more than half of students have a moderate level of mental health status. **Conclusion:** There was a statistically significant positive correlation between cognitive emotional regulation and mental health. Conversely, academic stress had a highly statistically significant negative effect on mental health status**. Recommendations:** Nursing educators must continue to cultivate cognitive emotion regulation skills in nursing students and appropriately guide them to use positive emotion regulation strategies in their studies.

Keywords: Academic stress, Cognitive emotional regulation strategies, Mental health, Nursing students.

Introduction

Students represent the most valuable resource of any institution. They ensure the advancement and growth of societies and the intelligent and productive social class that shapes a country's future **(Heidari et al., 2019).** Nursing students are the future professional nurses that will enrich the future of health care system and remedy the ongoing nursing workforce shortage. Accordingly, it is imperative to concentrate on this group by researching its traits, understanding its difficulties, and concentrating on and

assisting them in order to revitalize this next generation of nurses and thereby guarantee the advancement of health **(Berdida, 2023).**

Cognitive emotion regulation strategies are a cognitive method of controlling people's emotions or altering the event itself to assist people in controlling their emotions and avoiding emotional overload. Additionally, it can be described as the ideas or thoughts that control and govern one's emotions and symbolize the methods a person uses to deal with a traumatic event. It can lead to psychological flexibility and emotional well-being **(Boon and Hauber, 2022).**

Additionally, cognitive emotion regulation strategies are predominantly classified as adaptive or maladaptive strategies, there are four maladaptive strategies (self-blame, rumination, catastrophizing and blaming others) and five adaptive strategies (acceptance, positive refocusing, refocus on planning, positive reappraisal and putting into perspective. Self-blame is the idea that you are to blame for anything that has happened to you; rumination is the process of thinking about negative events and feelings; catastrophizing is to overemphasize the terror of experiences; blaming others includes ideas of blaming others for your own problems; acceptance means embracing your past and your experiences; positive refocusing is thinking about joyful and pleasurable things instead of real-life occurrences; refocus on planning involves taking actionable measures to address unfavorable circumstances; positive reappraisal means giving traumatic circumstances constructive meanings in the context of development; and putting into perspective is to downplay the seriousness of events **(Wang et al., 2021).**

College students' mental health may be impacted by academic stress more than any other stressor. It possesses the capacity to impair learning and performance, making it a particularly significant problem in the field of education. The demanding nature of nursing education puts a lot of strain on students, that affects both their academic performance and general health. As a result, students who struggle with academic stress shouldn't be ignored because failing to do so can result in issues with their physical and mental health. **(Bajracharya, Maharjanr and Lawot, 2025; Labrague et ai., 2025).**

Mental health is a vital aspect of overall health that is frequently disregarded since other health-related aspect are prioritized, particularly for undergraduate nursing students. They are susceptible to stress and mental health conditions like anxiety and depression, for a variety of personal, cultural, societal, and environmental causes. Demanding, competitive, and stressful cultures at nursing institutions can increase this risk and frequently result in future nurses' poor mental health. As a result, nursing institutions must listen to students' opinions and take action to support their mental health **(Fariha, Uddin and Flatt, 2024).**

Overall, nurses, especially psychiatric nurses, are essential to support the mental health of young people through providing early awareness, instructions, and easily accessible emotional support **(Arnold and Baker, 2018)**. They must be ready, sympathetically aware, and equipped to assist in resolving this mental health issue. They should also receive training in evaluating the traits and conduct of those people, as well as

their everyday activities, interpersonal skills, low self-esteem, motivation, and hope **(Arya and Rentala, 2022).**

Significance of the Study

Nursing education is a demanding and naturally stressful field of study. Stress in student nurses is aggravated by the clinical requirements of courses that are essential for the development and acquisition of basic nursing competencies, academic activities such as exams, clinical reports, and research projects, and strained relationships with nursing faculty members **(Labrague et al., 2018).** In Egypt, the prevalence of academic stress among nursing students is 81.4% **(Mohammed, El-sayed and Attia, 2024)**. In the same vein, nursing students' mental health is crucial because it enables them to feel good, perform well, and consistently deliver high-quality care. In order to effectively manage a variety of stressors and preserve their mental health, nursing students must strengthen a variety of constructive coping mechanisms.

Aim of the study

The aim of this study was to assess the effect of cognitive emotional regulation strategies, and academic stress on mental health of nursing students.

Research questions

- What is the level of academic stress among nursing students?
- What is the level of mental health among nursing students?
- What is the relationship between cognitive emotional regulation strategies, and academic stress?
- What is the effect of cognitive emotional regulation strategies and academic stress on mental health among nursing students?

Subjects and methods

Research design

Across-sectional descriptive research design was utilized.

Study setting

The study was carried out at Technical Institute of Nursing at Zagazig University

Study subjects

A stratified random Sample composed of 300 nursing students selected from the from the previously described setting based on the following

Inclusion criteria

Both genders aged 18 to 20 years old, free from physical disabilities, medical or psychiatric comorbidity and willing to participate in the study.

Exclusion criteria

Students with psychiatric disorder and chronic disease

Tool for data collection

Tool I: Youth profile questionnaire.

A structured questionnaire was developed by the researcher to register all related demographic and characteristic data of the participants. It included i.e., age, gender, interests, hobbies, family information and number of friends while adopting the part of socioeconomic level was measured using (**El-Gilany, et al., 2012).**

Scoring system

To determine the socio-economic class of the nursing students, the overall rating of
the scale was varied from (0-54), Cut off point 50%. a score less than 50% was considered as a low socio-economic class, from 50-75 was regarded as middle class, and a score

of 75% or more was considered as a high social class.

Tool II: Cognitive Emotion Regulation Questionnaire - short version:

It was validated by **Garnefski and Kraaij (2006)** to measure cognitive ways of emotion regulation. It consists of nine subscales. The subscales are self-blame, other-blame, rumination, catastrophizing, putting into perspective, positive refocusing, positive reappraisal, acceptance, and planning and consist of 4 items for each subscale**.**

Scoring system

The response of nursing student to the Likert scale included five points, with 1 denoting "almost never" and 5 denoting "almost always." The individual responses were added up to determine the total scale scores and to create the composite score for each subscale, and the total scores range from (36-180), Cut off point 50%. The cognitive emotion regulation was high if the percent is 75% or more, moderate if from 50-75% and low if less than 50%.

Tool III: Academic Stress Scale

In order to gauge the degree of stress related to academic studying, Kim (1970) created and standardized the Academic Stress Scale questionnaire, which was accepted by **Phillips et al., (2020)**. Considering the viewpoints of the three panelists, the 40 items that made up the initial scale were trimmed to 25 components by eliminating objects that were too similar or unsuitable for the subjects.

Scoring system

Nursing students answered the scale utilizing a Likert scale with five points. The scale's overall score, which considered the sum of nursing students' responses, varied from 25 to 125. The cutoff point was 50%. Academic stress was classified as low if it was less than 50%, moderate if it was between 50 and 75 percent, and high if it was 75 percent or more.

Tool IV: Mental Health Scale (MCH-SF)

It was developed by **Keyes (2013)** to measure social, emotional, and psychological well-being. It has fourteen items, each of which stands for a different facet of wellbeing. It is scored on a six-point scale that indicates how frequently different well-being symptoms were experienced throughout the previous month.

Scoring system

Nursing students answered the scale using a six-point Likert scale, ranging from 1 (*never)* to 6 (*every day)*. The scale's overall score, which considered the sum of nursing students' responses, ranged from 14 to 84. The cutoff threshold was 50%. A percentage of 75% or higher was deemed to indicate a high mental health status, 50–75% a moderate one, and less than 50% a low one.

Content validity and reliability

Following the distribution of the instruments, a cover letter, and an explanation page detailing the goals of the study, three panels of experts reviewed them. Two assistant professors from Zagazig University's psychiatric and mental health nursing department and one assistant professor of community health nursing comprised the three expert panels. They revised the tools for clarity, relevance, applicability, comprehensiveness, and understanding.

Their recommendations were taken into consideration. The reliability of tools was tested by measuring their internal consistency. It demonstrated a good level of reliability with Cronbach's Alpha as preventive measures was 0.855 for

Cognitive emotional regulation strategies and Mental Health Questionnaire was 0.889. Excellent level of Academic stress was 0.918

Field work

Once permission was granted to proceed with the study, the researcher introduced herself to students, and the purpose of the study was explained; voluntary participation and confidentiality were ensured. The researcher met with students at the Technical Institute of Nursing who fulfilled the inclusion criteria. The researcher started the interview with the students individually using the data collection tools. The questionnaire was read and explained. Instructions were given to students to fill out the questionnaire. The researcher clarified any question to students if needed. The filled forms were revised to check their completeness to avoid any missing data.

From the pilot study results, it was found that the average time to fill in all tools is 30-45 minutes. Data was collected two days per week (Monday and Wednesday). The questionnaire sheet was distributed during break time and between lectures in classrooms or at the end of the day. The data collection phase of the study took three months, from the start of October 2024 to the end of December,2024.

Pilot study

At the Technical Institute of Nursing, pilot study was conducted on a sample of thirty nursing students in the first and second university grades. These students made up around 10% of the estimated total sample size and were incorporated into the total number of subjects to ensure the comprehensiveness and clarity of the instrument.

Administration and ethical consideration

First, with the code M.D.ZU.NUR/218/10/6/2024, The study's proposal was accepted by the Postgraduate and Research Ethics Committee (REC) of the Zagazig University Faculty of Nursing. Before beginning any of the study's activities, the director of Zagazig University's technical institute of nursing received an official letter outlining the study's purpose. Each participant provided their informed consent after being fully informed of the purpose of the study. When completing the questionnaire, participants were given the option to leave the study at any moment and were guaranteed that their information would be kept private and used exclusively for research.

Statistical analysis

Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 25 were used to perform the statistical analysis of the data. Frequencies and percentages for categorical data, as well as the arithmetic mean (X) and standard deviation (SD) for quantitative data, were used to display the data. The chi-square test and P-value were used to compare qualitative variables and determine whether two variables were associated. The correlation between the variables under study was tested using the correlation coefficient test (r). Linear regression model was used to analysis of the effect of cognitive emotional regulation strategies and academic stress on mental health. Reliability of the study tools was done using Cronbach's Alpha. Statistical Significance was considered at P-value < 0.05 Significant (S)

Results

Table (1) reveals that 49.0% of the studied nursing students were at the

age of 18 years old with mean 18.59±0.63. Also, 73.7% of them were females, 66.6% of them were residing in rural areas and 87.7% of them were single. Moreover, 15.7% of them were working with 42.6% of them were working as workers. Regarding parents' education, 52.3% of the studied students' fathers and 55.0% of their mother had secondary education (diploma). As for father/mother occupation, 89.7% of their fathers were working, 49.8% of them were workers. Likewise, 21.7% of their mothers were working, 90.8% of them were workers.

Table (2) demonstrates that 56.0% of the studied nursing students were at first year. Considering the physical activity, 25.3% of the studied nursing students were practicing sports with 67.1% of them were practicing football. In addition, 33.7% of the studied nursing students had a talent, 56.4% of them preferred reading. Regarding friends and living conditions, 39.0% of them had four or more close friends and 89.7% of them were living with both parents.

Figure (1) shows that (59.3%) of studied nursing students were in the middle class. meanwhile, only 4.7% were from very low socio-economic level.

Table (3) reveals that, 56.7% of the studied nursing students had high level of academic stress with the mean score of (81.39±19.36). While,15.0% of them had poor level of mental health status with the mean score of (47.48±13.68).

Table (4) reveals that, total cognitive emotional regulation strategies among studied nursing students were 66,6%, such as many had moderate level compared with 12,3% were low with a mean score of 119.62±15.89. Also, displays that 53,0% of them had a moderate adaptive strategy compared with 6,3% had low adaptive strategy with mean score of 71.20 ±10.54. while, 71,0% of them had moderate maladaptive strategies compared with 9.7% had high maladaptive strategies with mean score of 48.47 ± 8.90.

Table (5) demonstrates that a significantly substantial positive correlation was found between their score of total cognitive emotional regulation and mental health (r= 0.911). Moreover, there were highly statistically significant negative correlation between their score of total academic stress and cognitive emotional regulation (r= -0.874) and mental health (r= -0.935).

The result of **table (6)** Demonstrates that nursing students' cognitive emotional regulation strategies was a highly statistically significant positive effect on mental health status.

Table (7) Demonstrates that nursing students' academic stress was a highly statistically significant negative effect on mental health status

Discussion

Globally, there is worry about students' mental health. Students at the tertiary level deal with a variety of stressors, such as academic stress brought on by periodic curriculum and exam system modifications. Throughout their academic careers, nursing students encounter demands and stressors that can significantly impair their mental and general well-being **(Akter and Barua, 2025).** Nursing students can effectively manage the high levels of stress and anxiety that are frequently a part of their demanding clinical placements and academic pursuits by using cognitive emotion regulation strategies, which are mental processes an individual use to cope with a

distressing event **(Lee and Jang 2021)**.

Regarding Cognitive emotional regulation strategies

The current study's results showed that two-thirds of students had a moderate level in cognitive emotion regulation strategies. This might be because of the demanding nature of nursing education and nursing students experience significant academic and clinical stressors that impact their emotional regulation, including intense coursework, clinical rotations, and high-pressure learning environments, challenges their ability to develop and maintain consistent emotional regulation strategies **(Lavoie-Tremblay et al., 2022).**

This result was to some extent in harmony with the study of (**Li et al., 2024)** in China, which clarified that total cognitive emotion regulation of students' scores were at moderate level. Also, the findings of this research were in line with a prior study executed by **Weidi and Jee Ching (2023)**, which shown that about half of the students always used cognitive emotion regulation. The results of the current study revealed that more than half of students possessed a moderate adaptive strategy and two-thirds of them had a moderate maladaptive strategy. This study result was in line with the research of **Ghattas and El-Ashry (2024)** which revealed that more than half of student had Moderate level of an adaptive cognitive emotion regulation and more than three-fourths of them had moderate level of a maladaptive cognitive emotion regulation.

Regarding academic stress

The results of the current study revealed that more than half of student had high level of academic stress. This might be due to heavy course load, students must manage multiple complex medical courses simultaneously, continuous assessments, rigorous testing and evaluation methods. Also, clinical practice demands and long hours in hospital settings while maintaining academic studies need to apply theoretical knowledge in real patient care situations, responsibility for patient safety and wellbeing during training and Fear of making mistakes in clinical settings. Moreover, Pressure to maintain high Grade Point Average (GPA) for future opportunities. The findings of this study were consistent with a previous study performed by **Ali and El-Sherbini, (2018**) in Egypt**,** which revealed that more than three-quarters of the students experiencing a significant academic stress This mostly has to do with patient care, tasks, and workload. Conversely, study performed by **Mohamed et al, (2024); Kapali, Neupane and Panta, (2019),** which results showed that over half of nursing students experienced moderate stress.

Regarding mental health

The findings of the present study were that**,** more than half of students have a moderate level of mental health status. This might be due to academic stress and limited time for relaxation and hobbies, as well as irregular sleep patterns, poor eating habits, reduced physical activity time due to busy schedules affect mental health of students. In addition, limited mental health education, stigma around seeking help and lack of awareness about available resource **(Vaidya, 2025).** This study result was congruent with **Solhi et al. (2024)** in Iran, who showed that almost 50% of individuals had moderate mental health. This study result agreed with the study of **Córdova Olivera et al., (2023)** in Bolivia which, revealed that nearly half of students had a moderate

level of Mental Health. Also, **Hasanah et al., (2022)** in Negeri, who concluded that the students' average mental health fell into the moderate range. Conversely, a study conducted by **Hu et al., (2023)** in Chin, which found that nearly three-fourths of student had poor mental health and it was closely related to with gender, residential locations and parents' education.

Correlation between cognitive emotional regulation, academic stress and mental health among nursing students

Firstly, there was a statistically significant positive correlation between cognitive emotional regulation strategies and mental health. This might be due to cognitive emotional regulation are critical factors influencing mental health, particularly in high-stress environments. Cognitive emotion regulation strategies help students to reinterpret negative emotions, leading to better emotional outcomes **(Razak et al., 2025).**

The multiple linear regression model was in favor of these findings, which detected that nursing students' cognitive emotional regulation strategies was a highly statistically significant positive effect on mental health status. The outcome was in harmony with the study of **Zagaria et al., (2023)** in Italy, which revealed that the relationship between mental health and cognitive emotional regulation strategies was statistically significant. Similarly, **Arrivillaga et al., (2023); Sakakibara and Kitahara, (2016)** found that there was a positive relationship between cognitive emotion regulation and mental health status of adolescent.

Secondly, A highly statistically significant negative connection was found between academic stress and cognitive emotional regulation, perhaps this is due to an effective cognitive emotional regulation strategy can act as buffers against academic stress. When academic stress is high, it can impair executive function needed for emotional regulation, lead to cognitive overload and make it harder to reappraise situations objectively and student may find it challenging to implement these effective strategies **(Ukaegbu and Ekpenyong, 2025).**

In the same line study conducted by **Xu, Jaffri, And Yang., (2024**), which suggested that there was a negative relationship between total academic stress and cognitive emotional regulation strategies. Also, study conducted by **Iuga and David, (2024),** which revealed that that there was a negative relationship between total academic stress and cognitive emotional regulation strategies.

In contrast the result of **Chellamuthu, and Venkatachalam, (2020),** who revealed that Students' academic stress and cognitive emotion regulation strategies were significantly correlated.

Finally, A highly statistically significant negative connection was found between academic stress and mental health. This could be because academic stress acts as a significant psychological stressor that can Increase anxiety and depressive symptoms, disrupt sleep patterns essential for mental wellbeing and led to burnout and emotional exhaustion. This can impair the capacity of students to concentrate, remember information, and succeed academically **(Kaufeldt, 2021).**

In support of these findings, the present study articulated in a multiple linear regression model that nursing students' academic stress was a highly statistically significant negative effect

on mental health status. The current study results conformed to the result of a study conducted in China by **Byun and Yang (2020),** which revealed mental health was negatively correlated with academic stress. Also, **Chen, (2024),** who revealed that there were a negative association between academic stress and mental health. A study Performed in Sri Lanka by **Fazly, and Kulaweera, (2023),** which revealed that academic stress negatively impacts students' mental health.

In contrast, study performed by **Koppenborg et al., (2024),** showed that Perceived academic stress was positively related to anxiety and depression. Also, study carried out in United States by **Barbayannis et al., (2022),** which revealed that mental health and perceived academic stress are positively correlated.

Conclusion

Based on the results of the study and the answer to the research question, more than two-thirds of the nursing students in the study exhibited a moderate degree of cognitive emotional regulation strategies. However, more than half of them had an average level of mental health, and over half of them experienced significant levels of academic stress. Additionally, a statistically significant positive relation was found between mental health and cognitive emotional regulation. Academic stress, on the other hand, had a highly statistically significant detrimental impact on mental health.

Recommendations

Based on findings, the study recommended

- Nursing educators need to keep helping nursing students develop cognitive emotion regulation abilities and properly mentor them so they can employ constructive emotion control techniques in their coursework.
- Design and implement a stress management program for nursing students that emphasize stress coping mechanism.
- Future research. It is advised that longitudinal designs be used in order to assess how students' emotional responses change over the course of technical institute (beginning, middle, and end of practice).

Authors' contributions

A.K.M; suggested the research concept, drafted the proposal, performed data collection and analysis, and drafted the manuscript. B.E.S. and M.M.E; contributed to the study by revising and assisting in developing the research methodology, data analysis and interpretation, discussion, comparison of results with recent literatures in the study field, writing, editing and summarizing of the manuscript. All parts in the thesis have been revised and approved by all authors.

Acknowledgment

The authors are grateful to the Technical Institute of Nursing's directors for granting permission to gather data and the students who willingly took part in the study and contributed insightful opinions**.**

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

Funding source

The author received no financial support for the research, authorship, and/or publication of this article.

Table (1): Demographic characteristics of studied nursing students in the study sample (n=300)

Demographic data	No.	%
Age		
18 years	**147**	**49.0**
19 years	128	42.7
20 years	25	8.3
18.59±0.63	**Mean ± SD**	
Gender		
Male	79	26.3
Female	**221**	**73.7**
Residence		
Rural	**198**	**66.0**
Urban	102	34.0
Marital status		
Single	**263**	**87.7**
In a relationship	27	9.0
Married	10	3.3
Working		
Yes	**47**	**15.7**
No	253	84.3
If working, what is the job? (n=47)		
Worker	**20**	**42.6**
Nursing training	14	29.8
Free business	13	27.6
Father educational level		
Illiterate	13	4.3
Reads or write	26	8.7
Basic education (primary, preparatory)	27	9.0
Secondary education (diploma)	**157**	**52.3**
High education	77	25.7
Mother educational level		
Illiterate	21	7.0
Reads or write	24	8.0
Basic education (primary, preparatory)	26	8.7
Secondary education (diploma)	**165**	**55.0**
High education	64	21.3
Father job		
Work	**269**	**89.7**
Not Work	31	10.3
If working, what is the job? (n=269)		
Worker	93	34.6
Employee	**134**	**49.8**

Free business	42	15.6
Mother job		
Housewife	**65**	**21.7**
Work	235	78.3
If working, what is the job? (n=65)		
Employee	**59**	**90.8**
Free business	6	9.2

Table (2): Youth characteristics of the studied nursing students (n=300)

Youth characteristics	No.	%
Academic year		
First	**168**	**56.0**
Second	132	44.0
Practice any sports		
Yes	**76**	**25.3**
No	224	74.7
If yes, what is the sports? (n=76)		
Football	**51**	**67.1**
GYM	25	32.9
Have a talent		
Yes	**101**	**33.7**
No	199	66.3
If yes, what is a talent? (n=101)		
Reading	**57**	**56.4**
Cooking	4	4.0
Singing	20	19.8
Drawing	20	19.8
Number of close friends		
None	33	11.0
One	45	15.0
2-3	105	35.0
≥4	**117**	**39.0**
Living condition		
Both parents	**269**	**89.7**
One parent	31	10.3
A relative	0	0.0
If the answer is one of the parents, why is that? (n=31)		
Travel	2	6.4
Separation	7	22.6
Death	22	71.0

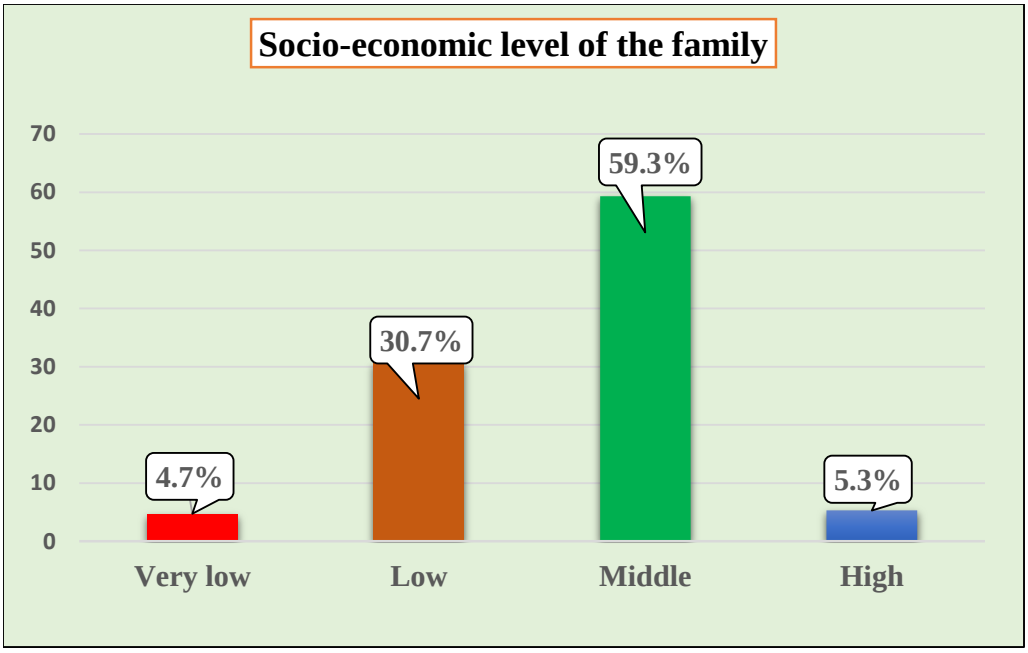

Figure (1): Socio-economic level of the studied nursing students in the study (n=300)

Table (3): Percent of academic stress and mental health status level among the studied nursing students (n=300)

Variables		No.	%
Academic stress	**High**	170	56.7
	Moderate	95	31.7
	Low	35	11.6
	Mean ± SD	**81.39±19.36**	
Mental health status	**Good**	90	30.0
	Average	165	55.0
	Poor	45	15.0
	Mean ± SD	**47.48±13.68**	
	Mean ± SD	**71.20 ± 10.54**	

SD: *Standard deviation*

Table (4): Percent of cognitive emotion regulation strategies scale of studied nursing students (n=300)

Domains	High		Moderate		Low		Mean ± SD
	No.	%	No.	%	No.	%	
Adaptive cognitive emotion regulation strategies							
Acceptance	70	23.3	155	51.7	75	25.0	**12.97±3.51**
Positive refocusing	114	38.0	139	46.3	47	15.7	**13.48±3.88**
Refocus on planning	191	63.7	86	28.7	23	7.6	**15.92±3.06**
Positive reappraisal	151	50.3	141	47.0	8	2.7	**15.72±2.71**
Putting into perspective	79	26.3	151	50.3	70	23.4	**13.10±3.14**
Total adaptive strategies score	122	40.7	159	53.0	19	6.3	**71.20±10.54**
Maladaptive cognitive emotion regulation strategies							
Self-blame	31	10.3	175	58.4	94	31.3	**11.98±2.84**
Rumination	123	41.0	144	48.0	33	11.0	**14.89±3.27**
Catastrophizing	41	13.6	158	52.7	101	33.7	**11.76±3.37**
Other blame	20	6.7	117	39.0	163	54.3	**9.85±3.81**
Total maladaptive strategies score	29	9.7	213	71.0	58	19.3	**48.47±8.90**
Total cognitive emotional regulation strategies score	65	21.7	198	66.0	37	12.3	**119.62±15.89**

SD: *Standard deviation*

Table (5): Correlation matrix between cognitive emotional regulation, academic stress and mental health among studied nursing students (n=300)

Variables		Cognitive emotional regulation	Academic stress
Academic stress	**R** **P**	-0.874- 0.000**	
Mental health	**R** **P**	0.911 0.000**	-0.935- 0.000**

Table (6): Multiple linear regression analysis of the effect of cognitive emotional regulation strategies on mental health among the studied nursing students (n=300)

Variable	Unstandardized Coefficients		Standardized Coefficients	T	P. value	95% Confidence interval	
	B	Std. Error	Beta			Lower	Upper
Constant	-46.390-	2.479		-18.71-	0.000**	-51.269-	-41.510-

Total cognitive emotional regulation strategies	0.785	0.021	0.911	38.192	0.000**	.744	.825
Model Summary							
Model	**R**	**R^2**	**Adjusted R^2**		**Std. Error of the Estimate**		
1	0.911	0.830	0.830		5.64809		
ANOVA							
Model	**Df.**		**F**		**P. value**		
Regression	1		1458.59		0.000**		

Dependent Variable: *Total mental health score.* ***B=****Unstandardized Coefficients.*
Beta*=Standardized Coefficients.* ***t:*** *Independent t-test.* ***R^2*** *= Coefficient*

Table (7): Multiple linear regression analysis of the effect of academic stress on mental health among the studied nursing students (n=300).

Variable	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**P. value**	**95% Confidence interval**	
	B	**Std. Error**	**Beta**			**Lower**	**Upper**
Constant	101.293	1.212		83.541	0.000**	98.907	103.679
Total academic stress score	-0.661-	0.014	-.0935-	-45.61-	0.000**	-.690-	-.633-
Model Summary							
Model	**R**		**R^2**	**Adjusted R^2**		**Std. Error of the Estimate**	
1	0.935		0.875	0.874		4.85340	
ANOVA							
Model	**Df.**			**F**		**P. value**	
Regression	1			2080.9		0.000**	

Dependent Variable: *Total mental health score.* ***B=****Unstandardized Coefficients.* ***Beta****=Standardized Coefficients.*
t: *Independent t-test.* ***R^2*** *= Coefficient of multiple. **Highly significant at p ‹ 0.01.*

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