Coping Strategies Related to Academic Stress Among Nursing and Engineering Students at Selected Colleges of City: a Comparative Study

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***Abstract*—INTRODUCTION Coping is an important process that helps us manage difficult situations. It involves using different behavioral and cognitive approaches to find relief or consolation in stressful situations. Coping strategies refer to a person's behavioral choices in response to a stressor. It's generally considered healthy to have adaptive behaviors, which are positive choices made when dealing with stress. One such behavior is meditation, which many people use before starting their day or after a hard day at work. Academic stress is a psychological distress that arises from the anticipated academic challenges or the possibility of academic failure. It manifests in various aspects of a student's environment, including college, home, peer relations, and neighbourhoodsThe four components of academic stress that are commonly identifiable in students are academic frustration, conflict, anxiety, and pressure. By identifying effective coping strategies, the research can inform the development of targeted interventions to support students' mental health and academic success. The study is significant as it contributes to the field of coping strategies research, particularly in the context of nursing and engineering education. OBJECTIVES the objectives of the study were to study the level of coping strategies related to academic stress among Nursing students. To study the level of coping strategies related to academic stress among Engineering students. To study the significance difference related to academic stress between Nursing and Engineering students. To study if there is any association between academic course and coping strategies of students. To study if there is any association between coping strategies related to Academic stress among undergraduate students with selected demographic variable. Result The study's findings highlighted key demographic and psychological differences between nursing and engineering students. A significant gender disparity was observed, with 85% of nursing students being female, while engineering students showed a more balanced gender distribution. Age-wise, 79% of engineering students were 18 years old, whereas nursing students exhibited a broader age range, suggesting a mix of traditional and non-traditional learners. Most participants (67%) were from urban areas. Differences in family structure were noted, with 63% of nursing students from nuclear families and 41% of engineering students from joint families, possibly reflecting cultural variations. Family income levels, however, did not differ significantly between the groups. In terms of academic stress, nursing students reported slightly higher stress levels (mean score 101.8) compared to engineering students (mean score 93.95), though this difference was not statistically significant ($p = 0.052$). Notably, engineering students demonstrated significantly more effective coping strategies (mean score 33.3) than nursing students (mean score 27.95), with the difference being highly significant ($p < 0.001$). Despite these differences, a substantial 92% of all students reported experiencing academic stress, underscoring its pervasive nature across disciplines.There is significance in age, percentage of previous year, Course of Education**

***Index Terms*—COPING STRATEGIES, ACADEMIC STRESS NURSING AND ENGINEERING**

I. INTRODUCTION

Stress is a complex phenomenon that can manifest as emotional or physical tension. It is triggered by a variety of events or thoughts that cause us to feel anxious, frustrated, or nervous. Our body's response to stress is designed to help us cope with challenges or demands, and in many cases, it can be beneficial. For example, acute stress can help us manage dangerous situations or perform well under pressure. However, if stress persists for an extended period, it can have a detrimental effect on our mental and physical well-

being. Chronic] stress is particularly concerning, as it is a prolonged state of stress that can occur due to ongoing problems such as financial difficulties, relationship issues, or work-related stress. Over time, chronic stress can lead to health problems such as weakened immunity, high blood pressure, anxiety, and depression. It's important to recognize the signs of stress and take proactive steps to manage it before it becomes a serious health concern. Coping strategies refer to a person's behavioral choices in response to a stressor. It's generally considered healthy to have adaptive behaviors, which are positive choices made when dealing with stress. One such behavior is meditation, which many people use before starting their day or after a hard day at work. On the other hand, maladaptive behaviors are negative and can worsen the stressor. For instance, if someone worries about weight gain, they may cope by either binge eating or dieting inappropriately, which can make them more self-conscious and worried, perpetuating the cycle of negativity. Unhealthy coping skills include self-criticism, retaliation, drug or alcohol abuse, and overeating or undereating. On the other hand, healthy coping skills can have a positive impact and include prayer or meditation, taking a vacation, being flexible, positive self-talk, and brainstorming. It's important to have healthy coping skills to manage stress effectively. The need for a study on coping strategies among engineering and nursing students arises from the unique academic and practical challenges faced by students in these disciplines. The rigorous and demanding nature of these programs can contribute to elevated stress levels, leading to negative impacts on students' mental health and academic performance. Therefore, there is a need to understand how students cope with the challenges posed by these programs and develop targeted interventions and support systems to enhance their academic experience. The study aims to explore the coping strategies used by nursing and engineering students to manage academic stress and the impact of these strategies on their mental health and academic performance. Furthermore, the research has practical implications for educational institutions, policymakers, and mental health professionals who seek to enhance students' academic experience and promote their mental health and wellbeing. In summary, the study on coping strategies among engineering and nursing students is needed to address the challenges faced by students in these disciplines and develop effective interventions to support their mental health and academic success.

II. THE OBJECTIVES OF THE STUDY

Primary objective

1. To compare the level of coping strategies related to academic stress among nursing and engineering students.

Secondary objective

1. To study the level of coping strategies related to academic stress among Nursing students.
2. To study the level of coping strategies related to academic stress among Engineering students.
3. To study the significance difference related to academic stress between Nursing and Engineering students.
4. To study if there is any association between academic course and coping strategies of students.
5. To study if there is any association between coping strategies related to Academic stress among undergraduate students with selected demographic variable.

III. MATERIALS AND METHOD

An Quantitative approach will be used to assess the coping strategies related to academic stress among nursing and engineering student at selected colleges of city. This study employs comparative descriptive research design. The study was carried out in Selected Nursing & Engineering Colleges of the city. The sample of present study consists of 100 B.sc nursing & 100 B.E The pilot study was conducted on 15 subjects (B.sc Nursing students)& 15 subjects (B.E Engineering students).the permission was obtained from the institutional ethical committee. Data collection tool was Demographic Variables and Academic Stress Scale throught which data was analyzed.

IV. STATSTICAL ANALYSIS

The data was analyzed by descriptive and inferential statistics. Demographic data was analyzed using frequency and percentage Data collection tool was Demographic Variables and Academic Stress Scale throught which data was analyzed. The data was

collected with the help of structured tool for a period of 28 days. A Random sampling technique was used for the study. . Participants include 200 undergraduate students (100 from nursing and 100 from engineering) selected through simple random sampling in city. The association and demographic variables was analyzed by using t test and chi square test.

Result *Table 1.1 :- Comparative assessment of Age (Nursing vs Engineering) using Chi- Square Analysis.*

Assessing	Age	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Age (in years)	18 years	Frequency	26	79	105	57.55	<0.001
		%	26.0%	79.0%	52.5%		
	19 years	Frequency	41	15	56		
		%	41.0%	15.0%	28.0%		
	20 years	Frequency	20	4	24		
		%	20.0%	4.0%	12.0%		
	22 and Above	Frequency	13	2	15		
		%	13.0%	2.0%	7.5%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.2 :- Comparative assessment of Gender (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Gender	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Gender	Male	Frequency	15	49	64	28.137	<0.001
		%	15.0%	49.0%	32.0%		
	Female	Frequency	85	51	136		
		%	85.0%	51.0%	68.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.3 :- Comparative assessment of Occupation of Father (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Occupation	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Occupation of Father	Self employed	Frequency	23	19	42	0.941	0.816
		%	23.0%	19.0%	21.0%		
	Private	Frequency	30	33	63		
		%	30.0%	33.0%	31.5%		
	Government Employee	Frequency	11	14	25		
		%	11.0%	14.0%	12.5%		
	other	Frequency	36	34	70		
		%	36.0%	34.0%	35.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.4 :- Comparative assessment of Residency (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Residency	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Residency	Urban	Frequency	59	75	134	5.789	0.016
		%	59.0%	75.0%	67.0%		
	Rural	Frequency	41	25	66		
		%	41.0%	25.0%	33.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.5 :- Comparative assessment of Type of Family (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Family	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Type of Family	Nuclear	Frequency	63	41	104	10.719	0.013
		%	63.0%	41.0%	52.0%		
	Joint	Frequency	24	41	65		
		%	24.0%	41.0%	32.5%		
	Single Parent	Frequency	11	17	28		
		%	11.0%	17.0%	14.0%		
	Others	Frequency	2	1	3		
		%	2.0%	1.0%	1.5%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.6 :- Comparative assessment of Family Income (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Income	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Family Income	Below 50,000	Frequency	56	49	105	1.115	0.774
		%	56.0%	49.0%	52.5%		
	50,001 to 100,000	Frequency	32	37	69		
		%	32.0%	37.0%	34.5%		
	100,001 to 500,000	Frequency	6	6	12		
		%	6.0%	6.0%	6.0%		
	500,001 or More	Frequency	6	8	14		
		%	6.0%	8.0%	7.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.7 :- Comparative assessment of Percentage of Previous Year (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Percent	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Percentage of Previous Year	35%	Frequency	1	1	2	18.759	<0.001
		%	1.0%	1.0%	1.0%		
	36% -50%	Frequency	14	1	15		
		%	14.0%	1.0%	7.5%		
	51% -75%	Frequency	51	76	127		
		%	51.0%	76.0%	63.5%		
	More than 75%	Frequency	34	22	56		
		%	34.0%	22.0%	28.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.8 :- Comparative assessment of Course of Education (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Course	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Course of Education	Nursing	Frequency	100	0	100	200.01	<0.001
		%	100.0%	0.0%	50.0%		
	Enginee-ring	Frequency	0	100	100		
		%	0.0%	100.0%	50.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

Table 1.9: - Comparative assessment of feel Academic stress (Nursing vs Engineering) using Chi- Square Analysis.

Assessing	Stress	Frequency	Group		Total	Chi Sq	P-value
			Nursing	Engineering			
Have you ever feel Academic stress	Yes	Frequency	93	91	184	0.272	0.602
		%	93.0%	91.0%	92.0%		
	No	Frequency	7	9	16		
		%	7.0%	9.0%	8.0%		
Total		Frequency	100	100	200		
		%	100.0%	100.0%	100.0%		

SECTION B ASSESSMENT OF THE LEVEL OF COPING STRATEGIES AMONG NURSING AND ENGINEERING STUDENTS IN SELECTED COLLEGES OF CITY.

Table 2.1: Assessment with level of Coping Strategies among nursing and engineering students.

Assessing	Course	N	Mean	Std. Deviation	Std. Error Mean	df	T- test	P-value
Coping Strategies	Nursing	100	27.9500	6.40450	0.64045	198	-6.357	<0.001
	Engineering	100	33.3000	5.45968	0.54597			

SECTION C TO STUDY THE SIGNIFICANCE DIFFERENCE RELATED TO 'ACADEMIC STRESS' BETWEEN NURSING AND ENGINEERING STUDENTS.

Table 3.1: To assess the significance difference related to academic stress between nursing and engineering students.

Assessing	Course	N	Mean	Std. Deviation	Std. Error Mean	df	T- test	P-value
Academic Stress	Nursing	100	101.8000	29.64197	2.96420	198	1.959	0.052
	Engineering	100	93.9500	26.97001	2.69700			

Section D: To Study the Association Between Academic Course and Coping Strategies of Students with Their Selected Demographic Variable. There Is Significance In Age, Percentage Of Previous Year, Course of Education.

V. CONCLUSION

In conclusion, the study found that Academic stress significantly impacts both nursing and engineering students, with nursing students experiencing somewhat higher levels of stress. Engineering students exhibit substantially better coping strategies than their nursing peers. Various demographic factors, including gender, age, and family background, may influence the coping mechanisms employed by students. There is a critical need for targeted interventions designed to enhance coping skills, particularly among nursing students, to better address the effects of academic stress.

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