

# ASSESSMENT OF LEVEL OF STRESS AND COPING BEHAVIORS STRATEGIES AMONG STUDENTS AT THE COLLEGE OF NURSING AT THE UNIVERSITY OF SULAIMANI



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## ABSTRACT

### *Background*

Stress is the emotional and physical strain caused by our response to pressure from the outside world. It is almost impossible to live without stress, but if the stress gets out of control, it may harm well-being, health, relationship and enjoyment of life. Students are subjected to different stressors such as the pressure of academics with an obligation to succeed, an uncertain future and difficulties of integrating into the system. Other ways of coping have been found to be more or less adaptive.

### *Objectives*

The general aim of the study is to assess the levels of stress among nursing students and how they cope with stressors at the College of Nursing at the University of Sulaimani.

### *Materials and Methods*

Data was collected from 85 nursing students. Nursing from all stages. A modified Perceived stress scale and brief coping inventory were used to collect data. SPSS version 21 with Chi-square and Fisher exact test for association was used for data analysis.

### *Results*

The study revealed that the majority of the sample (81.4%) had a moderate level of stress, while most of them (83.7%) used high levels of coping strategies.

### *Conclusion*

The study revealed a strong relationship between levels of stress and coping strategies used by the participants.

**Keywords:** *Assessment, Stress, Coping.*

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## INTRODUCTION

Stress is the body's reaction to any change that requires an adjustment or response, stress is a normal part of life that is impossible to live without some stress, but if stress gets out of control, it may harm health, relationship and enjoyment of life<sup>(1, 2)</sup>. Stress is a significant health hazard under any conditions and causes<sup>(3)</sup>. Most current definitions state that stress is the mental and physical response and adaptation by our bodies to the actual or perceived changes and challenges in our lives. It is a normal psychological and physical reaction to the ever-increasing demands of life. Surveys show that many Americans experience challenges with stress at some point during the year<sup>(4)</sup>. It can rob the body of needed nutrients, damage the cardiovascular system, raise blood pressure, increase the risk of cancer and diabetes, and dampen immune defences<sup>(5)</sup>.

Most current definitions state that stress is the mental and physical response and adaptation by our bodies to the actual or perceived changes and challenges in our lives<sup>(3)</sup>. Stress is not necessarily bad. Although events that cause prolonged negative stress, such as a natural disaster, can undermine health, positive yet stressful events can positively affect growth and well-being. Generally, positive stress is called eustress. Eustress presents the opportunity for personal growth and satisfaction and can improve health. It can energize, motivate, and raise when someone is down<sup>(6)</sup>. Events such as getting married, having a child, getting a promotion at work, or winning a major competition can give rise to the pleasurable rush associated with eustress.

According to a survey of college freshmen, college students are feeling more overwhelmed and stressed than fifteen years ago. More than 30% of all college freshmen report feeling overwhelmed - a great deal of the time. Thirty-eight per cent of college women report feeling frequently overwhelmed<sup>(7, 8)</sup>. Different ways of coping have been found to be more or less adaptive. In a meta-analysis, Bagcivan G et al. 2015<sup>(9)</sup> have compiled studies that examined the effects of various coping modes on several measures of adjustment to illness<sup>(10)</sup>.

Five coping strategies were identified that turned up as dimensions in factor analysis: (a) Seeking social integration, (b) rumination, (c) threat minimization, (d) turning to religion, and (e) seeking information. These factors were established as subscales of a psychometric inventory used in the study<sup>(10- 12)</sup>.

## METHODS

Before starting the study, formal administrative permission was obtained from the research ethics committee and the College of Medicine. A quantitative study and descriptive design were carried out from January 15<sup>th</sup> 2019 to February 5<sup>th</sup> 2019. The study was carried out at the College of Nursing at the University of Sulaimani. A non-probability, purposive sample size of (86) nursing students from all stages was selected from the College of Nursing at the University of Sulaimani. A modified questionnaire is used to achieve the objectives of the study. The Perceived Stress Scale (PSS) is a classic stress assessment instrument. While initially developed in 1983, this tool was then modified in 1994 by Sheldon Cohen.<sup>(13)</sup>

### **The score range of Level of Stress is:**

1.Scores ranging from 0-13 would be considered low stress.

2.Scores ranging from 14-26 would be considered moderate stress.

3.Scores ranging from 27-40 would be considered high perceived stress.

The brief cope inventory, which was developed by Carver (1997)<sup>(13)</sup>, was used to determine coping strategies used by the participants.

The data was collected through the utilization of the questionnaires (Kurdish version) and self-exam by the subjects (nursing students) at the college of nursing at the University of Sulaimani. The data was organized, coded, tabulated, and presented descriptively. Data were analyzed through the use of a statistical package for social science version 21 (SPSS.21).

The two statistical methods, chi-square and Fisher exact test were used to find an association between stress level and socio-demographical characteristics among the study sample.

## RESULTS

The findings were analyzed and presented systematically in tables that correspond with the study's objectives. From January to February of 2019, 86 nursing students participated in data collection from four stages of the college of nursing. The highest rate of participating students was (17-21 year) age group (69 students,

80.2%), while the lowest rate of participating students was (26 and more) age group, (4 students, 4.7%), Figure 1.

The rate of participating students for each stage in the nursing college was nearly equal, and nearly all participants were single (82 students, 95.3%), Table 1.

According to the study, the distribution of frequencies of stress is shown as follows:

The higher frequently questions were, “In the last course, how often have you felt that you were on top of things?” 45.3%, while the lowest frequently question was “how often have you been upset because of something that happened unexpectedly?” 1.2%, Table 2.

**Frequencies of Coping Strategies among the sample**

The study shows that: the higher frequencies used coping strategy was “I have been trying to find comfort in my religion or my spiritual beliefs.” 64% rated

as “used a lot”, while the lowest frequently coping strategies used were “I have been concentrating my efforts on doing something about the situation I am in and “I have been trying to come up with a strategy about what to do “1.2% rated as “not used at all”, Table 3.

**Overall Level of Stress and Coping strategies**

The study illustrated that most students have a moderate level of stress and use high coping strategies. Thus, the association between the level of stress and coping strategies was strong, Tables 4, 5.

Regarding the relationship between socio-demographic data and the overall stress level, the result shows no significant association between socio-demographic characteristics and the levels of stress among samples, Table 6. However, the study indicates a significant correlation between the levels of coping strategies and gender, Table 7.

**Table 1. Demographic characteristics of the study sample .**

<b>Variables</b>	<b>No.</b>	<b>%</b>
<b>Age</b>		
17-21	69	80.2
22-26	13	15.1
>26	4	4.7
<b>Total</b>	86	100
<b>Mean ±SD 20.0±3.28</b>		
<b>Gender</b>		
Male	30	34.9
Female	56	65.1
<b>Total</b>	86	100
<b>Marital status</b>		
Single	82	95.3
Married	4	4.7
<b>Total</b>	86	100
<b>Residency</b>		
Urban	28	32.6
Suburban	57	66.3
Rural	1	1.2
<b>Total</b>	86	100
<b>Financial status</b>		
Sufficient	0	0
Barley sufficient	61	70.9
Insufficient	25	29.1
<b>Total</b>	86	100
<b>Stage</b>		
1st	22	25.6
2nd	22	25.6
3rd	22	25.6
4th	20	23.3
<b>Total</b>	86	100

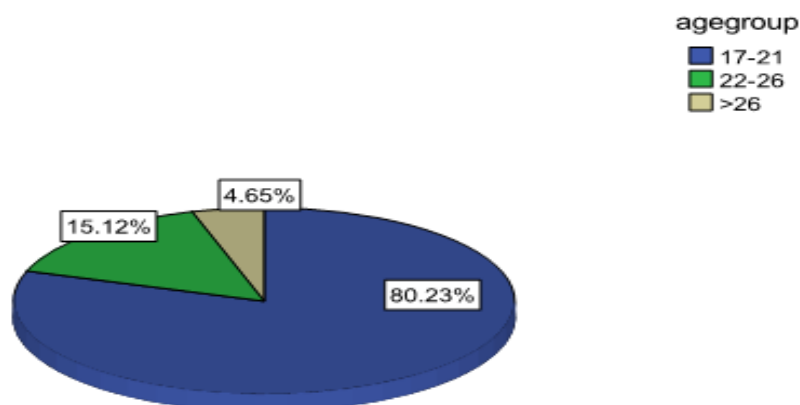


Figure 1. Distribution of Age group among the study sample.

Table 2. Distribution of frequencies of stress among the sample.

Variable	F (%)				
	Never	Almost Never	Some times	Fairly Often	Very Often
<b>1. In the last course, how often have you been upset because of something that happened unexpectedly</b>	1(1.2)	11(12.8)	38(44.2)	17(19.8)	19(22.1)
<b>2. How often have you felt that you were unable to control the important things in your life?</b>	12(14.0)	24(27.9)	26(30.2)	10(11.6)	14(16.3)
<b>3. How often have you felt nervous "stressed"?</b>	5(5.8)	15(17.4)	26(30.2)	20(23.3)	20(23.3)
<b>4. How often have you felt confident about your ability to handle your problems?</b>	1(1.2)	10(11.6)	19(22.1)	23(26.7)	33(38.4)
<b>5. How often have you felt that things were going your way in the last course?</b>	8(9.3)	24(27.9)	25(29.1)	18(20.9)	11(12.8)
<b>6. How often have you found that you could not cope with all the things you had to do?</b>	10(11.6)	31(36.0)	29(33.7)	10(11.6)	6(7.0)
<b>7. How often have you been able to control irritations in your life?</b>	4(4.7)	11(12.8)	33(38.4)	20(23.3)	18(20.9)
<b>8. How often have you felt that you were on top of things?</b>	5(5.8)	16(18.6)	39(45.3)	20(23.3)	6(7.0)
<b>9. How often have you been angered because of things that were outside of your control?</b>	4(4.7)	17(19.8)	27(31.4)	18(20.9)	20(23.3)
<b>10. How often have you felt difficulties were piling up so high that you could not overcome them?</b>	6(7.0)	25(29.1)	28(32.6)	12(14.0)	15(17.4)

Table 3. Frequencies of Coping Strategies among the sample.

Coping strategies	F (%)			
	Not used at all	Rarely used	Often used	Used a lot
1. I have been concentrating my efforts on doing something about the situation I'm in	1(1.2)	14(16.3)	38(44.2)	33(38.4)
2. Taking action to try to make the situation better.	1(1.2)	10(11.6)	26(30.2)	49(57.0)
3. Trying to develop a strategy about what to do.	1(1.2)	14(16.3)	38(44.2)	33(38.4)
4. Thinking hard about what steps to take.	3(3.5)	14(16.3)	27(31.4)	42(48.8)
5. Trying to see it in a different light to make it seem more positive.	3(3.5)	6(7.0)	37(43.0)	40(46.5)
6. Looking for something good about what is happening.	8(9.3)	15(17.4)	32(37.2)	31(36.0)
7. Accepting the reality of the fact that it has happened.	3(3.5)	11(12.8)	35(40.7)	37(43.0)
8. Trying to find comfort in my religion or my spiritual beliefs.	4(4.7)	10(11.6)	17(19.8)	55(64.0)
9. Receiving emotional support from others.	15(17.4)	17(19.8)	25(29.1)	29(33.7)
10. Receiving help and advice from other people.	5(5.8)	20(23.3)	28(32.6)	33(38.4)

Table 4. Overall Level of Stress and Coping strategies.

Overall Level of Stress	Level of Stress		Coping strategies	
	F	%	F	%
Low	2	2.3	0	0
Moderate	70	81.4	14	16.3
High	14	16.3	72	83.7
<b>Total</b>		<b>100</b>		<b>100</b>

Table 5. Comparison between both groups.

Both groups	Score of overall		
	N	Mean ± Standard Deviation	P-Value
Level of Stress	86	2.83±0.37	0.001
Coping strategy	86	2.13±0.41	HS

Table 6. Correlation between Socio-demographic characteristics and Overall level of stress.

Socio-demographic Characteristics		The overall level of stress						P-Value
		Low		Moderate		High		
		F	%	F	%	F	%	
<b>Age</b>	17-21	2	2.9	57	82.6	10	14.5	0.526** NS
	22-26	0	0	9	69.2	4	30.8	
	>26	0	0	4	100	0	0	
<b>Gender</b>	Male	1	3.3	27	90.0	2	6.7	0.228* NS
	Female	1	1.8	43	76.8	12	21.4	
<b>Marital status</b>	Single	2	2.4	66	80.5	14	17.1	0.639* NS
	Married	0	0	4	100	0	0	
<b>Residency</b>	Urban	0	0	25	89.3	3	10.7	0.177** NS
	Suburban	2	3.5	45	78.9	10	17.5	
	Rural	0	0	0	0	1	100	
<b>Financial status</b>	Sufficient	0	0	0	0	0	0	0.490* NS
	Barley sufficient	2	3.3	48	78.7	11	18.0	
	Insufficient	0	0	22	88.0	3	12.0	
<b>Stage</b>	1st	0	0	19	86.4	3	13.6	0.752* NS
	2nd	0	0	18	81.8	4	18.2	
	3rd	1	4.5	16	72.7	5	22.7	
	4th	1	5.0	17	85.0	2	10.0	

NS not significant    \*\* fisher exact test    \* chi-square

Table 7. Relationship between socio-demographic data and Overall level of coping strategy.

Socio-demographic Characteristics		The overall level of coping strategy						P-Value
		Low		Moderate		High		
		F	%	F	%	F	%	
<b>Age( Year)</b>	17-21	0	0	12	17.4	57	82.6	0.789* NS
	22-26	0	0	2	15.4	11	84.6	
	>26	0	0	0	0	4	100	
<b>Gender</b>	Male	0	0	9	30	21	70	0.016* S
	Female	0	0	5	8.9	51	91.1	
<b>Marital status</b>	Single	0	0	13	15.9	69	84.1	1.000* NS
	Married	0	0	1	25	3	75	
<b>Residency</b>	Urban	0	0	5	17.9	23	82.1	0.880* NS
	Suburban	0	0	9	15.8	48	84.2	
	Rural	0	0	0	0	1	100	
<b>Financial status</b>	Sufficient	0	0	0	0	0	0	0.749* NS
	Barley sufficient	0	0	9	14.8	52	85.2	
	Insufficient	0	0	5	20	20	80	
<b>Stage</b>	1st	0	0	7	31.8	15	68.2	0.061** NS
	2nd	0	0	2	9.1	20	90.9	
	3rd	0	0	1	4.5	21	95.5	
	4th	0	0	4	20	16	80	

S significant    NS not significant    \*\* fisher exact test    \* chi-square

## **DISCUSSION**

Socio-demographical findings of a study conducted in Nepal among nursing students are similar to the present study, especially in age groups marital status. Data represented in the Nepalese study show that out of 169 samples majority, 98.2% were age group, 17-21, majority, 98.2% were single <sup>(14)</sup>.

The findings of another study conducted in Bangalore, India, among first-year medical students of the government medical college in Bangalore revealed that the age group of 17-20 years answered the questionnaire and similar with the present study, while 141 (56.4%) males and 109 (43.6%) females participated in the study, which goes contract with the present study <sup>(15)</sup>.

Data in the Nepalese shows that out of 169 samples majority, 77.5 % of the students experienced moderate stress levels and at least 1.2% of the students experienced high-stress levels. These scores go similar to the present study in indicating the level of stress among nursing students <sup>(16)</sup>.

While Bangalore's study finding shows that 37 (14.8%) suffered low stress, a maximum number of students, 171 (68.4%), suffered from moderate stress and 42 (16.8%) high perceived stress, which supports the findings of the present study <sup>(16)</sup>.

However, a Cross-sectional study was conducted to assess stress among a Mansoura (Egypt) baccalaureate nursing student. Data were obtained from 373 students using a self-administered questionnaire. It contains sociodemographics, a list of possible stressors, perceived stress, and physical well-being factors. Results show a Prevalence of 40.2% high-stress level. Regarding experiencing stress, this study has been controverted by a study was carried out in 2011 to Analyze stress among higher secondary school students <sup>(17)</sup>. Also, another was carried out at the college of Mangaluru to assess the level of Teenage Stress among first-year B.Sc. nursing students. Its findings are contracted with the present study, the majority (63.75%) of samples exhibited a severe level of teenage stress, and a minor percentage of samples (36.25%) exhibited a moderate level of teenage stress <sup>(7)</sup>.

Likewise, findings of the Nepalese study show that there was no association between levels of Stress and socio-demographical characteristics. Similar to the present study, the findings of another study conducted in Ghana indicate no statistically significant

relationship in the reported levels of stress among male and female students. However, the Mangaluru revealed a significant association between level of stress and age monthly income, which goes into a contract with the present study.

However, there was no significant association between the level of stress and gender, supporting the present study's finding <sup>(7)</sup>.

In conclusion, all statistical analysis of socio-demographical characteristics of the students indicates that more than half of students are female and among the age group of 17-21 years. Nearly all of them are single, and more than half of them are from the suburban residential area, with two-thirds at barely-sufficient economic status. Moreover, most of the nursing students experienced moderate stress levels, and the majority of them had a high level of coping. There was a strong relationship between stress levels and coping strategies used by the participant. There was a significant relationship between the gender of the participants and the levels of coping strategies.

## **Recommendations**

Arrange workshops to beat stress along with lectures motivating positive lifestyle have become part of the academic curriculum; the ministry of higher education and lecturers have the central role in reducing stress and in coping with it.

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