

# Relationship Among Perceived Stress, Emotional Intelligence and Coping Strategies of Nursing Students: A Descriptive Correlational Approach

Prof Sonam Dubey<sup>1</sup>, Dr Sushmita Sil<sup>2</sup>, Dr Blessy Antony<sup>3</sup>

<sup>1</sup>Professor, Medical Surgical Nursing Dept., Smt R.D.Gardi Nurses Training Centre, Indore (M.P.)

<sup>2</sup>Principal, Mental Health Nursing Dept., Mitali Institute of Nursing, Balaghat (M.P.)

<sup>3</sup>Principal, Mental Health Nursing Dept., St. Francis College of Nursing, Indore (M.P.)

## Abstract

Nursing profession is known to be a noble but disciplined profession which involves delivery of health care to the society. Nursing students are vulnerable to stress due to the ever-changing nature of college life<sup>1</sup>. Stress during this period can result in several negative outcomes, such as poor academic performance,<sup>2</sup> elevated burnout levels,<sup>3</sup> and diminished personal well-being<sup>4</sup>. Increased level of stress supposed to influence the mind, physical health and academic functions of nursing students. In today's advance nursing practice, emotional intelligence is a concept that should be at main concern in this professional field, as it has the impending impact on the excellence of patient care and health care outcomes, critical thinking, decision-making and in general the comfort and security of committed nurses who are serving to the mankind<sup>5</sup>. Nursing students must be taught how to handle or cope with stress & it is their prospect to decide whether to use adaptive or maladaptive coping mechanisms. Lower stress levels were found to be associated with more competent, efficient and adaptive students in the nursing colleges/schools. Present study was conducted to assess & describe the Relationship among Perceived Stress, Emotional Intelligence and Coping Strategies of Nursing Students. A modular instructional plan was also prepared & distributed among all participants in a view to enhance their understanding about prevalent stressors, common coping strategies used to resolve the stress & techniques to develop emotional intelligence among them. Quantitative research approach & Non experimental research design (Descriptive Correlational) was selected. Non Probability Purposive Sampling technique was used. Results: The results revealed that in correlation among variables, correlation between perceived stress and emotional intelligence indicates Very low Negative and statistically Non-significant correlations ( $P > 0.05$ ). Correlation between emotional intelligence and coping strategies indicates Low but statistically Significant correlations ( $P < 0.05$ ). There was found to be significant association between perceived stress with the selected demographic variables ( $P < 0.05$ ) whereas there is no significant association was found between emotional intelligence, coping strategies and selected demographic variables of B.Sc.(N) students respectively ( $P > 0.05$ ). Satisfaction level of respondents towards the modular instructional plan shows that 48.4% were fairly satisfied and 46.8% were highly satisfied with the content of the material provided. As far as feasibility to implement the modular instructional plan is concerned, a higher proportion of 64.8% samples feel that it is highly feasible.

**Keywords:** Perceived stress, emotional intelligence, coping strategies, modular instructional plan, correlational research design

## 1. Introduction

Nursing profession is known to be a noble but disciplined profession which involves delivery of health care. It is a kind of profession which provides services oriented to maintain health and well-being of general population. Health indicators in form of many investigations highlights ill-effects of higher stress level among student nurses. Exposure with stressors continuously, generates a number of health threats for student nurses at a very early age including diabetes, hypertension and depression.<sup>6</sup> Stress not only creates impact on one's emotions but alters their coping skills too, and it gets changed. Coping is the ability of a person to deal with stressful conditions by doing some conscious efforts and altering/changing the thought process. Stress not only creates impact on one's emotions but alters their coping skills too, and it gets changed. Coping is the ability of a person to deal with stressful conditions by doing some conscious efforts and altering/changing the thought process.<sup>7</sup> The capacity to interpret the feelings of other people is at the heart of emotional intelligence (EI). Emotionally intelligent nurses are able to bring their own emotions under control before visiting patients. This allows them to avoid letting stress interfere with the care they provide or their relationships with patients and the people closest to them.<sup>8</sup> Findings of meta-analysis conducted by Michelangelo, (2015)<sup>9</sup> shows 100% favorable outcome regarding the effectiveness of EI in improving the skills required for nurses and student nurses, it should not be ignored when drawn from 395 diverse research studies. At the end, it was said that emotional intelligence training and education should be added in nursing curriculum and practiced by all the nurses for their peaceful future endeavors. Holston & Taylor (2016)<sup>10</sup>, done longitudinal research study to assess nursing students' degree of emotional intelligence during their last 2 years in a B.Sc. Nursing program. By convenient sampling they collected data 03 times from 32 nursing students. A number of aspects of emotional intelligence were suggestively affected by time. A considerable increase can be seen in emotional self-awareness, problem solving and assertiveness with a considerable decline in impulse control, happiness. The degree of emotional intelligence was same in nursing students during last 2 years of course and they completed their degree with moderate-low emotional intelligence, which shows nursing students are not fully prepared emotionally for working in stressful and ever challenging nursing workforce at clinical area. Therefore it was recommended that emotional intelligence building from very initial stage in nursing curricula should be planned and maintained throughout 4 years of course so that we can build and train emotionally strong and competent nurses. Kumar, Avinash (2016)<sup>11</sup> done one research study with the objective to assess the association between EI and coping among nursing students and recognize the areas where more concern is needed. 150 nursing students were selected from a nursing college from Pune city, India. For collecting data related to demographics and life style factors a self-administered questionnaire was used. According to findings of this research work it can be seen that all the samples had some sort of emotional intelligence within them but it is also very important constrain that this EI should also flow into them when they independently work in clinical settings or in any educational institution where they will confined with day today stressors. Also the institutions also organize programs periodically where they can find the tricks and skills to maintain EI skills forever and they can teach the same to their patients and family members as well. Students less effective communication skills, inability to provide proper nursing care and excessive assignment work found to be the most important and main stressors in nursing students' life. Participants in the survey identified problem resolution and a positive outlook on life as the most useful

coping mechanisms. The results shows that if nursing students knows their stressors and have the ability to use proper coping strategies, it becomes very easy for them to be confident and convert themselves as good, cheerful and successful nurse who can provide comprehensive care to her patients. Students with low EI have a greater risk of developing health injurious activities due to stress, developing many psychological disturbances as well.<sup>12</sup>

## 2. Materials and Methods

### PROBLEM STATEMENT:

**“ A Descriptive Correlational Study to Assess the Relationship among Perceived stress, Emotional intelligence and Coping strategies of Nursing Students at selected Nursing colleges of Indore in the year”**

### RESEARCH OBJECTIVES:

1. To measure the level of perceived stress, emotional intelligence and coping strategies of nursing students.
2. To evaluate the relationship among perceived stress, emotional intelligence and coping strategies of nursing students.
3. To find out association between perceived stress, emotional intelligence and coping strategies of nursing students with the selected demographic variables.
4. To develop need based modular instructional plan intended to create awareness among nursing students regarding measures to deal with stress and build up emotional intelligence in their future endeavors.
5. To evaluate the satisfaction level of nursing students based on the solution provided in the modular instructional plan.
6. To evaluate the feasibility to implement the modular instructional plan.

### HYPOTHESIS:

#### Null hypotheses:

1. **H<sub>01</sub>**: There is no significant relationship among perceived stress, emotional intelligence and degree of utilized coping strategies by nursing students.
2. **H<sub>02</sub>**: There is no significant association between perceived stress, emotional intelligence and utilized coping strategies with the selected demographic variables.
3. **H<sub>03</sub>**: There is no significant difference in the satisfaction score of samples regarding modular instructional plan with different grades of stress, emotional intelligence and coping strategies.
4. **H<sub>04</sub>**: There is no significant difference in the feasibility score of samples regarding implementation of modular instructional plan with different grades of stress, emotional intelligence and coping strategies.

#### Research hypotheses:

1. **H<sub>1</sub>**: There is significant relationship among perceived stress, emotional intelligence and degree of utilized coping strategies by nursing students.
2. **H<sub>2</sub>**: The selected demographic factors have been shown to have a substantial relationship with measured levels of perceived stress, EI, and the use of surviving ways.
3. **H<sub>3</sub>**: There is substantial variance in the satisfaction score of samples regarding modular instructional plan with different grades of stress, emotional intelligence and coping strategies.

4. **H4:** There is significant difference in the feasibility score of samples regarding implementation of modular instructional plan with different grades of stress, emotional intelligence and coping strategies.

#### ASSUMPTIONS:

##### The study assumes that:

- The budding nurses who are new in nursing profession may need guidance and assistance regarding how to reduce stress and develop coping & emotional intelligence among them.
- Some academics related, clinical duties, personal and familial issues may be the reasons which make nursing students more vulnerable to develop stress.
- The investigator assumed that the modular instructional plan may be helpful to improve coping abilities and develop emotional intelligence among B.Sc. (N) 1<sup>st</sup> year students.
- Every nursing institution (nursing college or nursing school) may always helpful for their nursing students for support them and develop strategies which can prevent the students from developing any kind of stress.

#### 3. Methodology

- **Research approach:** Quantitative Descriptive Correlational Approach
- **Research design:** Descriptive Correlational Research Design
- **Setting:** The following nursing colleges of Indore, M.P. were included :
  - ✓ Smt. Rukmaniben Deepchandbhai Gardi Nurses Training Centre
  - ✓ St. Francis College of Nursing
  - ✓ Kanyakubj College of Nursing
  - ✓ Rai Academy College of Nursing
- **Sample:** B.Sc. (N) 1<sup>st</sup> year students who were studying at selected nursing colleges and those who meet the inclusion criteria.
- **Sample size:** Here we have a sample proportion of 50% and a known Population of size 1300, respondents with a confidence interval of 95% and expected error of 5%.

**Formula:**  $n = \frac{N \cdot X}{(X + N - 1)}$ ,

“Where  $X = \frac{Z^2 \cdot p \cdot (1-p)}{c^2}$ ”

- $Z = 1.96$  - Z value for 95% confidence level
- $N = 1300$  Respondents as Population size
- $p = 0.50$  (50%)- Sample Proportion
- $c = 0.05$  (5%)- Expected Error, expressed as decimal

According to the formula the calculated value for sample size is 297 but availability of samples was good so investigator took total **310 participants in the research study.**

- **Sampling technique:** Non Probability Purposeful Sampling
- **Tools:** The instrument was built after an exhaustive literature search and validation with the input of several specialists. Tool of this study comprised of 5 sections which includes:
  - **Section - A:** Demographic variables
  - **Section - B:** Modified Perceived Stress Scale (MPSS)
  - **Section - C:** Schutte Self Report Emotional Intelligence Test and Brief COPE [Standardized tools]
  - **Section – D:** Satisfaction level scale
  - **Section – E:** Feasibility assessment scale

- **Testing of tool:**

**Validity:** Eleven specialists from the department of Medical Surgical Nursing and Mental Health Nursing worked together to verify the accuracy of the instrument. The accuracy, clarity, relevance, comprehensiveness, and appropriateness of the information are validated by subject matter experts. The recommendations made by the specialists were included, and the process of personalizing, modifying, and finishing the instrument took place.

**Reliability:** After the instrument had been validated, its reliability was assessed in a variety of situations. The Modified Perceived Stress Test, the Tool for Assessing Satisfaction Level of Nursing Students Based on the Solution Provided in the Modular Instructional Plan, and the Feasibility of Instructional Module all had Cronbach's alpha reliability (r) values of 0.87, 0.83, and 0.89, respectively, indicating high levels of internal consistency reliability. SPSS (Statistical Package for the Social Sciences) version 23 was used to get an estimate of the test's reliability coefficient.

- **Ethical considerations:** Institutional “Ethical Committee clearance” was obtained. Written informed consent had taken from the participants (B.Sc. N 1<sup>st</sup> year students of selected colleges). The tool was validated for its content by the field experts and by the research supervisors. The samples involved in the study had explained clearly the purpose and objectives of the study. The samples selected for the study had assured for the confidentiality of the information provided to the investigator. The samples are free to drop out from the study anytime when they wish for.
- **Data collection procedure:** As the investigator selected four different nursing colleges for data collection procedure, formal permission was taken from Principals of selected nursing colleges. Prior detailed discussion with respective Principals and class coordinators was done. The investigator planned whole data collection procedure according to students’ scheduled classes, clinical duties, internal examinations etc. In this investigation, individuals gave both written and verbal agreement. After outlining the aims of the research, data collecting commenced. The tools related to assessment of perceived stress; coping strategies and emotional intelligence was administered to the study participants for obtaining base line data of these variables. The modular instructional plan titled “Implementation of Coping strategies to reduce Stress & Development of Emotional Intelligence among nursing students” was implemented. During 2 consecutive days, investigator met with participants again, to explain them about modular instructional plan with help of detailed PPT Presentation. Per session took almost 1.5 hour. Moreover the investigator prepared the content of module along with videos and willing to practice the strategies with students in form of live-demonstrations, thus it was planned to convey the module to the students in 2 different sessions so it will be easy for them to listen carefully, understand and grasp the content effortlessly. A softcopy of the content with essential video links was also shared / mailed to participants, given handouts also for their future references. Investigator instructed participants to practice the strategies and methods including specific yoga asanas which is explained in the session, they will surely find positive results in their lives. On this take home note, investigator ended up the session. At last, again the data was collected from samples to assess their satisfaction level based on the solution provided in the modular instructional plan and to evaluate the feasibility to implement the modular instructional plan.
- **Pilot study:** After obtaining permission from the concerned authority, a pilot study was conducted prior to final study. The purpose of this research work was explained to respondents & confidentiality was assured. 10% samples of main study’s sample size were selected for pilot study, to find out how long it would take to collect data and determine whether the tools were simple and useful. Tools were

administered to samples who fulfilled the sample criteria. The samples responded well for the questions and they were able to understand clearly. Investigator did not face any problem during the pilot study.

#### 4. Findings

The study findings were distributed under following sections:

<b>Section - A</b>	Description of demographic variables among B.Sc.(N) 1st year students
<b>Section - B</b>	Assessment of the level of perceived stress, coping strategies and emotional intelligence among B.Sc.(N) 1st year students
<b>Section - C</b>	Evaluation of the relationship among perceived stress, coping strategies , and emotional intelligence of nursing students
<b>Section - D</b>	Relationships between nursing students' demographic characteristics and their levels of stress, emotional intelligence, and coping techniques
<b>Section - E</b>	Evaluation the satisfaction level of nursing students based on the solution provided in the modular instructional plan
<b>Section - F</b>	Evaluation of the feasibility to implement the modular instructional plan

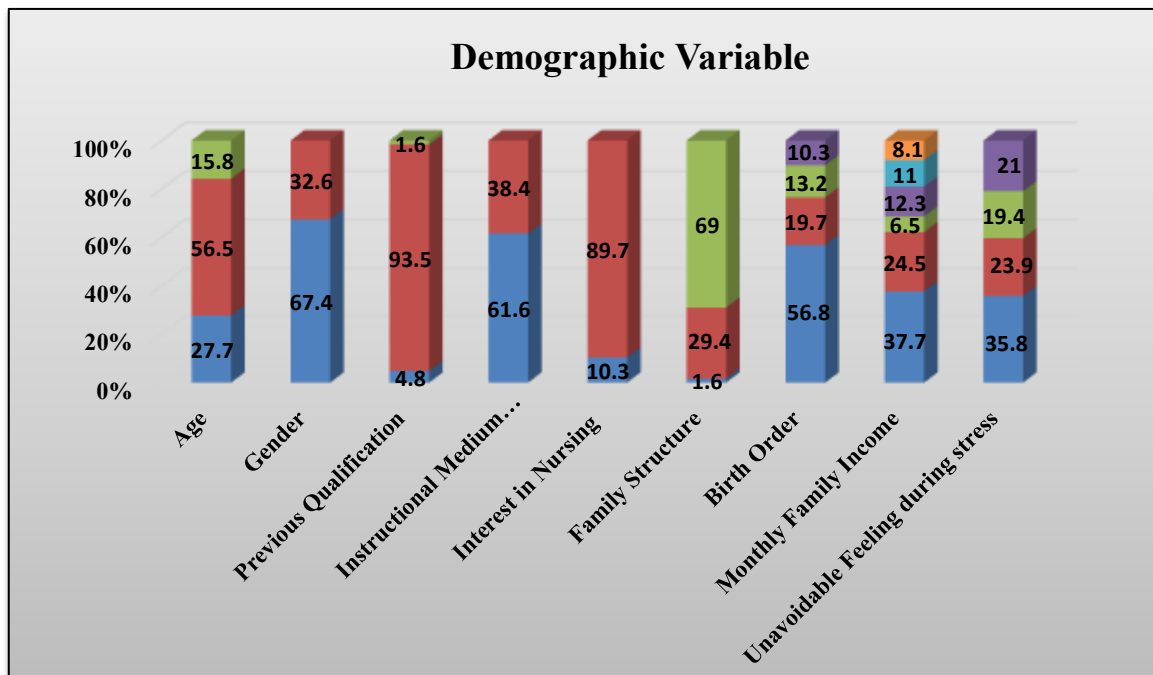
#### Section – A

**Table no. 1: “Description of the Demographic Variables among” B.Sc. (N) 1<sup>st</sup> Year Students:  
N=310**

S.No.	Demographic Variable	Frequency	%
1	Age:		
	• 17-18 Years	86	27.7
	• 19-20 Years	175	56.5
	• >=21	49	15.8
2	Gender:		
	• Female	209	67.4
	• Male	101	32.6
3	Previous qualification:		
	• Graduation	15	4.8
	• Higher Secondary	290	93.5
	• Post Graduation	5	1.6
4	Instructional medium of previous education:		
	• English	191	61.6
	• Hindi	119	38.4
5	Interest in Nursing:		
	• No	32	10.3
	• Yes	278	89.7
6	Family structure:		
	• Extended	5	1.6
	• Joint	91	29.4
	• Nuclear	214	69.0

7	Birth order: <ul style="list-style-type: none"> <li>• 1st</li> <li>• 2nd</li> <li>• 3rd</li> <li>• Other</li> </ul>	176 61 41 32	56.8 19.7 13.2 10.3
8	Monthly Family Income: <ul style="list-style-type: none"> <li>• &lt;=10000</li> <li>• 11000-20000</li> <li>• 21000-30000</li> <li>• 31000-40000</li> <li>• 41000-50000</li> <li>• &gt;=51000</li> </ul>	117 76 20 38 34 25	37.7 24.5 6.5 12.3 11.0 8.1
9	Encountered with any unavoidable feeling during stress <ul style="list-style-type: none"> <li>• Anger</li> <li>• Anxiety</li> <li>• Fear of Failure</li> <li>• Hopelessness</li> </ul>	111 74 60 65	35.8 23.9 19.4 21.0

**Figure no. 1: Showing demographic variables of samples**

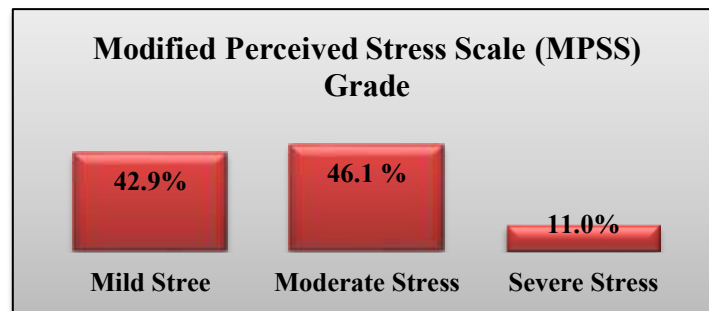


**Section – B**

**Assessment of the level of perceived stress, coping strategies and emotional intelligence among B.Sc.(N) 1<sup>st</sup> year students**

**Table & figure no. 2: “Frequency and percentage distribution of subjects according to level of perceived stress”:** **N=310**

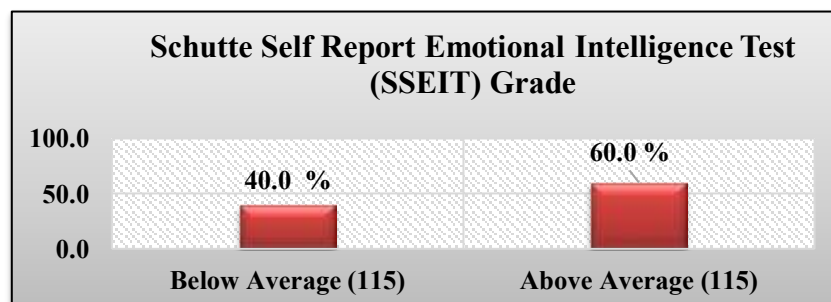
<b>Modified Perceived Stress Scale (MPSS) Grade</b>	<b>Frequency</b>	<b>Percentage</b>
Mild Stress	133	42.9
Moderate Stress	143	46.1
Severe Stress	34	11.0
<b>Total</b>	<b>310</b>	<b>100.0</b>



The above table no. 2 & figure no. 2 shows the % distribution of study samples according to level of perceived stress. It was found that out of total samples 310, majority of 143 samples (46.1%) had encountered with Moderate stress, whereas 133 samples (42.9%) reported Mild and only 34 samples (11%) had Severe stress, so the **data shows need of samples to provide measures which can reduce their stress level.**

**Table & figure no. 3: Frequency and percentage distribution of subjects according to level of emotional intelligence:N=310**

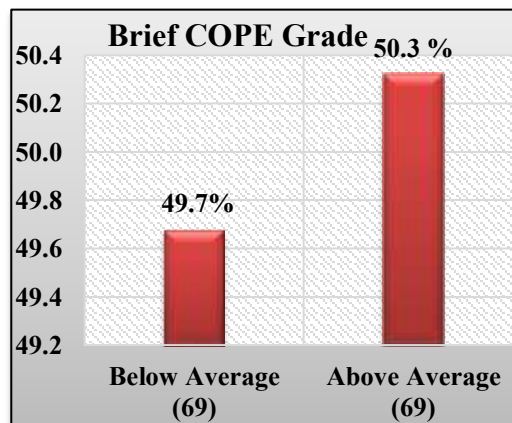
<b>Schutte Self Report Emotional Intelligence Test (SSEIT) Grade</b>	<b>Frequency</b>	<b>Percentage</b>
Below Average (115)	124	40.0
Above Average (115)	186	60.0
<b>Total</b>	<b>310</b>	<b>100.0</b>



The above table no. 3 & figure no. 3 shows the % distribution of study samples according their emotional intelligence the table divides the samples into below average and above average categories. The mean value of SSEIT was equal to 115 for all the respondents. A proportion of 60% (186 samples) for above average category and proportion of 40% (124 samples) for below average category shows that majority of respondents have higher value of SSEIT score.

**Table no. 4: Frequency and percentage distribution of subjects according to coping strategies used: N=310**

Brief COPE Grade	Frequency	Percentage
Below Average (69)	154	49.7
Above Average (69)	156	50.3
Total	310	100.0



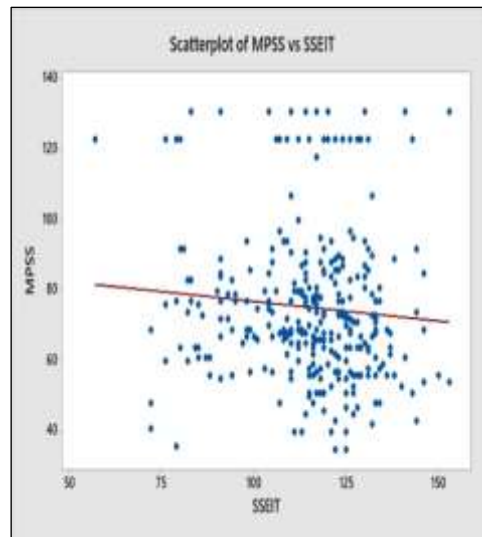
The above table no. 4 & figure no. 4 shows the % distribution of study samples according to coping strategies used. The average value of coping score was found out to be 69. Here almost equal proportion 49.7% (154 samples) and 50.3% (156 samples) was found for below average and above average category respectively.

**Section – C**

Evaluation of the relationship among perceived stress, coping strategies , and emotional intelligence of B.Sc. (N) students

**Table & figure no. 5: Correlation among Modified Perceived Stress Scale (MPSS) grades with Emotional intelligence (SSEIT) grades of B.Sc.(N) students:**

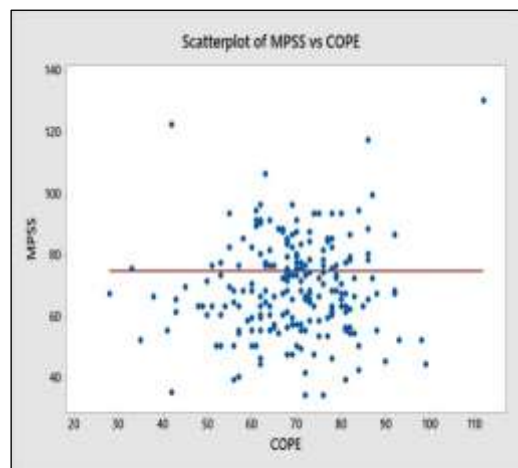
Correlations	Variable	Value	Result
Modified Perceived Stress Scale(MPSS) grades and Schutte Self Report Emotional Intelligence Test (SSEIT) grades	Correlation Coefficient	-0.085	Very Low Negative and Non-Significant Correlation
	P Value	0.135	
	N	310	



The above plotted table no. 5 shows, correlation between Modified Perceived Stress Scale (MPSS) grades and Schutte Self Report Emotional Intelligence Test (SSEIT) grades ( $r = -0.085$ ) which was found to be Very low Negative and statistically Non-significant correlations ( $P > 0.05$ ). The figure no. 5 (Scatter diagram) showing relationship among Modified Perceived Stress Scale (MPSS) grades with Emotional intelligence (SSEIT) grades of B.Sc.(N) students.

**Table & figure no. 6: Correlation among Modified Perceived Stress Scale (MPSS) grades with Coping strategies (Brief COPE) grades of B.Sc.(N) students:**

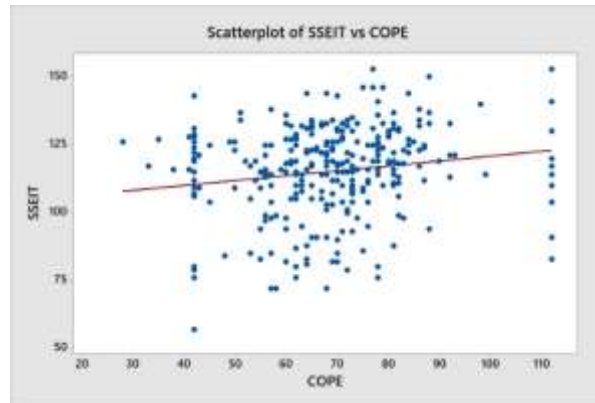
Correlations	Variable	Value	Result
Modified Perceived Stress Scale(MPSS) grades and Brief COPE grades	Correlation Coefficient	-0.003	Very Low Negative and Non-Significant Correlation
	P Value	0.957	
	N	310	
	N	310	



The above plotted table no. 6 shows correlation between Modified Perceived Stress Scale (MPSS) grades and Brief COPE grades ( $r = -0.003$ ), which was found to be Very low Negative and statistically Non-significant correlations ( $P > 0.05$ ). The figure no. 6 (Scatter diagram) showing relationship among Modified Perceived Stress Scale (MPSS) grades with Coping strategies (Brief COPE) grades of B.Sc.(N) students.

**Table & figure no. 7: Correlation of Emotional intelligence (SSEIT) grades with Coping strategies (Brief COPE) grades of B.Sc.(N) students:**

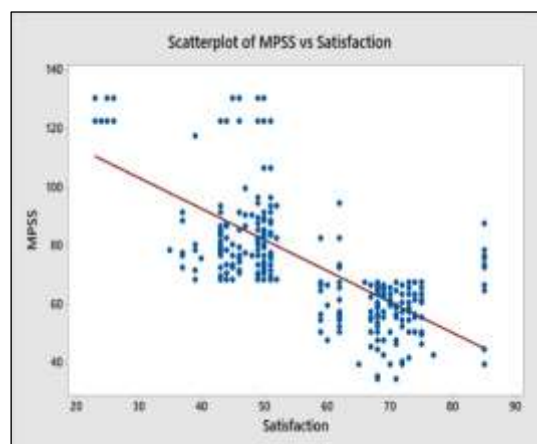
Correlations	Variable	Value	Result
(SSEIT) and Coping strategies grades	Pearson Correlation	0.167	Low Positive and Significant Correlation
	P Value	0.003	
	N	310	



The above plotted table no. 7 shows correlation between (SSEIT) grades and Coping strategies grades ( $r=0.167$ ) was found to be low but statistically significant correlations ( $P<0.05$ ). The figure no. 7 (Scatter diagram) showing relationship among Emotional intelligence (SSEIT) grades with Coping strategies (Brief COPE) grades of B.Sc.(N) students.

**Table & figure no. 8: Correlation among Modified Perceived Stress Scale (MPSS) with Satisfaction score of B.Sc.(N) students:**

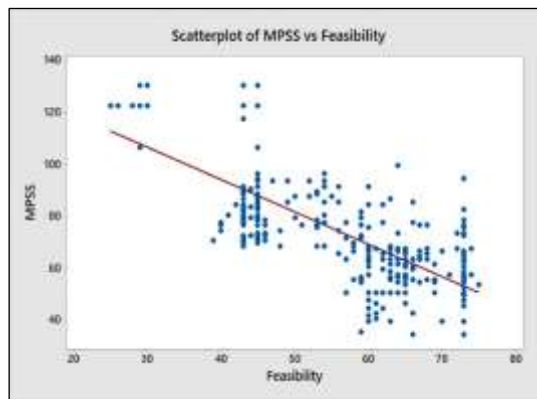
Correlations	Variable	Value	Result
Modified Perceived Stress Scale(MPSS) grades and Satisfaction score of nursing students	Pearson Correlation	-0.708	Highly Negative and Significant Correlation
	P Value	0.000	
	N	310	



The above plotted table no. 8 shows correlation between Modified Perceived Stress Scale (MPSS) score and Satisfaction score of Nursing students ( $r = -0.708$ ), which was found to be Highly Negative and statistically significant correlations ( $P < 0.05$ ). The figure no. 8 (Scatter diagram) showing relationship among Modified Perceived Stress Scale (MPSS) grades with Satisfaction score of B.Sc.(N) students

**Table & figure no. 9: Correlation among Modified Perceived Stress Scale (MPSS) with Feasibility to implement modular instructional plan:**

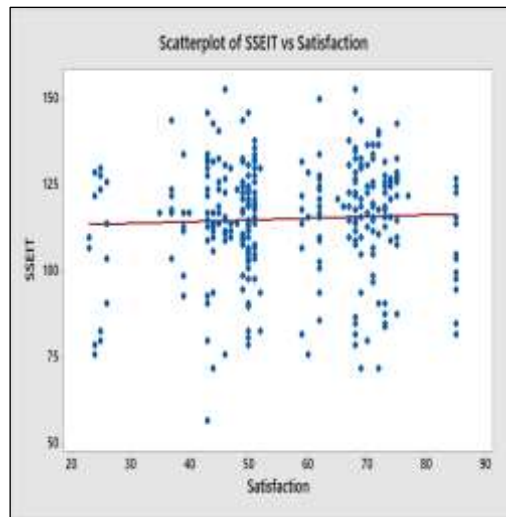
Correlations	Variable	Value	Result
Modified Perceived Stress Scale (MPSS) grades and Feasibility score	Pearson Correlation	-0.737	Highly Negative and Significant Correlation
	P Value	0.000	
	N	310	



The above plotted table no. 9 shows correlation between Modified Perceived Stress Scale (MPSS) score and Feasibility to implement instructional module score ( $r = -0.737$ ), which was found to be Highly Negative and statistically significant correlations ( $P < 0.05$ ). The figure no. 9 (Scatter diagram) showing relationship among Modified Perceived Stress Scale (MPSS) with Feasibility to implement modular instructional plan

**Table & figure no. 10: Correlation of Emotional intelligence (SSEIT) with Satisfaction score of nursing students:**

Correlations	Variable	Value	Result
Schutte Self Report Emotional Intelligence Test (SSEIT) grade and Satisfaction score of nursing students	Pearson Correlation	0.044	Very Low Positive and Non-Significant Correlation
	P Value	0.435	
	N	310	



The above plotted table no. 10 shows the correlation between (SSEIT) grade and Satisfaction score ( $r=0.044$ ) which was found to be Very low Positive and statistically Non-significant correlations ( $P>0.05$ ). The figure no. 10 (Scatter diagram) showing relationship among Emotional intelligence (SSEIT) with Satisfaction score of B.Sc.(N) students.

**Table & Figure no. 11: Correlation of Emotional intelligence (SSEIT) grade with Feasibility score to implement modular instructional plan :**

Correlations	Variable	Value	Result
Schutte Self Report Emotional Intelligence Test(SSEIT) grade and Feasibility score	Pearson Correlation	0.083	Very low Positive and Non-Significant Correlation
	P Value	0.147	
	N	310	

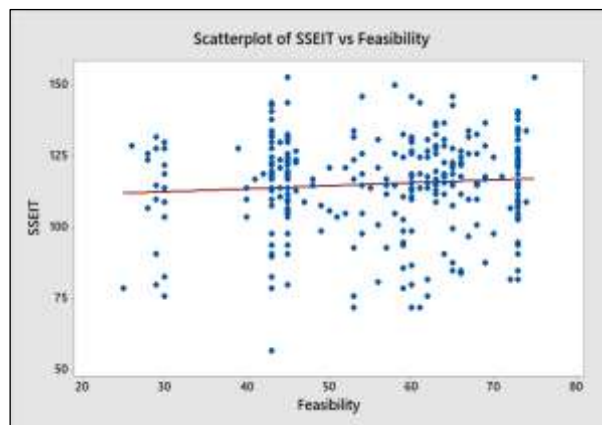
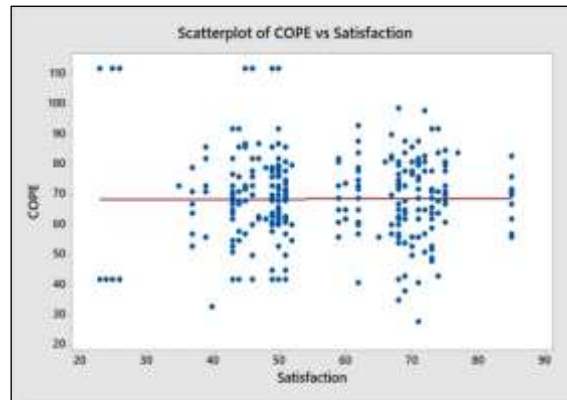


Table above plotted no. 11 shows correlation between (SSEIT) and Feasibility score ( $r=0.083$ ) which was found to be Very low Positive and statistically Non-significant correlations ( $P>0.05$ ). The figure no. 11 (Scatter diagram) showing relationship among Emotional intelligence (SSEIT) with Feasibility score to implement modular instructional plan.

**Table & figure no. 12: Correlation of Coping strategies(Brief COPE) score with Satisfaction level of B.Sc.(N) students:**

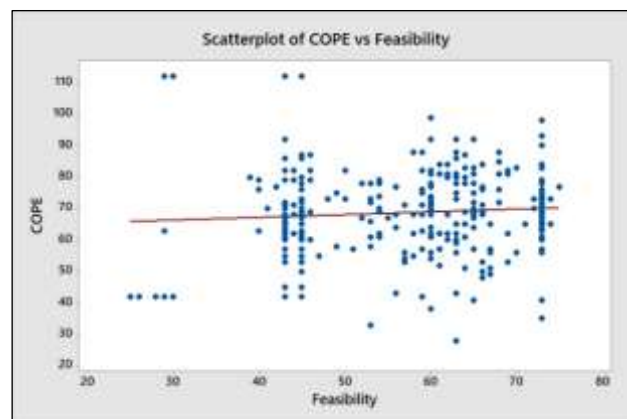
Correlations	Variable	Value	Result
Brief COPE score and Satisfaction of nursing students	Pearson Correlation	0.008	Very Low Positive and Non-Significant Correlation
	P Value	0.893	
	N	310	



The above plotted table no. 12 shows the correlation between Brief COPE score and Satisfaction score ( $r=0.008$ ), which was found to be Very low Positive and statistically Non-significant correlations ( $P>0.05$ ). The figure no. 12 (Scatter diagram) showing relationship among Coping strategies (Brief COPE) score with Satisfaction level of B.Sc.(N) students.

**Table & figure no. 13: Correlation of Coping strategies(Brief COPE) with Feasibility to implement modular instructional plan :**

Correlations	Variable	Value	Result
Brief COPE and Feasibility score	Pearson Correlation	0.072	Very Low Positive and Non-Significant Correlation
	P Value	0.209	
	N	310	



The above plotted table no. 13 shows the correlation between Brief COPE score and Feasibility score ( $r=0.072$ ), which was found to be Very low Positive and statistically Non-significant correlations.

( $P > 0.05$ ). The figure no. 13 (Scatter diagram) showing relationship among Coping strategies (Brief COPE) with Feasibility to implement modular instructional plan.

**Section – D**

Association between nursing students' demographic characteristics and their levels of stress, emotional intelligence, and coping techniques

- Level of stress [Modified Perceived Stress Scale (MPSS) Grades] was found to be statistically significant with the selected demographic variables namely age ( $p=0.001$ ), medium of previous education ( $p=0.000$ ), interest in nursing profession ( $p=0.000$ ), monthly family income ( $p=0.000$ ) and presence of unavoidable feelings during stress ( $p=0.000$ ) ( $P < 0.05$ )
- Level of emotional intelligence [Schutte Self Report Emotional Intelligence Test (SSEIT) Grades] was found to be statistically non-significant with the above mentioned all selected demographic variables ( $P > 0.05$ )
- Different coping techniques [Brief COPE Grades] was found to be statistically significant only with monthly income ( $p=0.003$ ), and non-significant with remaining other selected demographic variables.

**Section – E**

Evaluation of the satisfaction level of nursing students based on the solution provided in the modular instructional plan

**Table & figure no. 14: Distribution of subjects according frequency and percentage distribution of Satisfaction level of nursing students based on the solution provided in the modular instructional plan:**

**N=310**

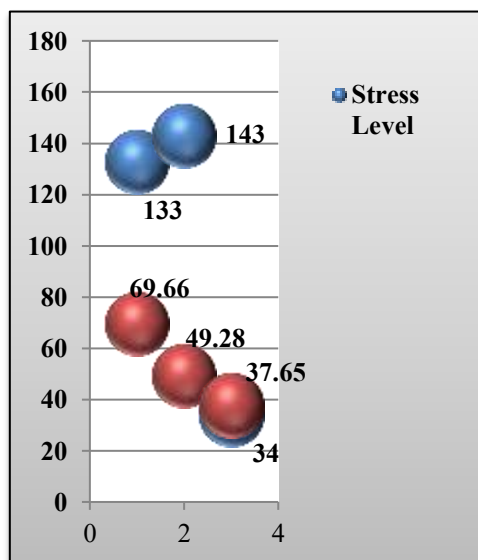
Satisfaction Level	Frequency	Percentage
Partial Satisfied	15	4.8
Fairly Satisfied	150	48.4
Highly Satisfied	145	46.8
Total	310	100.0



The above table and figure no.14 shows that the majority 48.4% of B.Sc.(N) students were fairly satisfied, 46.8% and 04.8% highly & partially satisfied respectively, with the solution provided in the modular instructional plan.

**Table & figure no. 15: Comparison of Mean Satisfaction Score between Different Modified Perceived Stress Scale (MPSS) Grades for Perceived stress :**

Modified Perceived Stress Scale (MPSS) Grade	N	Mean Satisfaction	Std. Dev.	F Test	P Value	Result
Mild Stress	133	69.66	5.296	310.410	0.000	Signi-ficant
Moderate Stress	143	49.28	9.434			
Severe Stress	34	37.65	11.944			
Total	310	56.75	14.347			



The above table & figure no. 15 shows comparison of Mean satisfaction score between different Modified Perceived Stress Scale (MPSS) grades. It is determined by One way ANOVA test. Here, this test is basically applied to compare 3 categories of perceived stress (mild, moderate, severe) with mean satisfaction score found corresponding to each MPSS grade respective category. Mild stress has higher Satisfaction score 69.66 followed by 49.28 for moderate stress level and least mean score 37.65 for severe stress level. The above relationship and mean comparison shows that satisfaction score reduces with severity of stress level.

**Table no. 16: Post Hoc Tukey test table:**

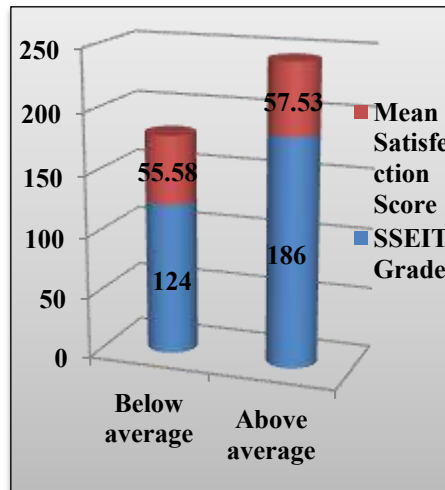
Pairwise Comparison		Mean Difference	Std. Error	P Value	Result
Mild Stress	Moderate Stress	20.382	0.997	0.000	Sig
	Severe Stress	32.015	1.591	0.000	Sig
Moderate Stress	Severe Stress	11.633	1.580	0.000	Sig

Post Hoc Tukey test is important part of ANOVA test. In ANOVA the results indicates that not all of the group means are equal. The Post Hoc Tukey test helps to explore the differences between means and it also controls experiment-wise error rate. Here Post Hoc Tukey test was applied for Individual group

comparisons which show that there were significant differences in the mean satisfaction score of all the pair of individual groups. ( $P < 0.05$ )

**Table no.17 & figure no.16: Comparison of Mean Satisfaction Score between Schutte Self Report Emotional Intelligence Test (SSEIT) Grades :**

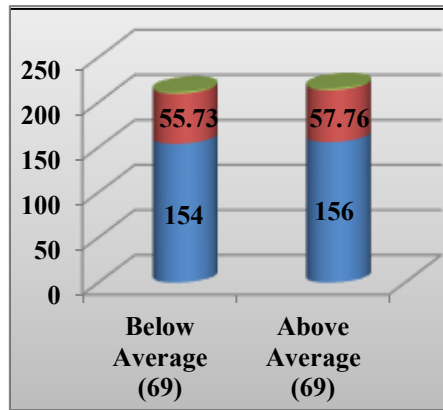
SSEIT GRADE	N	Mean Satisfaction	Std. Dev	T Test	P Value	Result
Below Average (115)	124	55.58	15.302	-1.171	0.243	Non Sig
Above Average (115)	186	57.53	13.661			



The above comparison of Mean satisfaction score between different SSEIT grades was determined by Student T Test which was found to be statistically non-significant ( $P > 0.05$ ). Average score of participant’s responses regarding SSEIT grades and divided into 2 categories i.e. Below average (115) group and Above average (115) group, which was used to calculate SSEIT grade values. Mean satisfaction score was found 55.58 for below average and mean satisfaction score was found 57.53 for above average group, both have almost equal mean satisfaction score and no significant difference was observed between two mean values.

**Table no.18 & figure no.17: Comparison of Mean Satisfaction Score between Different Brief COPE Grades for Coping strategies:**

Brief COPE Grade	N	Mean Satisfaction	Std. Dev	T Test	P Value	Result
Below Average (69)	154	55.73	14.337	-1.246	0.214	Non Sig.
Above Average (69)	156	57.76	14.332			



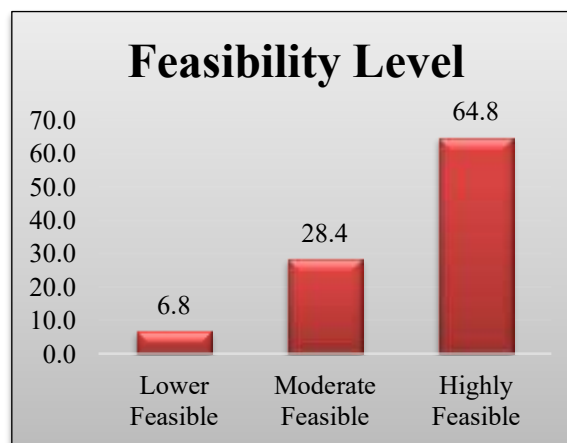
The above Table no.18 & figure no.17 shows comparison of Mean satisfaction score between different Brief COPE grades was determined by Student T Test. Mean satisfaction score 55.73 for below average and mean satisfaction score 57.76 for above average group both have high and almost equal mean Satisfaction score and no significant difference was observed between two mean values.

**Section – F**

Evaluation of the feasibility to implement the modular instructional plan

**Table no. 19 & figure no. 18: Distribution of subjects according frequency and percentage distribution of feasibility to implement the modular instructional plan:**

Feasibility Level	Frequency	Percentage
Lower Feasible	21	6.8
Moderate Feasible	88	28.4
Highly Feasible	201	64.8
Total	310	100.0



The above table no. 19 & figure no. 18 shows a higher proportion of 64.8% feels that it is highly feasible and can be used effectively in the nursing profession in near future. Out of remaining respondents 28.4% shows moderate feasibility and very less 6.8% shows lower feasibility score.

**5. Discussion**

**Objective no. 1: To measure the level of perceived stress, emotional intelligence and coping strateg-**

### ies of nursing students.

- **Level of stress:** As far as the present study's result is concerned, It was found that out of total samples 310, majority of 143 samples (46.1%) had encountered with Moderate stress, whereas 133 samples (42.9%) reported Mild and only 34 samples (11%) had Severe stress, which is a great indication for nursing institutions and educators to work on it and try to develop certain policies and programmes to make these budding nurses stress free and improve their quality of life.

**This result of present study supported by** a cross-sectional ,observational, descriptive study done by **Mausumi Basu et al.(2016)<sup>13</sup>**, which was an institution-based research work carried out from April to May 2016 at Nursing Institution of a Government Teaching Hospital, Kolkata. **Results of this study shows, 33.33 % of the nursing students were suffered from moderate to extreme stress** and depression which supports present study findings as well.

- **Level of emotional intelligence:** In present study, although the data shows a proportion of 60% (186 samples) for above average category and proportion of 40% (124 samples) for below average category shows that majority of respondents have higher value of SSEIT score but still there is a need that they should continue to enhance and use their emotional intelligence in their future endeavors as well.

The results of present study correspond to the research conclusion of almost **similar study done by Mary G. Harper (2012)<sup>14</sup>**. Moreover, similar to present study's data analysis approach, here also researcher divided the samples into 2 groups below and above average categories of findings of emotional intelligence. On total emotional intelligence, 19% of the participants scored below average, while 31% scored above average.

- **Level of coping strategies:** Out of 310 samples, it was found, the average value of coping score was 69. Here almost equal proportion 49.7% (154 samples) and 50.3% (156 samples) was found for below average and above average category respectively. As it is clear with above results that respondents using coping skills , as and when required, still it is a necessity for every nursing student to learn how to improve use of different types of coping skills in various life circumstances and same should be disseminate to patients as well. This result was supported by **Vajjala, B & Deboire, S. J (2018)<sup>15</sup>**.

### **Objective no. 2: To evaluate the relationship among perceived stress, emotional intelligence and coping strategies of nursing students.**

**H<sub>01</sub>:** "There is no significant relationship among perceived stress, emotional intelligence and degree of utilized coping strategies by nursing students".

**H<sub>1</sub>:** There is significant relationship among perceived stress, emotional intelligence and degree of utilized coping strategies by nursing students.

- On the bases of the objective, correlation between Modified Perceived Stress Scale (MPSS) grades and Schutte Self Report Emotional Intelligence Test (SSEIT) grades ( $r = -0.085$ ), the p- value found 0.135 of B.Sc.(N) students. Correlation between perceived stress (MPSS grades) and emotional intelligence (SSEIT) grades indicates **Very low Negative and statistically Non-significant correlations. ( $P > 0.05$ )**. We accept the null hypothesis (**H<sub>01</sub>**) which concludes that there is no significant correlation between perceived stress and emotional intelligence among B.Sc.(N) students.
- The other correlation between Perceived Stress (MPSS) grades and Coping strategies (Brief COPE) grades indicates **Very low Negative and statistically Non-significant correlations. ( $P > 0.05$ )**. We accept the Null hypothesis (**H<sub>01</sub>**) which concludes that there is no significant correlation between perceived stress and degree of utilized coping strategies among B.Sc.(N) students.

- The other correlation between emotional intelligence (SSEIT) grades and coping strategies (Brief COPE) grades indicates **Low but statistically Significant correlations. (P<0.05)**, so we reject Nullhypothesis (H01) and **accept the Research hypothesis (H1)** which concludes that there is a significant correlation between emotional intelligence and degree of utilized coping strategies among B.Sc.(N) students.

**Objective no. 3: To find out association between perceived stress, emotional intelligence and coping strategies of nursing students with the selected demographic variables.**

**H0<sub>2</sub>:**“There is no significant association between perceived stress, emotional intelligence and utilized coping strategies with the selected demographic variables”.

**H<sub>2</sub>:** There is significant association between perceived stress, emotional intelligence and utilized coping strategies with the selected demographic variables.

- Level of stress [Modified Perceived Stress Scale (MPSS) Grades] was found to be statistically significant with the selected demographic variables namely age (p=0.001), medium of previous education (p=0.000), interest in nursing profession(p=0.000), monthly family income (p=0.000) and presence of unavoidable feelings during stress(p=0.000) (P<0.05)
- Level of emotional intelligence [Schutte Self Report Emotional Intelligence Test (SSEIT) Grades] was found to be statistically non-significant with the above mentioned all selected demographic variables (P>0.05)
- Different coping techniques [Brief COPE Grades] was found to be statistically significant only with monthly income (p=0.003), and non-significant with remaining other selected demographic variables.

**Objective no. 4: To develop need based modular instructional plan intended to create awareness among nursing students regarding measures to deal with stress and build up emotional intelligence in their future endeavors.**

- As a general phenomenon, investigator is also concluding by her own experiences that, now a day's stress is a very common and serious complication in day today life of every human. If it is concerned with students, the prevalence and severity may vary because every student has their own perception and coping to deal with stressful situations.

As many literatures explains, that intelligence of a human only helps 20% in their daily life, but emotional intelligence plays a key role to have a peaceful life. If a nurse knows emotions of her patients, it becomes very easy to act accordingly; on the other hand the emotionally intelligent nurse also understands the thought process, symptoms and severity of patient's present condition so she can help the patient in every worst or negative circumstance. Then again she herself also has the courage deal with any sort of professional or personal burden with hopefulness and positivity. In addition, by the help of present research work, the investigator tries to provide certain guidelines (in form of modular instructional plan) of changing the thought process in a positive way, provides some yogic exercises & coping skills which are evidence based, explains a few specific characteristics that to be assimilate by budding student nurses to improve specific traits within them. These above written strategies also help the budding nurses to develop the tendency see positivity in every situation. All these efforts can lead to develop a confident, blissful, wonderful and skillful future nurses and human as well.

**Objective no. 5: To evaluate the satisfaction level of nursing students based on the solution provided in the modular instructional plan.**

**H0<sub>3</sub>:**“There is no significant difference in the satisfaction score of samples regarding modular instructional plan with different grades of stress, emotional intelligence and coping strategies”.

**H<sub>3</sub>:** There is significant difference in the satisfaction score of samples regarding modular instructional plan with different grades of stress, emotional intelligence and coping strategies”.

- The correlation between Modified Perceived Stress Scale (MPSS) grades and Satisfaction score of Nursing students ( $r = -0.708$ ) based on the solution provided in the modular instructional plan indicates Highly Negative and statistically significant correlations. ( $P < 0.05$ ), **thus rejecting null hypothesis (H<sub>03</sub>) and accepting the research hypothesis (H<sub>3</sub>)**
- The correlation between Emotional Intelligence (SSEIT) grades and Satisfaction score of participants ( $r = 0.044$ ) based on the solution provided in the modular instructional plan indicates Very low Positive and statistically Non-significant correlations. ( $P > 0.05$ ), **thus accepting the null hypothesis (H<sub>03</sub>)**
- The correlation between Coping strategies (Brief COPE) grades and Satisfaction score of participants ( $r = 0.008$ ) based on the solution provided in the modular instructional plan indicates Very low Positive and statistically Non-significant correlations. ( $P > 0.05$ ), **thus accepting the null hypothesis (H<sub>03</sub>)**

**Objective no. 6: To evaluate the feasibility to implement the modular instructional plan.**

**H<sub>04</sub>:** “There is no significant difference in the feasibility score of samples regarding implementation of modular instructional plan with different grades of stress, emotional intelligence and coping strategies

**H<sub>4</sub>:** There is significant difference in the feasibility score of samples regarding implementation of modular instructional plan with different grades of stress, emotional intelligence and coping strategies

- The correlation between perceived stress (MPSS) grades and feasibility ( $r = -0.737$ ) to implement modular instructional plan score indicates Highly Negative and statistically significant correlations. ( $P < 0.05$ ) **thus rejecting null hypothesis (H<sub>04</sub>) and accepting the research hypothesis (H<sub>4</sub>)**
- The correlation between emotional intelligence (SSEIT) grades and feasibility ( $r = 0.083$ ) to implement modular instructional plan score indicates Very low Positive and statistically Non-significant correlations. ( $P > 0.05$ ), **thus accepting the null hypothesis (H<sub>04</sub>)**
- The correlation between coping strategies (Brief COPE) grades and feasibility ( $r = 0.072$ ) to implement modular instructional plan score indicates Very low Positive and statistically Non-significant correlations ( $P > 0.05$ ), **thus accepting the null hypothesis (H<sub>04</sub>)**

## 6. Conclusion

The results of the current study generally indicate that stress has a detrimental impact on the physical, emotional, academic, and professional lives of aspiring nurses, influencing every aspect of a nursing student’s existence. If not addressed promptly, it can harm health, learning, self-confidence, and future career success. Hence, it is crucial for budding nurses to have stress management strategies and emotional support. Training in stress management and emotional intelligence is vital for their well-being and success. Nursing education programs should incorporate the development of emotional intelligence and stress management training to enhance students’ well-being and clinical performance. Aspiring nurses who are better equipped to understand and manage their emotions experience lower levels of stress. Those with elevated emotional intelligence are more inclined to employ effective coping methods, such as problem-solving and seeking assistance. Nursing colleges could benefit from integrating emotional intelligence and effective stress coping strategies into their curriculum.

## References

1. Ahmed W.A.M. Anxiety and related symptoms among critical care nurses in Albaha, Kingdom of Saudi Arabia. AIMS Med Sci. 2015;2(4):303–309.

2. Kernan W.D., Wheat M.E. Nursing students' perceptions of the academic impact of various health issues. *Nurse Educ.* 2008;33(5):215–219. [PubMed] [Google Scholar]
3. Gibbons C. Stress, coping and burn-out in nursing students. *Int J Nurs Stud.* 2010;47(10):1299–1309. [PubMed] [Google Scholar]
4. Bradshaw C., Tighe S.M., Doody O. Midwifery students' experiences of their clinical internship: a qualitative descriptive study. *Nurse Educ Today.* 2018;68:213–217. [PubMed] [Google Scholar]
5. Raghubir AE. Emotional intelligence in professional nursing practice: A concept review using Rodgers's evolutionary analysis approach. *Int J Nurs Sci.* 2018 Apr 6;5(2):126-130. doi: 10.1016/j.ijnss.2018.03.004. Erratum in: *Int J Nurs Sci.* 2020 Dec 05;8(1):IV. PMID: 31497624; PMCID: PMC6718873.
6. Alvarez Hector A. Olvera, Provencio-Vasquez E., Stress and Health in Nursing Students: The Nurse Engagement and Wellness Study, *Nurs Res.* 2019 Nov-Dec; 68(6): 453–463. doi: 10.1097/NNR.0000000000000383
7. Huang, L., Lei, W., Xu, F., Liu, H., & Yu, L. (2020). Emotional responses and coping strategies in nurses and nursing students during Covid-19 outbreak: A comparative study. *PloS one*, 15(8), e0237303. <https://doi.org/10.1371/journal.pone.0237303>
8. Thomas D.S., Natarajan J.S. Emotional Intelligence among Nursing students - An Integrated Review. *IOSR Journal of Nursing and Health Science (IOSR-JNHS e-ISSN: 2320–1959, p-ISSN: 2320–1940 Volume 6, Issue 1 Ver. VII (Jan. - Feb. 2017), PP 81-89* [www.iosrjournals.org](http://www.iosrjournals.org)
9. Michelangelo, L. (2015). The overall impact of emotional intelligence on nursing students and nursing. *Asia-Pacific Journal of Oncology Nursing*, 2(2), 118. doi:10.4103/2347-5625.157596
10. Holston, Ezra & Taylor, Janette. (2016). Emotional Intelligence in Nursing Students Describing Emotional Intelligence in the Last 2 Years of a BSN Program. *International Journal of Advances in Psychology*. 5. 10.14355/ijap.2016.05.003.
11. Kumar, Avinash & Chowdhury, Dr & Panwar, Dr & Kosala, Dr. (2016). Assessment of Association between Emotional Intelligence and Academic Achievement among Indian Nursing Students.
12. Sharma P.K., Ranjan J.K. (2021). A Descriptive Study to Assess the Hospital Practice Stress among Graduate Nursing Students in Madhya Pradesh. *International Journal of Research Publication and Reviews*, Vol 3, no 2, pp 596-598, February 2022
13. Mausumi Basu et al. Depression, Anxiety, Stress among nursing students of Kolkata: a cross sectional study. *Journal of Preventive Medicine and Holistic Health*, July-December 2016;2(2):54-60
14. Mary G. Harper (2012) . Stress and Coping Strategies among Nursing Students in Clinical Practice during COVID-19. *Nurs. Rep.* 2012, 11, 629–639. <https://doi.org/10.3390/nursrep11030060>
15. Vajrala, B & Debores, S. J (2018). Level of Stress and Coping Strategies among B. Sc. Nursing Students. *International Journal of Indian Psychology*, 6(3), 108-114. DIP:18.01.070/20180603, DOI:10.25215/0603.070