

75. **STRESS LEVELS AND COPING STRATEGIES IN MEDICAL STUDENTS AND ITS ASSOCIATION WITH SALIVARY IL-6 LEVELS**

Monica Karanth¹, Anahita R Shenoy Basti², Chandralekha N³, Cleeta Reberio⁴.

¹ MBBS Intern. Father Muller Medical College, Mangalore-575002, India.

² MD Physiology. Father Muller Medical College, Mangalore-575002, India.

³ MD Pharmacology. Father Muller Medical College, Mangalore-575002, India.

⁴ MSc. Father Muller Medical College, Mangalore-575002, India.

BACKGROUND: Medical students experience stress throughout their training period, to which they have built their own coping mechanisms. Stress alters various physiological processes, including markers like IL-6, a pro-inflammatory marker. The present study was conducted to assess the stress levels and coping strategies in medical students and its association with salivary IL-6 levels. **METHODS:** This descriptive study was conducted after obtaining institutional ethical clearance. Total of 76 undergraduate medical students who gave their consent, answered the Cohen's perceived stress scale and BriefCOPE questionnaire. Unstimulated saliva was used to assess salivary IL-6 levels using Diaclone human IL-6 ELISA kit and data obtained was analyzed. **RESULTS:** Out of the 76 participants, 59(77.6%) were females and 17(22.4%) were males. Mild stress was perceived by 9 students, moderate and severe stress by 53 and 14 students respectively. Based on Kruskal-Wallis p test, in all grades of stress, approach method of coping had a higher score. Approach is form of active coping strategy where the students deal with the stressor in order to solve the issue and plan for the future. Approach coping has shown better responses for adversity, physical health and emotional responsiveness. Most commonly used coping strategies in mild and medium stress was acceptance, positive-refrain and planning. Students with severe stress adopted planning, self-distraction and self-blame. In spite of the perceived stress, there was no significant difference in the salivary IL-6 levels among the three categories. **CONCLUSION:** The common coping strategies employed by students to handle stress was 'approach'. As described in the BriefCOPE, it has been shown to be associated with better outcomes. In spite of this, a vast number of students have reported to experience stress. Therefore, more effective coping strategies are needed to handle stress and demands of the profession. The study also emphasizes on need for further research with a large sample size to assess the relation between salivary IL-6 and stress levels.

Table. Responses to BRIEF COPE Questionnaire.

	Mild stress (n=9) mean± SD	Moderate stress (n=53) Mean± SD	Severe stress(n=14) Mean± SD	Kruskal- Wallis test p value
Avoidant	21.11±5.09	23.98±4.57	30.50±4.67	<0.001
a. Denial	4.11±1.05	4.04±0.88	4.79±0.89	0.026
b. Substance abuse	2.67±1.32	2.45±0.91	2.64±1.45	0.759
c. Venting	3.00±1.12	4.26±1.42	5.57±1.50	<0.001
d. Behavior disengagement	3.00±1.41	3.53±1.35	4.86±1.70	0.004
e. Self-distraction	4.89 ± 2.15	5.21±1.41	6.36±1.50	0.029
f. Self-blame	3.44±1.67	4.49±1.59	6.29±2.20	<0.001
Approach	30.22±5.36	30.30±6.01	34.93±5.85	0.035
a. Positive refrain	5.67±1.12	5.70±1.64	5.86±2.03	0.945
b. Planning	5.56±1.51	5.51±1.55	6.50±1.51	0.104
c. Acceptance	6.11±1.54	5.51±1.65	6.21±1.67	0.272
d. Emotional support	4.44±1.01	4.81±1.73	5.07±1.94	0.693
e. Use of instrumental support	4.33±1.50	4.49±1.44	6.07±1.49	0.002
f. Active	4.11±1.36	4.28±1.28	5.21±0.80	0.032
Humor	4.11±1.90	4.51±1.93	6.21±1.76	0.008
Religion	5.11±1.27	4.89±1.87	5.36±2.10	0.689

Key words: Stress; Coping Strategies; Medical Students; IL-6 levels
(Source: MeSH-NLM).