

Attachment Styles in Medical Postgraduate Students and their Correlation with Sources of Perceived Stress – A Cross-Sectional Study

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Introduction: Postgraduate training is a difficult time for students with high levels of stress and anxiety being prevalent. Raised stress has also been associated with lower performance and increased psychiatric morbidity. Poor adult attachment pattern is a known risk factor for a broad range of mental health difficulties and poor coping. **Aims:** This study aims to assess the prevalence and sources of stress and its correlation with attachment styles and sociodemographic variables. **Methods:** A cross-sectional study was conducted on 102 postgraduate students at a rural tertiary-level hospital with the help of an online survey. Sociodemographic profile was recorded as were responses to the Postgraduate Stressor Questionnaire (PSSQ) and Relationship Questionnaire (RQ) over 1 month. **Results:** Overall stress was found to be high (23.5%), of which Academic Related Stress (35.3), Performance Pressure Related Stress (29.4%) and Poor Relationship With Superior Related Stressor (25.5%) were found to be higher. The year of study ($p=0.043$) and substance use ($p=0.039$) were significant factors. The results of correlation analysis showed that the PSSQ scores and Fearful attachment pattern in RQ scores had a significant positive mild correlation (0.384, $p<0.001$). **Conclusion:** Overall stress in PG students is high, particularly Academic Related Stress, and individuals having a Fearful attachment style showed significantly higher perceived stress when compared to other attachment styles.

Keywords: Post Graduate Stressor Questionnaire, Relationship Questionnaire, Adult Attachment, Stress, Medical Education, Perceived Stress.

1. Introduction

Postgraduate training is a highly stressful endeavour¹. While this is true for every individual, it has been long-held that subjective perception of the stressfulness of an event affects its impact. Stress is a complex adaptive behaviour of any organism when the expectations from the environment exceed their capability to cope naturally. Particularly, those situations perceived to be uncontrollable or unpredictable^{2,3,4}. Optimum levels of stress can improve performance in some, based on motivation, but if constant or too much results in individuals being tense and disorganised and causes poor performance. Those under constant stress exhibit poor performance and are at an increased risk of lasting psychological and physical morbidities⁵⁻¹¹. The type of adult attachment pattern has been shown to significantly affect the ability to cope with stress and regulate emotions^{12,13}. This is a function of the perceived social support and varies based on the type of attachment¹⁴. Adult attachment styles include “Dismissive”, “Fearful”, “Preoccupied”, and “Secure”. Persons with insecure attachment styles, like Fearful or Preoccupied ones, are more likely to experience stress from occurrences. In contrast, persons with secure attachment are less likely to experience stress^{15,16}. Attachment behaviours also play a role in health risk behaviours and the overall mental health of the individual. With our study, we would like to explore the relationship between adult attachment styles and stress experienced by medical postgraduate students and assess the prevalence and sources of stress in them.

2. Methodology

A cross-sectional study was conducted on 102 postgraduate medical students in a tertiary-level medical college in a rural setting. Participants included students from all specialities who were willing to participate. The study was conducted by collecting details via online forms once informed consent was given and was collected over one month. The only exclusion criteria were the presence of pre-existing psychiatric illness and those currently on psychotropic medications.

Study Tools

Sociodemographic details were collected via a structured proforma.

Postgraduate Stressor Questionnaire (PSQ) was used to assess the prevalence and sources of stressors. This is a 28-item self-rated questionnaire, which collects responses on a 5-point Likert scale. It measures 7 domains of commonly experienced stress in postgraduates. Namely, Academic, Performance pressure, Work-family conflicts, Bureaucratic constraints, Poor relationships with superiors, Poor relationships with colleagues and Poor job prospects. A measure of overall stress can also be obtained. Has been used with permission from the author. Its reliability and validity are established¹⁷.

Attachment was measured with the help of Relationship Questionnaire (RQ), which consists of 4 questions to be answered in two parts. The first part requires participants to choose the one statement that best describes their relationship style, and the second part has them rate each statement on a 7-point Likert scale. If there is a disagreement between the first and second statements, the response is not considered. This scale provides both categorical and dimensional data. The questions correspond to Secure, Fearful, Preoccupied and Dismissive

Nanotechnology Perceptions Vol. 20 No. S5 (2024)

attachment styles respectively. It is a validated, open access scale¹⁸.

Statistical analysis

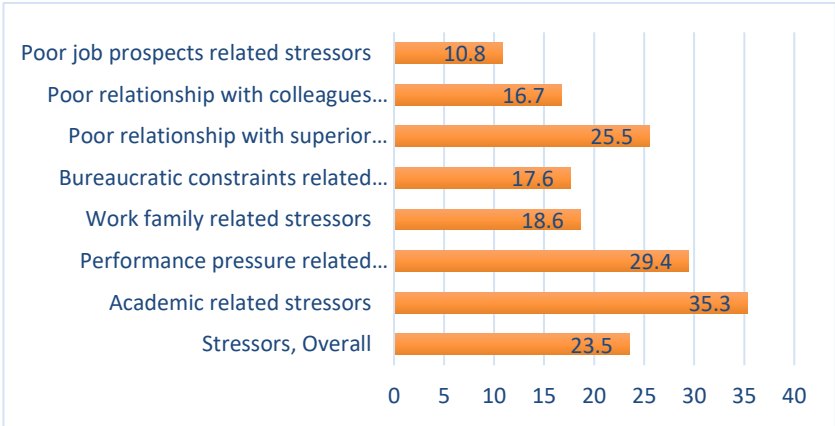
Analysis was done using the SPSS software version 27. Relevant descriptive and inference statistics were used to interpret the data. For test of association of continuous variables, independent t test was used and are mentioned as mean and Standard Deviation (SD). For categorical variables Chi-square and Fisher’s exact test were used and are reported as frequencies and percentages. For correlation analysis Spearman rank correlation was used. The PSQ scale items were grouped into their domains. Overall stressors were compared to sociodemographic variables for significance. The individual questions of the RQ scale were correlated with the overall stressors. The relationship between the overall stressors and overall responses to second part of RQ was observed using scatter plot.

3. Results

In our study, responses were collected from 102 medical postgraduate students. 54 (52.9%) were male and 48 (47.1%) were female, with the majority, 77 (75.5%) being under 30 and only 25 (24.5%) being over 30. Participation was comparable across all three years of training. 34 (33.3%) were married while the rest, 68 (66.7%) were either single, engaged, or in a relationship. Substance use was present in 38 (37.3%) with 64 (62.7%) not using any substance. Few, 27 (26.5%), sought help from psychiatrist and fewer 7 (6.9%) are currently on psychotropic drugs. 75 (73.5%) never sought psychiatric help and 95 (93.1%) are not currently on psychotropic drugs. 73 (71.6%) are pursuing Masters in Medicine and 29 (28.4%) Masters in Surgery.

The dispersion measure of the seven domains of stressor and the overall stressor were tabulated. Overall stressor was high (23.5%). Of the seven domains, Academic related stressors (35.3%), Performance pressure related stressors (29.4%) and Poor relationship with superiors related stressors (25.5%) were the highest.

	Number (N = 102) (n)	Percent (%)	Mean (SD)
Stressors, Overall	24	23.5	1.4 (0.8)
Academic related stressors	36	35.3	1.7 (1.0)
Performance pressure related stressors	30	29.4	1.6 (1.0)
Work family related stressors	19	18.6	1.3 (0.9)
Bureaucratic constraints related stressors	18	17.6	1.3 (0.9)
Poor relationship with superior related stressors	26	25.5	1.3 (1.1)
Poor relationship with colleagues related stressors	17	16.7	1.1 (1.0)
Poor job prospects related stressors	11	10.8	1.1 (0.9)



		Stressors, Overall			P value
		Present N = 24	Absent N = 78	Total N = 102	
Age (in years) Mean (SD)		27.9 (2.7)	27.9 (2.3)	27.9 (2.4)	0.861
Age (in years)	Less than 30	18 (75.0)	59 (75.6)	77 (75.5)	0.949
	≥30	6 (25.0)	19 (24.4)	25 (24.5)	
Gender	Male	11 (45.8)	43 (55.1)	54 (52.9)	0.425
	Female	13 (54.2)	35 (44.9)	48 (47.1)	
Religion	Hindu	17 (70.8)	55 (70.5)	72 (70.6)	0.751
	Muslim	4 (16.7)	11 (14.1)	15 (14.7)	
	Christian	1 (4.2)	8 (10.3)	9 (8.8)	
	Others	2 (8.3)	4 (5.1)	6 (5.9)	
Marital Status	Married	9 (37.5)	25 (32.1)	34 (33.3)	0.694
	Single	13 (54.2)	49 (62.8)	62 (60.8)	
	Engaged/In a relationship	2 (8.3)	4 (5.1)	6 (5.9)	
Type of postgraduate degree	Master of Medicine	17 (70.8)	56 (71.8)	73 (71.6)	0.927
	Master of Surgery	7 (29.2)	22 (28.2)	29 (28.4)	
Year of study	1 st year	5 (20.8)	30 (38.5)	35 (34.3)	0.043*
	2 nd year	7 (29.2)	27 (34.6)	34 (33.3)	
	3 rd year	12 (50.0)	21 (26.9)	33 (32.4)	
Substance Use	Present	13 (54.2)	25 (32.1)	38 (37.3)	0.039*
	Absent	11 (45.8)	53 (67.9)	64 (62.7)	
Received Help from Psychiatrist	Yes	9 (37.5)	18 (23.1)	27 (26.5)	0.161
	No	15 (62.5)	60 (76.9)	75 (73.5)	
On psychotropic drugs	Yes	3 (12.5)	4 (5.1)	7 (6.9)	0.212
	No	21 (87.5)	74 (94.9)	95 (93.1)	
*Statistically significant at p<0.05					

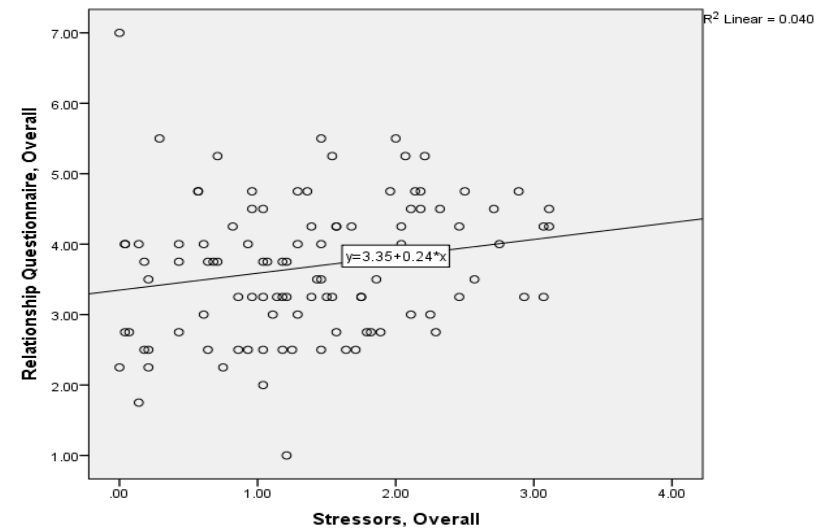
Significance was found in the association between overall stressors with Year of postgraduate study (p-0.043) and substance use (p-0.039).

	Number (N = 102) (n)	Percent (%)
It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	40	39.2
I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	24	23.5
I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.	11	10.8
I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	27	26.5

Of the 102 students, 40 (39.2%) have secure attachment, 24 (23.5%) have fearful attachment, 11 (10.8%) have preoccupied attachment and 27 (26.5%) have dismissive attachment.

The results of correlation analysis showed that the Postgraduate Stressors Questionnaire (PSQ) scores had a significant mild positive correlation (0.242; $p = 0.014$) with overall Relationship questionnaire scores, negative mild correlation, but not significant (-0.172 , $p=0.084$) for question 1 relating to secure attachment, significant positive mild correlation (0.384, $p<0.001$) for question 2 relating to fearful attachment, mild positive insignificant correlation (0.148, $p=0.138$) for question 3 relating to preoccupied attachment and mild positive insignificant correlation (0.038, $p=0.701$) for question 4 relating to dismissive type of attachment.

A scatter plot was used to assess relationship between overall stressors and overall responses to second part of the RQ scale. The mean and SD of the second part of RQ was tabulated.



	Mean (SD)
It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	4.3 (2.0)
I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	3.6 (2.0)
I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.	3.1 (1.9)
I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	3.7 (2.0)

4. Discussion

This study aimed to assess the prevalence and sources of stress in postgraduate students and its relation, if any, to adult attachment style. Postgraduate education is known to be a stressful period¹. Our results suggest a high prevalence of perceived stress overall in postgraduate medical students, particularly in Academic Related Stressors, Performance Pressure Related Stressors and Relationship with Superiors Related Stressors. This is in keeping with other similar prevalence studies^{19, 20}. Varying from these studies was its correlation with socio-demographic variables, which showed a higher prevalence of perceived stress in females. Our study found no significance of gender for perceived stress.

Significant was the year of study, with a higher proportion of third-year students being stressed, and the presence of substance use, which found that those without stressors were less likely to have substance use. Final-year students have increased academic and familial expectations placed on them and worry for the future, with significant effects on social and biological functions²¹. The association between perceived stress and maladaptive coping strategies such as substance use has been repeatedly demonstrated in several studies done in varied locations and settings^{22,23,24}. However, studies in Indian settings are limited.

The adult attachment model, as proposed by Bowlby²⁵, is influenced by childhood experiences and core beliefs and has a pervasive effect on one's life²⁶. Longitudinal studies in the student population show an increase in insecure attachment in recent years²⁷.

The prevalence of attachment styles in our study population is in keeping with other studies conducted on a national level²⁸, with secure attachment styles being the most prevalent, followed by avoidant and fearful types of attachment. The effects of attachment styles on socio-occupational functioning has long been a topic of interest. Insecure attachment styles (Fearful, dismissive, avoidant) are generally associated with worsening psychopathology, more perceived stress and poorer performance in education or work^{29,30,31}. It is also a predictor of poor health outcomes, as a function of health risk behaviours, physiological effects of constant stress and reduced efficacy of mediating factors such as family and social relationships. The opposite is true for those with secure attachment, having better persistence in occupation and lesser psychopathology. Studies in the student population have also shown this relationship between adult attachment patterns, perceived stress, mental and physical

health, and social and occupational outcomes³²⁻³⁷.

Our study shows a significant positive correlation between fearful attachment patterns and a mild negative correlation between secure attachment patterns when compared to levels of perceived stress in the study population. This highlights the possibility of insecure attachment as a possible avenue of treatment. Some effects that generalise to other aspects of psychological well-being have been demonstrated in group therapies addressing insecure attachment. Though consensus exists on the value of treatment, the lack of fixed guidelines for treatment and measures of improvement, make further progress difficult^{38,39,40}.

5. Conclusion

High prevalence of stress in postgraduate medical students, more in the final year, with a tendency for negative coping strategies such as substance use. Academic-related stressors, performance pressure-related stressors and poor relationship with superiors-related stressors were most commonly observed. There was a significant positive correlation between fearful attachment style, a type of insecure attachment, and overall perceived stress. This highlights attachment patterns as a potential treatment target for improving student functioning and reducing stress. More research is needed towards standardised and effective therapy for insecure attachment.

6. Limitations

The study population is limited to one institute. This was a cross-sectional study. A larger study population and longitudinal follow-up study would yield more valid comparisons and could be generalised to the population. No interventions were attempted. The study design employed online self-reporting forms, taken over a month to be completed at participant's discretion, which would introduce biases to the study.

CONFLICTS OF INTEREST

Nil

FUNDING

Nil

ETHICAL STATEMENT

The institutional ethical committee accepted this study. The study was approved by the institutional human ethics committee, Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Vinayaka Missions Research Foundation (DU), Salem. Informed consent was obtained during online response and only willing participants were recruited. Risks benefits and lack of remuneration explained to participants. Confidentiality of patients was maintained.

DATA AVAILABILITY

All data sets used for analysis are attached

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