Section: Psychiatry

Original Research Article

EARLY DISTRESS SIGNALS: SCREENING ADJUSTMENT DISORDER AND PREDICTORS AMONG FIRST-YEAR MBBS STUDENTS AT SPMCHRI, HOSUR-A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: First-year medical students encounter significant academic and psychosocial stressors that may impair adjustment. This study estimated the prevalence, severity, and symptom profile of probable adjustment disorder and examined its association with coping and resilience among first-year MBBS students at SPMCHRI, Hosur. **Materials and Methods:** A cross-sectional survey was conducted immediately before the first internal assessment. A total of 232 consenting first-year MBBS students completed a sociodemographic questionnaire, the Adjustment Disorder–New Module (ADNM-20), selected Brief COPE items, and the Brief Resilience Scale (BRS-6). Descriptive statistics summarized prevalence and symptom severity, while Spearman's correlation assessed associations between adjustment disorder symptoms, coping, and resilience. **Results:** Using an ADNM-20 cut-off score of ≥48, 84.1% of students screened positive for probable adjustment disorder. The mean ADNM-20 score was 59.8 ± 10.9, indicating considerable distress. Common symptoms included rumination about stressors, avoidance behaviors, sadness, anxiety, and impairment in academic and social functioning. The mean coping score was 18.7 ± 2.45, reflecting greater use of relaxation, problem-focused coping, and positive reframing than avoidance. The mean resilience score was 18.2 ± 3.29, indicating moderate resilience. ADNM-20 scores showed significant negative correlations with coping ($\rho = -0.210$, $p = 0.001$) and resilience ($\rho = -0.570$, $p < 0.001$), while coping was positively correlated with resilience ($\rho = 0.294$, $p < 0.001$). **Conclusion:** Probable adjustment disorder was highly prevalent. Better coping and resilience were associated with lower symptom burden, highlighting the need for early screening and supportive interventions.

INTRODUCTION

Medical school is a very stressful place everywhere in the world.Students are under pressure due to several factors like vast syllabus, unending series of examinations, fear of failure, peer pressure, high expectations of parents and demanding society etc.Adjustment problem is more common in medical students than other streams of education.[1] The ability to cope up can vary in individuals based on many inherent and environmental factors. Research from both the east and the west has revealed that the adjustment ability has a profound impact on academic performance. Maladjustment will also affect both physical and mental health of the students in many immediate and remote ways leading to the development of negative emotional symptoms of depression, anxiety and stress and even suicide or suicidal attempts.[2]

Adjustment is a process by which a person adjusts himself and his environment at home, school or college, at work and life situations during growing as well as aging. Good adjustment ability helps to keep the basic impulses on a tolerable level and to achieve goals by believing in one's own abilities. It has many dimensions like intellectual, emotional,

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social, physical, psychological, vocational etc. According to Halonen and Santrock, adjustment is the psychological process that helps a person to adapt, cope and manage the problems, problems challenges and demands of everyday life faced in daily life.[3] A similar definition for adjustment is also presented by Simon et al.[4]

Adjustment problems are common to students in the first year of medical college. The entry into the stressful environment of medical college is perceived by many students as distressing which can lead to many adjustment problems resulting in poor academic performance.[5] Srivastava et al observes that students with adjustment problems are less with good psychological support.[6] Early identification of such problems and providing the necessary psychological and emotional support may be useful in reducing the short term and long term consequences.[7-8] Academic performance of medical students is influenced by various factors such as family background, gender, age, personality, intelligence and level of comprehension, method and style of learning, pressure from peers and parents and sometimes even psychological disturbances and psychiatric disorders.[9-11] Besides, there are other factors that affect the academic performance. Poor academic achievement and poor attendance are frequently indicators of difficulties in adapting to the new environment.[12] Social, emotional, physical and family problems can influence the learning ability and academic performance of these students.[13]

Some of them are not able to cope with the stress and lag behind, others see the pressure as a challenge to work harder.[14,15] Entry to Medical college for many students means displacement from family and friends to an altogether different environment with vast syllabus, newer terminologies and newer pattern of study different from their school. This leads to a crisis in the self-image of the students and a possible loss of self-confidence.[16,17]

MATERIALS AND METHODS

Objectives: The primary objective of present study is to determine the prevalence of adjustment disorder among first year MBBS students of St. Peter's Medical College & Research Institute (SPMCH & RI), Hosur by a standardized screening questionaries and secondary objectives are to assess the severity and symptom profile of adjustment disorder with a validated tool such as the adjustment disorder – New Module 20 (ADNM‑20), and to study the relation between presence and severity of adjustment disorder with students' coping strategies and resilience levels, to identify coping patterns associated with better or poorer psychological adjustment.

Study design: This was a cross-sectional study conducted in St. Peter's Medical College, Hospital and Research Institute (SPMCHRI), Hosur, Tamil Nadu. Volunteer students were enrolled in the study following their informed consent to a protocol. The study was conducted before the first internal evaluation exam, so most of the students might have been adapted to the new environment. so that the pupils who have real adjustment problems can be identified.

Inclusion and Exculsion criteria

Participants of age group 18-25 years, First year MBBS students admitted in our institution and provided informed consent. Students who were absent, had a history of mental illness, had a history of physical illness, were under the age of eighteen, had a history of serious stressors unrelated to the school (e.g., significant life events or family crises), or did not give informed consent were excluded from the study.

Tools employed:

Socio-Demographic Survey:

Sociodemographic data (age, sex, parental education and occupation) were collected by means of a questionnaire (Appendix I).

Adapted ADNM-20 item, coping mechanisms and resilience questionnaire student version:

This modified screening adjustment disorder and predictors comprise three groups: i) ADNM-20, which is further divided into three subgroups: preoccupation, failure to adapt, avoidance, depressive mood, anxiety, impulsive disturbance, and functional impairment. ii) Resilience using the Connor-Davidson resilience scale ii) coping strategies using the Brief COPE inventory. It is widely used by many scholars and therapists in the Indian context. This study employs the student form. The self-administered questionnaire contains thirty questions divided into three sections. Different scores are awarded for each segment and results are interpreted by norms. The overall level of adjustment was calculated by summing the result from each category (home, health, social and emotional). Higher scores indicate more adjustment problems. The item scale of the ADNM-20 was presented.

Ethical Approval Exemption:

Formal institutional ethical approval was not required for this study as it involved anonymous, minimal-risk survey research evaluating psychological distress among students, with no collection of identifying personal data or biological samples. Nonetheless, the study strictly adhered to accepted ethical principles for research involving human participants.

Voluntary Participation & Informed Consent:

Participation was entirely voluntary. All eligible first-year MBBS students were briefed on the study's purpose, objectives, procedures, potential benefits, and minimal risks. Written informed consent was secured from each participant prior to data collection. Students were explicitly informed of their right to decline participation or withdraw at

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any stage without academic or personal consequences.

Confidentiality & Data Security: To ensure absolute anonymity, no personal identifiers (such as names or institutional roll numbers) were collected. All data were coded and stored securely, with access strictly restricted to the primary investigators.

Participant Welfare & Support: Because the study assessed psychological distress, a proactive safety net was established. Participants reporting significant emotional distress were provided with detailed information regarding available institutional counseling and mental health support services.

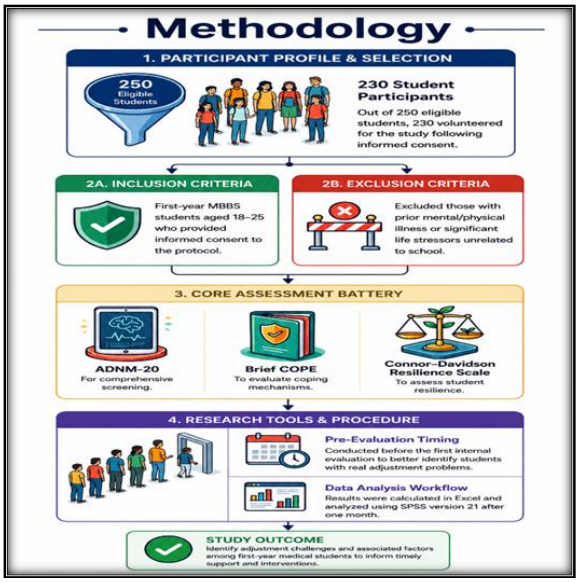
Procedure: The study was conducted before the first internal assessment examination when most students might have settled down in the new environment. After being informed about the aims of the study, 230 of the 250 students volunteered to participate. They filled out an ADNM-20 item disorder scale and sociodemographic questionnaire. They were instructed in the administration of the inventory and the questionnaire took 20 minutes to complete.

Each student's score was calculated using Microsoft Excel, and the score was interpreted. After one month, academic evaluation of the student was done on the basis of their final sessional marks.

The data were analysed using SPSS version 21.Descriptive statistics were employed to calculate mean and standard deviation of numerical data, and frequencies and percentages of nominal data. [Figure: 1]

Statistical analysis

Data were entered into Microsoft Excel and analyzed using Jamovi statistical. Descriptive statistics were used to summarize the study variables. Categorical variables such as gender, residence, socioeconomic status, and probable adjustment disorder status were presented as frequencies and percentages. Continuous variables including ADNM-20, coping strategy, and Brief Resilience Scale (BRS) scores were summarized using mean, standard deviation (SD), median, minimum, and maximum values. The prevalence of probable adjustment disorder was estimated using the ADNM-20 cut-off score of ≥48 and expressed as a percentage. Symptom profiles of adjustment disorder, coping strategies, and resilience were assessed using item-wise mean scores and standard deviations. Normality of continuous variables was assessed using Q–Q plots and measures of skewness. As the study variables were derived from Likert-scale psychometric instruments, Spearman's rank correlation coefficient (rho) was used to evaluate the relationship between adjustment disorder symptoms, coping strategies, and resilience. Correlation coefficients were interpreted according to the strength and direction of association. A p-value of less than 0.05 was considered statistically significant.



RESULTS

A total of 232 first-year MBBS students participated in the study. The socio-demographic characteristics of the participants are shown in [Table 1]. Among them, 137 (59.1%) were females and 95 (40.9%) were males. With respect to residence, 132 (56.9%) students belonged to urban areas, while 100 (43.1%) were from rural areas. Regarding socioeconomic status (SES), the majority of participants belonged to the middle class (63.8%), followed by upper middle class (19.0%), lower middle class (11.6%), lower class (3.0%), and upper class (2.6%).

Table 1: Socio-demographic characteristics of study participants (N = 232)

Characteristic	Frequency (n)	Percentage (%)
Gender		
Female	137	59.1
Male	95	40.9
Residence		
Rural	100	43.1
Urban	132	56.9
Socioeconomic Status		
Lower class	7	3.0
Lower middle class	27	11.6
Middle class	148	63.8
Upper middle class	44	19.0
Upper class	6	2.6

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[Figure 1] shows the prevalence of probable adjustment disorder among the study participants. A majority of students (84.1%) screened positive for probable adjustment disorder using the ADNM-20 questionnaire cut-off score of ≥48. The findings indicate a high burden of adjustment-related psychological distress among first-year medical students during the transition into medical education.

[Table 2] shows the mean ADNM-20 total score among the participants was 59.8 ± 10.9, indicating considerable adjustment-related psychological distress among first-year MBBS students.

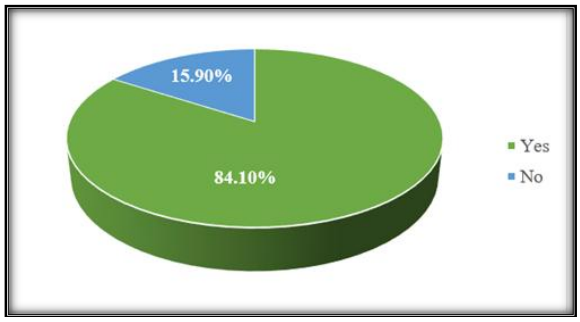

Figure 1: Prevalence of probable adjustment disorder among first-year MBBS students (N = 232).

Table 2: Severity of Adjustment Disorder Symptoms among the participants (N = 232)

Variable	Mean ± SD	Median	Range
ADNM-20 Total Score	59.8 ± 10.9	61.5	25–80

[Table 3] shows the symptom profile of adjustment disorder among the first-year MBBS students. Individual ADNM-20 symptom items revealed that repetitive thinking about the stressful situation (mean = 3.33 ± 0.64), attempts to avoid thinking about the situation (mean = 3.30 ± 0.70), sadness and low mood (mean = 3.28 ± 0.75), and recurrent memories of the stressful event (mean = 3.19 ± 0.75) were among the most commonly reported symptoms. Symptoms related to anxiety and emotional distress, including feeling tense and restless (mean = 3.13 ± 0.83), feeling nervous or anxious (mean = 3.09 ± 0.80), and irritability or anger (mean = 3.10 ± 0.94), were also frequently reported. Functional impairment was evident among participants, with many students reporting that their work or studies were affected (mean = 3.06 ± 0.90), along with disturbances in social life (mean = 2.76 ± 1.00), interpersonal relationships (mean = 2.63 ± 1.09), and overall functioning (mean = 2.75 ± 1.00). [Table 3]

[Figure 2] shows the mean scores of ADNM-20 symptom items among first-year MBBS students. Repetitive thoughts about the stressful situation, avoidance of thinking about the situation, sadness/low mood, and recurrent memories were the most commonly reported symptoms. Anxiety, tension, irritability, and academic impairment were also frequently observed, while interpersonal relationship disturbances and feelings of losing control showed relatively lower mean scores.

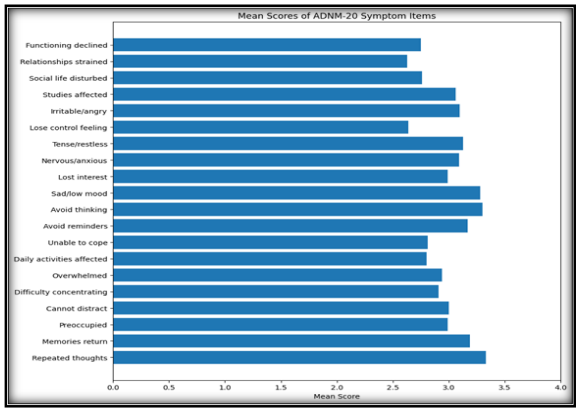

Figure 2: Mean Scores of ADNM-20 symptom items among first-year MBBS students

Table 3: Symptom profile of adjustment disorder among first-year MBBS students (N = 232)

ADNM-20 Symptom Item	Mean ± SD
I must think about the stressful situation repeatedly	3.33 ± 0.64
Memories of the stressful event keep coming back	3.19 ± 0.75
I feel constantly preoccupied with the stressful situation	2.99 ± 0.85
I find it difficult to distract myself from thoughts about the events	3.00 ± 0.91
I have difficulty concentrating since the event	2.91 ± 0.91
I feel overwhelmed by the situation	2.94 ± 0.87
I find it hard to carry out daily activities	2.80 ± 1.04
I feel unable to cope with the situation	2.81 ± 0.98
I avoid reminders of the stressful event	3.17 ± 0.75
I try not to think about the situation	3.30 ± 0.70
I feel sad and low	3.28 ± 0.75
I have lost interest in things I used to enjoy	2.99 ± 0.94
I feel nervous or anxious	3.09 ± 0.80
I feel tense and restless	3.13 ± 0.83
I feel like I might lose control over my behavior	2.64 ± 1.06
I get easily irritated or angry	3.10 ± 0.94
My work/studies are affected	3.06 ± 0.90
My social life is disturbed	2.76 ± 1.00
My relationships are strained	2.63 ± 1.09

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My overall functioning has declined	2.75 ± 1.00

Table 4: Coping strategy profile among first-year MBBS students (N = 232)

Coping Strategy Item	Mean ± SD
I try to stay calm and think clearly about the problem	3.15 ± 0.68
I talk to someone I trust about how I feel	3.09 ± 0.96
I take breaks or do things that help me relax	3.20 ± 0.73
I focus on finding solutions and take action	3.14 ± 0.73
I avoid thinking about the problem	2.94 ± 0.79
I try to see the positive side of the situation	3.14 ± 0.80
Coping Total Score	18.7 ± 2.45

The mean coping total score among the participants was 18.7 ± 2.45. Among the coping strategies, taking breaks or engaging in relaxing activities showed the highest mean score, followed by staying calm and focusing on problem-solving. Avoidance-related coping demonstrated comparatively lower mean scores. [Table 4]

Table 5: Brief Resilience Scale (BRS-6) Scores among first-year MBBS students (N = 232)

BRS Item	Mean ± SD
I tend to bounce back quickly after difficult times	3.16 ± 0.97
I have a hard time making it through stressful events*	2.82 ± 0.86
It does not take me long to recover from stress	3.12 ± 0.98
It is difficult for me to recover from setbacks*	2.86 ± 0.95
I usually come through difficult times with little trouble	3.31 ± 0.82
I take a long time to recover from stress*	2.97 ± 1.00
BRS Total Score	18.2 ± 3.29

* Reverse-scored items

The mean BRS total score among the participants was 18.2 ± 3.29. The highest mean score was observed for the statement "I usually come through difficult times with little trouble," suggesting a moderate level of resilience among the students. Reverse-scored items demonstrated comparatively lower mean scores.

Table 6: Correlation between adjustment disorder, coping strategies and resilience (N = 232)

Variables	Spearman's rho	p-value
ADNM Total score vs Coping Total score	-0.210	0.001
ADNM Total score vs BRS Total score	-0.570	<0.001
Coping Total score vs BRS Total score	0.294	<0.001

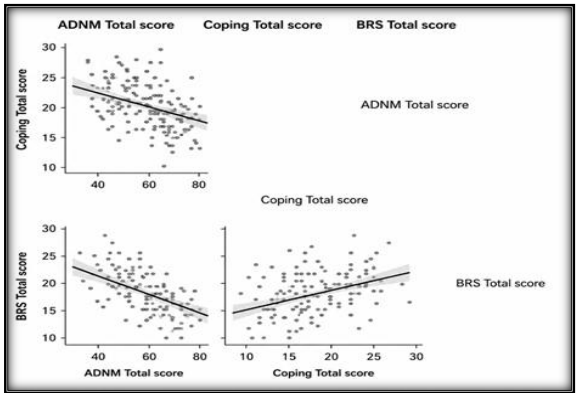

Figure 3: Scatter plot matrix showing relationships

Spearman's rank correlation was used to assess the relationship between adjustment disorder scores, coping strategies, and resilience, as the variables were derived from Likert-scale psychometric instruments. Spearman correlation analysis demonstrated a statistically significant negative correlation between ADNM-20 total scores and coping scores (rho = −0.210, p = 0.001), indicating that students with better coping strategies experienced lower levels of adjustment-related distress. A moderate negative correlation was observed between ADNM-20 scores and resilience scores (rho = −0.570, p < 0.001), suggesting that higher resilience was associated with lower adjustment disorder symptom severity. Additionally, coping scores showed a weak positive correlation with resilience scores (rho = 0.294, p < 0.001), indicating that students with better coping abilities also tended to have higher resilience levels.

[Figure 3] illustrates the relationship between adjustment disorder symptoms, coping strategies, and resilience among first-year MBBS students. Adjustment disorder scores were negatively associated with coping and resilience scores; while coping and resilience showed a positive association with each other.

DISCUSSION

The present study showed a high prevalence (84.1%) of probable adjustment disorder among first-year MBBS students and was suggestive of psychological distress during transition of medical education. Similar findings have been reported previously where medical students are particularly vulnerable to adjustment difficulties due to

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academic pressure, competitive environment and separation from familiar social support systems.[18,19] The mean score of ADNM-20 was 59.8 ± 10.9, indicating a high level of adjustment-related symptoms among the participants. The most common symptoms reported were repetitive thoughts about stressful situations, avoidance behaviors, sadness and anxiety. These findings are consistent with prior studies that identified preoccupation, emotional distress, and impaired functioning as core features of adjustment disorder among university students.[20,21]

Better coping strategies were also associated with lower adjustment disorder scores, the study found. Students reporting fewer distress symptoms used problem-focused coping and relaxation techniques. Similar observations were reported by Mahmoud et al. who found that adaptive coping mechanisms help in better psychological well-being among medical students.[22]

Resilience was moderately negatively correlated with severity of adjustment disorder, meaning that the students with higher resilience had fewer difficulties related to adjustment. This result is in line with previous research that has identified resilience as a protective factor against stress, anxiety and emotional problems in medical students.[23,24]

Overall, the findings suggest that first-year medical students should be provided with early screening, psychological support programs, resilience-building interventions, and effective coping skills training. These measures can lead to a successful adaptation to the demanding medical education environment and enhance the mental well-being and academic performance of students.[25]

Limitations:

This was a single-center cross-sectional study using self-reported measures that may be subject to social desirability bias. No control group from other professional courses was available, limiting generalizability. Longitudinal studies would give more information about the course of symptoms and causal relationships.

CONCLUSION

In conclusion, adjustment disorder is highly prevalent in first year medical students. Proactive screening and supportive interventions are necessary to promote better psychological adjustment and academic success.

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