EFFECT OF ADJUSTMENT ABILITY ON ACADEMIC PERFORMANCE OF FIRST YEAR MBBS STUDENTS IN A GOVERNMENT MEDICAL COLLEGE IN SOUTH KERALA

Dr. Gilsa.E.S[1*], Dr. Miriam Varkey[2], Dr. Rajad. R[3], Dr. Alen Jude Thambi[4]

1. Associate Professor of Biochemistry, 2. Professor of Biochemistry, 3.Assistant Professor of Anatomy, 4. Lecturer, Department of Biochemistry, Government TD Medical College, Alappuzha.

*Corresponding author – **Dr. Gilsa.E.S**

Email id – mailgilsaes@gmail.com

ABSTRACT

Background: The adjustment problem is highly prevalent among medical students compared to other streams of education. Maladjustment has profound influence on the academic performances and also will also have many immediate and remote influence on the students both physical and mental health. Hence this study was undertaken to assess the adjustment ability of our students and its effect on their academic performances **Methodology:** Adjustment ability of 98 first year MBBS students in Government in Kerala Medical College was assessed using Bell's adjustment Inventory (BAI). Scores obtained were compared with the marks scored for the final sessional examination using independent sample t Test **Results:** The mean Bells score for our students was 48.36± 14.17 which is above the cut off score of 44 indicating unsatisfactory adjustment ability. Out of 98 students 59 students were having Total Bell's score above 44. There was no significant gender difference noted. There was a significant difference in the Bells score between the students who secured more than 50% marks and those who have not. **Conclusion:** This study shows that a majority of first year MBBS students in our institution have unsatisfactory adjustment ability. Adjustment issues should be of concern because they may lead to undesirable coping strategies like substance abuse and the incidence of this is found to be increasing in medical students in India as shown by many studies. Hence adjustment issues among students should be addressed effectively not only to improve academic performance, but to prevent psychiatric morbidities in the future

Keywords-Adjustment ability, Academic Performance, Bell's adjustment Inventory

INTRODUCTION

The medical school environment is highly stressful everywhere in the world .There are several factors like vast syllabus, unending series of examinations, fear of failure, peer pressure, high expectations of parents and demanding society etc put the students under pressure .The adjustment problem is highly prevalent among medical students compared to other streams of education **(1)** The ability to cope up can differ in individuals based on many inherent and environmental factors. Studies from east and west shows the adjustment ability has profound influence on the academic performances. Maladjustment will also have many immediate and remote influence on both physical and mental health of the students leading to the development of negative emotional symptoms of depression, anxiety, and stress and can even result in suicide or suicidal attempts **(2)**

Adjustment is described as a process by which an individual adapts to oneself and environment at home, school or college, at work and life situations during growing as well as aging. A good adjustment ability helps to keep the basic impulses in a tolerable level and to achieve goals by believing in one's own

abilities. It has multiple dimensions like intellectual, emotional, social, physical, psychological, vocational etc. Adjustment is by Halonen and Santrock defined as the psychological process which helps a person to adapt, cope and manage the problems, problems challenges and demands of everyday life faced in daily life (3). Simon et al also gives a similar definition for adjustment" (4)

Students commonly face adjustment issues during the first year of their medical College. Many students experience the entrance to the stressful environment of medical college as distressing which may result in many adjustment problems causing poor academic performance (5). Srivastava et al notices that students with adjustment problems are less with good psychological support (6). Hence early recognition of such problems and giving necessary psychological and emotional support may be beneficial in reducing the short term and long term consequences. The factors known to affect academic performance of medical students are which include 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). Academic performance is also influenced by multiple other factors. Poor academic performance and poor attendance often indicates difficulties in adjusting to the new environment (12). These students face social, emotional , physical and family problems which may affect their learning ability and academic performance (13) Some of them find it hard to cope with the stress and lag behind, while others see the pressure as a challenge to work harder (14,15). For many students, entrance to the Medical college causes displacement from family and friends to an entirely different environment with a vast syllabus, newer terminologies and newer pattern of study different from their school .This challenges the students self-image and may cause loss of self-confidence (16, 17)

MATERIALS AND METHODS

This cross sectional study was conducted in the Department of Biochemistry among 98 first year medical students in a Government Medical College in Southern Kerala. The students who volunteered were recruited to the study after getting an informed consent to a protocol which was approved by Institutional Research committee and Institutional Ethical Committee. The study was done towards the end of second semester when most of the students might have accustomed to the new environment. So students with real adjustment issues can be picked up.

Tools used

Socio-Demographic Questionnaire

Socio demographic data like age sex, parent's educational status and occupation, marks obtained for the qualifying examination, rank obtained for the medical entrance examination etc was collected using a questionnaire (Appendix I)

Modified Bell's adjustment inventory (BAI) - student form[8]

This modified adjustment inventory is a psychometric analytic tool developed by Hugh M.Bell (1934) to assess the adjustment ability of a person in four aspects. It is a widely used tool used by several researchers and therapist in in Indian scenario. It has two forms –a student form and an adult form. The student form is used for this study. It is a self-administered questionnaire with four parts and each part has 35 questions and a total 140 questions. Each question is answered in a three point scale as Yes, No and Uncertain. Each section has different scores and norms are given to interpret the results. The scores obtained in each areas like home, health, social and emotional were added together to determine the total level of adjustment. Higher score indicate more adjustment issues. Bells adjustment inventory and the scoring key is given as Appendix II

Procedure

Study was conducted at the end of second semester, a week before the study leave. The students were briefed about the purpose of the study and 98 students out of 150 volunteered to participate. They were given socio demographic questionnaire and Bell's adjustment inventory. Instructions for the administration of inventory were given.40-45

minutes were taken to complete the questionnaire. Score for individual students were calculated using Microsoft Excel. The interpretation of the score was done as given below. The academic performance was assessed based on the final sessional marks scored by the student which was followed after one month.

Data was analyzed by SPSS version 21.Descriptive statistics was used to find the frequencies and percentages of nominal data and mean and Standard deviation of numeric data.

RESULTS

Out of 150 students admitted in the first year ,98 students participated in the study 68 were females and 30 were males and it was conforming to the general trend of female to male ratio of 2:1 getting admission to the medical colleges for the past few years. were males and it was conforming to the general trend of female to male ratio of 2:1 getting admission to the medical colleges for the past few years.

Only 39 students out of 98 have a satisfactory Bells score of above 44. Approximately one fifth of the students scored in the very unsatisfactory levels. More than 58 % have unsatisfactory Bells score. Majority of the students have good home (75.5%) and social adjustment score (98.98%).But 90.8% of students are having poor health score. Emotional score also is unsatisfactory in majority (69.4%).

Based on the marks scored in the final sessional examination students were grouped into two. Group1-Students who secured less than 50% for the final sessional examination n=35, Group 2 –Students who secured more than 50% marks n=63.Independent sample t test was used to compare the Total Bells score and the scores of subdomains in two student groups. There was significance difference between the two groups in total bells score and the scores of sub domains-Home, Health, Social and Emotional.

No significant difference was observed among male and female students in Total Bells score and scores of subdomains except for social adjustment. Male students have better social adjustment compared to female students t(96)=2.604 and p=0.011

DISCUSSION

The results show more than half of the students who participated in the study have adjustment issues. It is well known that medical education impart significant psychological stress on students [20] There are various studies which prove that considerable degree of psychological morbidity is seen among medical students ranging from stress, interpersonal problems and suicidal ideation to psychiatric disorders 21-27 and they tend to have greater psychological distress than the general population. There are many studies from different streams showing that Several studies have reported that poor adjustment can result in poor academic performance. The findings of our study is consistent with those reports, with a significant difference in the adjust ability between students who scored more marks and who scored less marks. There was no significant gender difference noticed in our study contrary to the study done by Rekha and Narasimha swami among first year medical students in Karnataka5. Emotional adjustment is poor in majority of the students .This may be because 94% of students are hostellers. Lack of emotional support is a major issue for students. Most have good home (75.5%) and social adjustment scores (98.98%). But 90.8% of students are having poor health score

CONCLUSION

This study shows that a majority of first year MBBS students in our institution have unsatisfactory adjustment ability. Adjustment issues should be of concern because they may lead to undesirable coping strategies like substance abuse and the incidence of this is found to be increasing in medical students in India as shown by many studies 27, 28.Hence adjustment issues among students should be addressed effectively not only to improve academic performance, but to prevent psychiatric morbidities in the future.

Table 1 Demographic characteristics and academic and adjustment score

Sl.No	Variables	Mean ±SD	Frequency (percentage in bracket)
1	Age	19.68±1.090	
2	Sex		
	Male		30(30.61)
	Female		68(69.39)
3	Marks for qualifying examination	93.94±4.312	
4	Marks scored in final sessional		
	<50		35(35.71)
	>50		63(64.29)
5	Total bells Score		
	<44		39(39.80)
	>44		59(60.20)

Table 2 Bells's score in subdomains –Frequency and percentage

Score	Mean ±SD		Interpretation	Frequency of students	Percentage of students
Total	48.36± 14.17	0-12	Excellent	1	1.02
Bells		13-24	Good	1	1.02
Score		25-44	Average	37	37.76
		45-60	Unsatisfactory	41	41.84
		>61	Very unsatisfactory	18	18.37
Home	7.94±5.20	0-2	Excellent	10	10.20
		3-4	Good	22	22.45
		5-10	Average	42	42.86
		11-16	Unsatisfactory	15	15.31
		17	Very unsatisfactory	9	9.18
Health	15.65±4.32	0-1	Excellent	0	0.00
		2-5	Good	0	0.00
		6-9	Average	10	10.20
		10-16	Unsatisfactory	45	45.92
		17	Very unsatisfactory	43	43.88
Social	9.53±4.86	0-5	Excellent	21	21.43
		6-9	Good	32	32.65
		10-21	Average	44	44.90
		22-26	Unsatisfactory	1	1.02
		27	Very unsatisfactory	0	0.00
Emotional	15.23 ±6.48	0-3	Excellent	1	1.02
		4-5	Good	6	6.12
		6-11	Average	21	21.43
		12-19	Unsatisfactory	46	46.94
		20	Very unsatisfactory	24	24.49

Figure -1 Bells score Total and sub domains in male and female student (% are in figure)
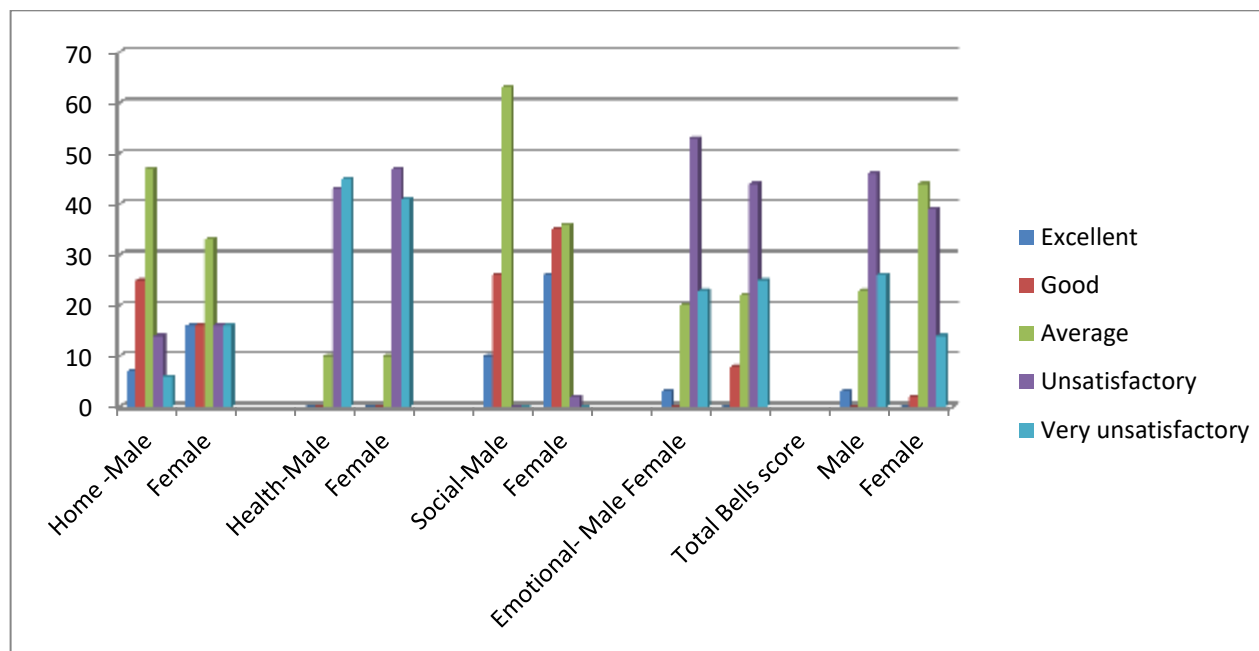

Table 3-Comparison of Group1 and Group2 based on Bells score (Group1-Students secured < 50% marks n=35, Group 2 –Students secured > 50% marks n=63)

Bells Score	Group 1 n= Mean ±SD	Group 2 n= Mean ±SD	t value	p value
Home	9.78±5.064	4.30±3.197	5.664	0.000
Health	16.54±4.228	13.91±4.018	2.957	0.000
Social	11.52±4.120	5.61±2.947	7.344	0.004
Emotional	18.22±5.410	9.36±3.872	8.365	0.000
Total	56.06±10.298	33.18±6.20	11.7	0.000

Table 4-Gender difference in the Bells score

Bells score	Female (n= Mean ±SD	Male n= Mean ±SD	t value	p value
Home	7.5±4.66	8.93±6.225	1.261	0.21
Health	15.6±4.373	15.67±4.278	0.021	0.984
Social	8.74±4.468	11.33±4.744	2.604	0.011
Emotional	14.96±6.677	15.87±6.056	0.640	0.640
Total Bells score	46.84±13.597	51.80±15.078	1.610	1.610

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