



**Correlation between medical students’ performance and Psychiatry morbidity with students’ economic and family conditions**

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**ABSTRACT**

**Introduction :** Studies from other parts of world have shown a high prevalence of academic difficulties in students with compromised family but studies in India especially amongst medical students are lacking. So a cross sectional study was planned to assess effect of parental alive, marital and financial statuses on medical students’ academic performance as well as relation to psychiatric morbidity.

**Methods :** A semi-structured questionnaire was given to 417 Under Graduate medical students containing demographic variables and questions regarding Academic, Family and Financial stress variables as well as specific anxiety and depression scales.

**Results :** Academic variables like students’ perception of satisfaction with study, academic difficulty in understanding or recall or revision of study, being late/missing classes, feeling of overloaded with study and exam related difficulties were comparable with perceived support from family. Significant association found between Hamilton Anxiety and Depression scores and family issues. 2(6.9%) (p 0.01) students who reported their family support poor and also 2(15.4%) (p 0.002) students who had their parents separated scored severe(>24) in anxiety scale. 3(10.3%) (p 0.03) of students who reported poor family support and 2(15.4%) (p 0.02) of students with separated parents scored severe (>24) in depression scale compared to 2.3% of students with parents living together.

**Conclusion :** Previously commonly reported themes were replicated in this study as students perceiving compromised family and financial support also perceived academic stress more and had some psychiatric morbidity. It is useful for all the medical colleges, media and government to carry out screening and management programmes as well as take care of such deserving students so they can give their optimum results.

**KEYWORDS**

academic stress, family, financial, anxiety, depression

**Introduction**

Parents are the most immediate relation of a child. Their marital, financial and alive statuses do have an important influence on the personality and development of child. Parents can better understand the educational needs and their children’s aptitude. They can help their children in their education which affects their proficiency in their relative area of knowledge. Belonging to strong financial background, parents can provide facilities in a best possible way to enhance educational capability of their children.

Parental Socio-Economic factors are of vital importance in affecting students’ educational achievements also. They are like backbone in providing financial and mental confidence to students. Education is a primary need in this era of globalization. Education not only gives insight, it also grooms the personality, inculcates moral values, add knowledge and gives skill. Education is necessary owing to the atmosphere of competition. In every field highly qualified people are needed. The world is making progress day by day because better education is the only key to match the pace of its progress. People are giving preference to higher education.

There could be number of factors that affect students’ academic performance like parental economical status, parent’s education and their involvement in child’s studies, student’s gender, time allocation, technology, available facilities and lots of more. Besides other factors, socio-economic status is one of the most researched and debated factor among education-

al professionals that contribute towards the academic performance of students.

The most prevalent argument is that the socio-economic status of learners affects the quality of their academic performance. Most of the experts argue that the low socio-economic status has negative effect on the academic performance of students because the basic needs of students remain unfulfilled and hence they do not perform better academically. The students having financial problems have to face various hurdles. Their financial problems distract them from their studies and they fail to get high grades and consequently have to suffer for finding a job.[1]

Causes of stress in medical education academic reasons and emotional factors are greater during the initial years while reasons related to patient care and physical factors are more important in subsequent years. Long working hours, lack of peer support, competitive environment, rigid authoritative non encouraging faculty, an imbalance between professional and personal lives, lack of recreational activities, staying away from home, financial problems, an uncertain future, emergency situations, speedy decisions, life and death issues, cultural and minority issues, mismatch between capability and expectation are some reasons of stress[2]. Stress as the perception of discrepancy between environmental demands and individual capacities to fulfil these demands[3]. While researcher defines stress as the adverse reaction people have to excessive pressure or other types of demands placed on them. Stress occurs

when an individual is confronted by a situation that they perceive as overwhelming and cannot cope up with.

While the negative effects of stress on an individual may vary considerably from one student based on their previous encounter with situations and the resilience of the individual student. The perception of the individual determines whether or not the stressor has a detrimental effect; that is whether it causes physical or psychological symptoms of stress in the individual.

Parents are in the strongest position to develop positive relationships with their children that facilitate the acquisition of standards and values; and also parents are better able to monitor and understand their children behavior than anyone else because of their long and sustained exposure to them, as a result to minimize the effect of a lower level of academic achievement and psychological problems[4]. So nowadays, the condition of parents' marital as well as parents' alive status plays a great role for child development. Specifically, divorce, remarriage and single parental status have an impact on children adjustment. For this reason, there is an increased attention to investigate the overall effect of family transitions on the well being of children. Regarding the relationship between family conditions and the behavior of children some studies show that harmonious marriages promote children's competence and maturity. Others demonstrate that marital conflict or divorce tends to be associated with the children's cognitive delay, academic difficulties, and antisocial or withdrawn behavior in the early school years[5-11]. Children from intact families, on average, display less behavior problems, less psychological distress, and greater academic achievement than do children of divorce [6-8][12-14]

Somewhat differently, other studies have tried to examine the importance of the access to both parents than separated. In one study following parental separation, in general, 30% of the children has experienced a marked decrease in their academic performance, and this was evident three years later [15-16].

[17] The study revealed that insufficient parental income, family type and lack of funding by governments are factors influencing students' academic performance. [19], [18], [20] carried out separate study on social economic status in education research and policy, found that social economic background remains one of the major sources of educational inequality and adds that one's educational success depends very strongly on the social economic status of one's parents. [22] Agree with [21], in their study on the influence of social and economic disadvantage in the academic performance of students found that families where the parents are advantaged socially, educationally and economically foster a higher level of achievement in their children. They also found that these parents provide higher levels of psychological support for their children through environments that encourage the development of skills necessary for success at school.

On the contrary [23] in their study on educational and social economic background of undergraduates and academic performance found that students coming from disadvantaged socio-economic and educational homes perform relatively better than those coming from higher socioeconomic and educational strata.

[24] In his study concurs with previous studies, a student who comes from a higher socio-economic group will achieve better test results than a student from a lower socio-economic group.

[24] The findings of many empirical studies suggest that children whose parents are at the bottom of the social economic hierarchy are not as inclined to seek or gain access to available facilities as the children with families are located at the middle or top of the hierarchy. [25] shared similar view with [24] from her study that students from the bottom quartile consistently perform below students from the top quartile of socioeconomic status.

Most Western Universities offer student welfare programs through committees, self-help groups, websites, counselling centres and so on. Studies from other parts of world have shown a high prevalence of academic difficulties in students with compromised parental and financial support but studies in India especially amongst medical students are lacking. India has the largest numbers of medical colleges and medical students. With this aim a cross sectional study was planned to assess effect of parental alive, marital and financial statuses on medical students' academic performance as well as relation to psychiatric morbidity.

## METHODOLOGY

A cross sectional study was done on Under Graduate medical students studying at Government Medical College. Study included 4 batches studying during the year, 2011-12, which include second year (227), third year (116) and final year(74).

After taking approval from the Human Research Ethics Committee and the college dean, a session was arranged for each batch. During the session, students were explained about the study and were given instructions for data filling. Each query was solved simultaneously. Appropriate time was given to make it easier for the students to complete the questionnaire and return it during the same session. After that, a session on stress management was taken by department of psychiatry. Selected time for the study was midterm for each batch. First year batch which was recently admitted in the medical college was not included in this study. All Under Graduate medical students who gave (oral) consent were included in the study and students who didn't give consent or participate in study were excluded from the study

**INSTRUMENTS:** A semi-structured questionnaire was prepared which contains demographic variables and questions regarding Academic, Family and Financial stress variables as well as specific anxiety and depression scales.

## Hamilton Anxiety Rating Scale (HARS) and Hamilton Depression Rating Scale (HDRS)

Several instruments have been developed to measure anxiety and depression. The most widely used of these are the Hamilton Anxiety Rating Scale (HARS) and Hamilton Anxiety Rating Scale (HDRS) (Hamilton, 1959, 1969), a measure regarded highly enough to have been included in the National Institute of Mental Health Standard Assessment Battery.

The 14-item, the version most widely used with adults was used in rating the adolescents in its original form. As each of the 14 items is rated from 0 (not present) to 4 (severe).[26-28]

The items assessing depressed mood includes a combination of affective, behavioral, and cognitive features, such as gloomy attitude, pessimism about the future, subjective feeling of sadness, and tendency to weep. The general somatic symptoms item, which is also symptomatically heterogeneous, includes feelings of heaviness, diffuse backache, and loss of energy. Headache is coded only as part of somatic anxiety along with such symptoms as indigestion, palpitations, and respiratory difficulties. Genital symptoms for women entail loss of libido and menstrual disturbances. Most items on the Hamilton depression scale at least are scaled so that increasing scores represent increasing severity. Then those data was entered into the computer and statistically analyzed by using various tests with software Epi Info.

## Results

Total 417 undergraduate medical students were surveyed which include students from second year to final year among which 214(51.7%) were male and 203(48.3%) were female students. Most of students were between 19 to 22 years of age.

Comparison was done amongst family and financial parameters with various academic variables and anxiety and depression scores. There was a significant association found that students

(p=0.02) who reported poor to average family support also reported poor level of satisfaction with their study compared to students who had good family support. Along with this there was a significant association found between students' parents' alive status and their level of satisfaction as (p 0.01) students who had any of their parents dead reported poor level of satisfaction compared to students who had both their parents alive.

On assessing the association between medical study or assignment related difficulty and family or financial issues there was a significant association found between difficulty in understanding medical concepts and parent's marital status as (p 0.02). There was also a significant association (p 0.01) between parents' alive status and recall as students, who had their either parents dead reported difficulty in recall or revision of study compared to students who denied having any difficulty for the same.

There was a significant relation found between the results of students' missing class and family support. (p 0.001) Students with perception of poor support from family reported missing class or being late to class compared to students who had good family support. Again (p 0.02) students who had either of their parents dead also reported missing class compare students who had both of their parents alive.

Regarding students' perception of study load with medical studies, there was a significant association (p 0.04) found between students with single parent and feeling overloaded with studies. But there was no significant association found with these students' perception of load with medical studies with other family and financial support. There was no significant association found between other family parameters and students' perception of their academic performance.

There was a significant relation found between the results of students' perception of difficulties with any subject (p 0.02) as well as exam issues (p 0.001) with of students with single parent.

There was a significant association found between Hamilton anxiety and depression scores and family issues. 2(6.9%) students who reported their family support poor also scored severe (>24) in anxiety scale compared to 1(0.3%) student who reported good family support (p 0.01). Also 2(15.4%) students who had their parents separated also scored severe in anxiety scale compare to 1(0.3%) student who had their parents together (p 0.002). But there was no significant association found between anxiety severity and financial issues.

10.3% of students who reported poor family support also scored severe (>24) in Hamilton depression scale compared to 2.1% of students who reported good family support which was found statically significant (p 0.03). Again 15.4% of students with separated parents scored severe in depression scale compared to 2.3% of students with parents living together (p 0.04). There was no significant association found between depression severity and financial issues..

Previously commonly reported themes were replicated in this study as many of the students perceiving compromised family and financial support also perceived academic stress more and had some psychiatric morbidity.

**Discussion**

Medical students are a valuable, intellectual and service-providing human resource for our future and stress in them leads to less productivity, reduced quality of life,

learning difficulties and may negatively affect patient care. Medical education and training are cost and time-intensive.

Each family setting has to give attention for taking formal responsibility by parents for child's education and support. This study targets at exploring influences of parents' alive, marital and perceived socio-economic status on medical students' academic progress and relevance to psychiatry morbidity. Through analysis of data, the findings show that these parameters do have effects on student's academic achievements as well as it may be causative factor for psychiatry morbidity amongst these students.

Our findings are replicated by various researches, as per shown in review, the academic difficulties faced by students raised in compromised homes in terms of parental marital, alive and financial status. However, despite the statistics, many students from these homes do attain academic success.

Across all socio-economic groups, parents, face major challenges when it comes to providing optimal care and education for their children. For families in poverty, these challenges can be formidable. Sometimes, when basic necessities are lacking, parents must place top priority on housing, food, clothing and health care. Unfortunately, relatively few researchers can help influence public policy by understanding factors which are associated with academic achievement and promote training, education, and advocacy programs which support these students. Expanding our understanding of single-parent families is crucial if we are to have significant impact on policy and be able to meet the needs of all people. Counselling Psychology cannot afford to rest on its past achievements regarding diversity and inclusion, we must continue to expand our thinking and reach out to deserved individuals and families.

There should be committees consisted on educated persons to guide those students whose parents cannot provide them a guide line in the educational problems. Moreover, this committee should also help the needy students by providing them financial aid. Media should launch a campaign regarding the importance of education and motive rich people to help those students who are intelligent but Socio Economic Status is an obstacle in their educational career. Media and government should play active roles in informing these parents about the importance of best education in today's world. This paper has been a review of research from the past few years regarding academic performance of students amongst single parent and financially poor families.

It is useful for all the medical colleges to carry out screening and management programmes to identify, prevent and eventually reduce stress; as a part of their medical curriculum. It is time to make medical education interesting, restore enthusiasm in the students and to project a more realistic, humane image of the profession. This would decrease the amount of stress and its consequences. It is imperative that future physicians are healthy themselves before they treat others. Multiple areas for future inquiry have been suggested and it is the hope of this author that science can influence policy to ensure all students receive equitable resources and are given the opportunity to give their best.

**Results of effect Of Parental Alive, Marital And Financial Statuses On Medical Students' Academic Performance, Anxiety And Depression.**

No	VARIABLES	PERCEIVED FAMILY SUPPORT n(%)		PARENT'S MARITAL STATUS n(%)		PARENTAL ALIVE STATUS n(%)		PERCEIVED FINANCIAL SUPPORT n(%)	
		Average- Poor 29(7.1)	Very Good-Good 382(92.9)	Separated 13(3.2)	Together 394(96.8)	Any dead 53(12.7)	Both alive 364(87.4)	Very Good-Good 164(39.4)	Average - Poor 252(60.6)

1	Students' perception of satisfaction with study								
	Not satisfactory	26(89.7)	277(72.5)	12(92.3)	286(72.6)	32(60.4)	275(75.5)	126(76.8)	180(71.4)
	Satisfactory	3(10.3)	105(27.5)	1(7.7)	108(27.4)	21(39.6)	89(24.5)	38(23.2)	72(28.6)
		P= 0.02		P=0.06		P=0.01		P=0.1	
2	Academic difficulty- Difficulty in understanding study material								
	No	25(86.5)	348(91.1)	9(69.2)	360(91.4)	49(92.5)	330(90.7)	145(88.4)	234(92.9)
	Yes	4(13.8)	34(8.9)	4(30.8)	34(8.6)	4(7.5)	34(9.3)	19(11.6)	18(7.1)
		P=0.27		P=0.02		P=0.45		P=0.3	
3	Academic difficulty- Difficulty in recall or revision of study								
	No	22(75.9)	266(69.6)	8(61.5)	280(71.1)	30(56.6)	264(72.5)	108(65.9)	186(73.8)
	Yes	7(24.1)	116(30.4)	5(38.5)	114(28.9)	23(43.4)	100(27.5)	56(34.1)	66(26.2)
		P=0.31		P=0.32		p=0.01		P=0.2	
4	Academic difficulty- Medical Study consumes lots of time								
	No	19(65.5)	242(64.4)	9(69.2)	251(64.7)	28(54.9)	238(66.1)	89(55.6)	177(70.8)
	Yes	10(34.5)	134(35.6)	4(30.8)	137(35.3)	23(45.1)	122(33.9)	71(44.4)	73(29.2)
		P=0.4		P=0.3		P=0.08		P=0.001	
5	Life as a medical student is problematic.								
	No	23(79.3)	342(89.5)	11(84.6)	352(89.3)	44(83)	327(89.8)	142(86.6)	228(90.5)
	Yes	6(20.7)	40(10.5)	2(15.4)	42(10.7)	9(17)	37(10.2)	22(13.4)	24(9.5)
		P=0.09		P=0.41		P=0.10		P=0.15	
6	There is difficulty in dealing with any particular subject								
	No	25(80)	306(79)	14(77)	316(80)	32(74)	291(80)	140(85.9)	234(92.9)
	Yes	8(20)	76(21)	4(33)	78(20)	11(26)	73(20)	23(14.1)	18(7.1)
		P=0.04		P=0.1		P=0.02		P=0.08	
7	There is difficulty in finishing exam paper in time								
	No	24(72)	297(77)	10(55)	310(78)	37(69)	286(78)	106(64.6)	177(70.2)
	Yes	9(28)	85(33)	8(45)	84(22)	16(31)	78(22)	58(35.4)	75(29.8)
		P=0.6		P=0.002		P=0.001		P=0.1	
8	There are histories of going blank in exam hall.								
	No	29(87)	353(92)	15(83.)	364(92)	48(90)	336(92)	54(32.9)	117(46.4)
	Yes	4(13)	29(8)	3(17)	30(8)	5(10)	28(8)	110(67.1)	135(53.6)
		P=0.6		P=0.1		P=0.06		P=0.22	
9	There are late/missing classes								
	No	21(72.4)	351(91.9)	11(84.6)	354(90.1)	43(81.1)	332(91.5)	140(85.9)	234(92.9)
	Yes	8(27.6)	31(8.1)	2(15.4)	39(9.9)	10(18.9)	31(8.5)	23(14.1)	18(7.1)
		P=0.001		P=0.38		P=0.02		P=0.08	
10	There is feeling of overloaded with study.								
	No	20(69)	259(67.8)	6(46.2)	272(69)	32(60.4)	252(69.2)	106(64.6)	177(70.2)
	Yes	9(31)	123(32.2)	7(53.8)	122(31)	21(39.6)	112(30.8)	58(35.4)	75(29.8)
		P=0.53		P=0.04		P=0.12		P=0.1	
11	Perception of academic performance								
	Good-Very Good	14(48.3)	156(40.8)	3(23.1)	163(41.4)	24(45.3)	148(40.7)	54(32.9)	117(46.4)
	Average- Poor	15(51.7)	226(59.6)	10(76.9)	231(58.6)	29(54.7)	216(59.6)	110(67.1)	135(53.6)
		P=0.27		P=0.15		P=0.31		P=0.22	
12	Hamilton Anxiety Rating Scale(severe) ( Score >24)								
	Negative	27(93.1)	381(99.7)	11(84.6)	393(99.7)	53(100)	361(99.2)	161(98.2)	252(100)
	Positive	2(6.9)	1(0.3)	2(15.4)	1(0.3)	0	3(100)	3(1.8)	0
		P=0.01		P=0.002		P=0.66		P=0.06	
13	Hamilton Depression Rating Scale (severe)( Score >24)								
	Negative	26(89.7)	374(97.9)	11(84.6)	385(97.7)	51(96.2)	355(97.5)	158(96.3)	247(98)
	Positive	3(10.3)	8(2.1)	2(15.4)	9(2.3)	2(3.8)	9(2.5)	6(3.7)	5(2)
		P=0.03		P=0.04		P=0.41		P=0.23	

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