

Study of Influence of Social and Economic Variables on Academic Performance of Students Preparing for Joint Engineering Entrance Exam in Delhi

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Abstract

Aims: To study the demographic profile of the JEE competitive exam aspirants preparing in coaching institutes as well as those who prepare by themselves for the exam in Delhi .Second , to assess the stress levels of the JEE competitive exam aspirants preparing in coaching institutes as well as those who prepare by themselves for the exam. Third, to study the influence of social and economic variables on academic performance of these competitive exam aspirants . Methods: In the descriptive study, cross –sectional study design was used. The population of the study was aspirant students preparing in coaching institutes as well as those who prepare by themselves for JEE competitive exam in Delhi. The sample consisted of 300 adolescents(150 each attending engineering coaching institute and those do not attend coaching institutes). Non random sampling method was used to select the subjects of the study. A well- structured open ended questionnaire was self- administered to the students and data (responses) was collected. A total of 300 adolescents filled the questionnaire. The data was analysed using frequency and percentage analysis of each item was done. Findings: The findings of the study indicated that among the stressors- academic, parental and personal stressors affected the student's performance and thus increase stress levels . Also among the social and economic variables parents educational levels, parental income ,moral support provided by both mother and father , social and economic standard of both mother and father, family size ,family composition and locality of the aspirant students influence the success and achievement of the engineering competitive exam aspirants preparing in coaching institutes as well as those who prepare by themselves.

Novelty: Study investigated the demographic profile of the engineering competitive exam aspirants , stress levels of the competitive exam aspirants and influence of social and economic variables on academic performance of the competitive exam aspirants. It depicts stress levels of the students, influence of social and economic variables on academic performance of the aspirants, therefore the study contributes in understanding of the socio-demographic factors affecting the students preparation for the competitive entrance exam by the parents and helps in reducing the stress of the adolescents. The study also provide in depth data for similar studies conducted by other researchers.

Keywords: Socio-demographic factors ; Impact ; Stress Level ;Engineering students ; Coaching Institutes ;North District ;Delhi.

Introduction

Examinations and tests have been considered of utmost importance at all stages of education for decision making in the competitive society especially at senior secondary level. Students performance in terms of their

achievement at all levels have been evaluated through exams. Psychiatric illness appears in students due to differences between student expectations and actually realizing the expectations. The tensions can be in the form of personal, psychological, economic, environmental etc. According to a recent study published by the National Institute of Mental Health and Neuro Sciences, one in every five teenagers in India turns into a victim of toxicity or mental illness. Each day, about six students commit suicide because of academic failure. The constant stress to score higher in competitive examinations such as JEE is making students slip into depression. Competitive exams check the relative performance of students, building pressure for many. Tremendous impact of socio-economic status was found on academic achievements of students and it was found that students of high socio-economic status families have better avenues for academic growth both at home and at school. Scholastic performances are better when good academic climate, teaching and learning strategies are available(1). According to Mishra and Tripathi's deprivation study, housing condition, home environment, economic sufficiency, food, clothing, education experience, children experience – rearing experiences, parental characteristics, interaction with parents, motivational experiences, religious experiences, travel and recitation, socio-culture experiences affect student's performance(2). Among groups who face psychological stress, students are the most common group to face psychological stress. This is because of the increasing competition, increased demands of family, society and moreover to be career conscious. Students who are preparing for various competitive exams are to face many psychological stresses that can be positive as well as negative outcome(3). Another study revealed choice of stream, class, place of residence, change in language of education, income, education of parents previous grades, peer pressure, burden of expectations, access to educational, recreational and public health resources have an important relationship with depression, anxiety and stress in students(4). Another study found that the prevalence of anxiety was significant in third year students related to their age, economic and residential status and also related to their academic performances stating that students with low special demographic factors and with academic problems will experience higher levels of anxiety than those with good social demographic status and with no academic problems(5). The results of another study show higher levels of stress among women, migrants, poor and lonely as compared with their counter parts. Stress decreases as the economic situation improves. Variation in the stress levels across socio-demographic characteristics may have specific features among people in the SES hierarchy dwellers of a deprived neighbourhood(5). The results of all the above mentioned studies indicated that socio-economic factors influence the academic achievement of the students in one or other way. Fewer studies have been done on the topic, socio-demographic factors and its impact on stress of engineering (IIT) students attending coaching institutes and those who do not attend coaching institutes and still aspire to crack IIT entrance exam. Therefore this topic was taken for study.

Objectives

1. To study demographic profile of the JEE competitive exam aspirants preparing in coaching classes and those who prepare by themselves in Delhi.
2. To assess the stress levels of the JEE competitive exam aspirants preparing in coaching classes and those who prepare by themselves in Delhi.
3. To study the influence of social and economic variables on academic performance of these JEE competitive exam aspirants in Delhi.

Materials and Methods

The study was descriptive in nature and cross –sectional design was used as design of the study. The study was conducted in November-January , 2019. The population of the study comprised of the JEE competitive exam aspirants preparing in coaching institutes and the students studying in XI and XII standards (Non-Medical) in Rajkiya Pratibha Vikas Vidhalya (RPVV) ,Rohini ,Sector-21 and Rohini ,Sector-11.Only those students of XI and XII (Non –Medical) were considered who prepare by themselves for the JEE competitive exam. Sample of the study consisted of 300 competitive exam aspirants,150 students from three engineering coaching institutes and 150 students (Non-Medical) from XI and XII standards of two RPVV Schools from Rohini ,sector- 21and sector -11,who prepare by themselves foe the JEE exam. Students were knowledgeable enough to answer the questionnaire.

The author was issued authorizing letter for data collection by the Amity Institute of Education, Amity University ,Noida, Uttar Pradesh. The authorising letter was produced to the directors of the five institutes imparting engineering coaching classes in Delhi and also to the Head of the School of both RPVV schools, Rohini Sectors 21,11. Only three coaching institutes gave their written consent for the conduct of the study and data collection. The students were prior informed about the study and their consent was obtained along with the consent of their parents.

Self- structured questionnaire was used as tool of the study to find out influence of social and economic variables on academic performance of JEE competitive exam aspirants and NPVV Schools Non –Medical XI and XII standard students. The questionnaire consisted of two parts. The first part consisted of twenty variables to assess the influence of social and economic variables on academic performance of aspirants. The second part consisted of open ended questions to assess the levels of stress of aspirants. The face validity of the questionnaire was checked by sending it to experts. The reliability of the questionnaire was calculated using Cronbach ‘s alpha ,reliability coefficient was found to be 0.9.

After a brief introduction of the tool ,the study questionnaire was distributed to all the 300 participants . The participants were provided instructions how to answer the questions in the questionnaire. All the participants (students) were instructed to answer all the questions .The participation of the students was voluntary. The completely filled questionnaire was collected by the researcher.

Statistical Analysis of Data

Descriptive statistics was used to analyse data. The data was analysed using frequency count and percentage.

1.Demographic Profile of the Students

Table 1 Demographic Variables of students

Demographic Variable	Engineering coaching Attending Students	Non Coaching Attending Students
1.Sex		
a)Male	100	110
b) Female	50	40
2.Age		
a)16-18	120	140
b)19-21	30	10

Data from Table 2 shows the demographic variables of the students. A total of 300 students participated in the study.150 each were the JEE competitive exam aspirants preparing in coaching classes and those who prepare by themselves for the exam in Delhi. In coaching attending aspirants 100 males and 50 females participated in the study, 120 students belonged to the age group 16-18 and 30 students belonged to the age group 19-21. In the non- coaching attending students 110 were males and 40 were females ,140 students belonged to the age group16-18 while 10 belonged to age group 19-21.

Table 2.- To assess stress levels of students

Stressors			Levels of Stress					
	Coaching attending engineering students					Non Coaching attending engineering students		
	Mild n%	Moderate n%	Severe n%	Very Severe n%		Mild n%	Moderate n%	Severe n% Very Severe n%
Personal stressors	43	57	38	12		33	27	83 7
Environment stressors	54	46	30	20		16	58	63 13
Academic stressors	20	48	74	8		23	51	66 10
Parental stressors	25	37	69	19		51	76	21 2

Data from Table 2 indicated the levels of stress by different stressors namely personal, academic, environmental and parental. From both types of students that is engineering coaching attending and non-coaching students the personal stressors contributed 83% and 57% of the stress levels. The students suffered severe stress due to personal stressor .7 % and 12% aspirants responded severely stressed. In Environmental stressor 54% JEE competitive exam aspirants felt low levels of stress due to environmental stressors. Similarly 63% of the self- preparing aspirants reported that they have severe stress due to environmental stressors. While74% of the coaching classes competitive exam aspirants responded high levels of stress due to academic stressors also 66% of the self –preparation competitive exam aspirants responded to have severe stress due to academic stressors .Among the parental stressors 69% of the JEE competitive exam aspirants preparing in coaching felt that they have severe stress due to parental stressor while 76% of the non –coaching attending students felt they have moderate stress due to parental stressors. The result concluded that all the stressors affect the achievement of the engineering competitive entrance exam students in one way or the other. The parental stressors , personal stressors and the academic stressors increase the levels of stress in one way or the other.

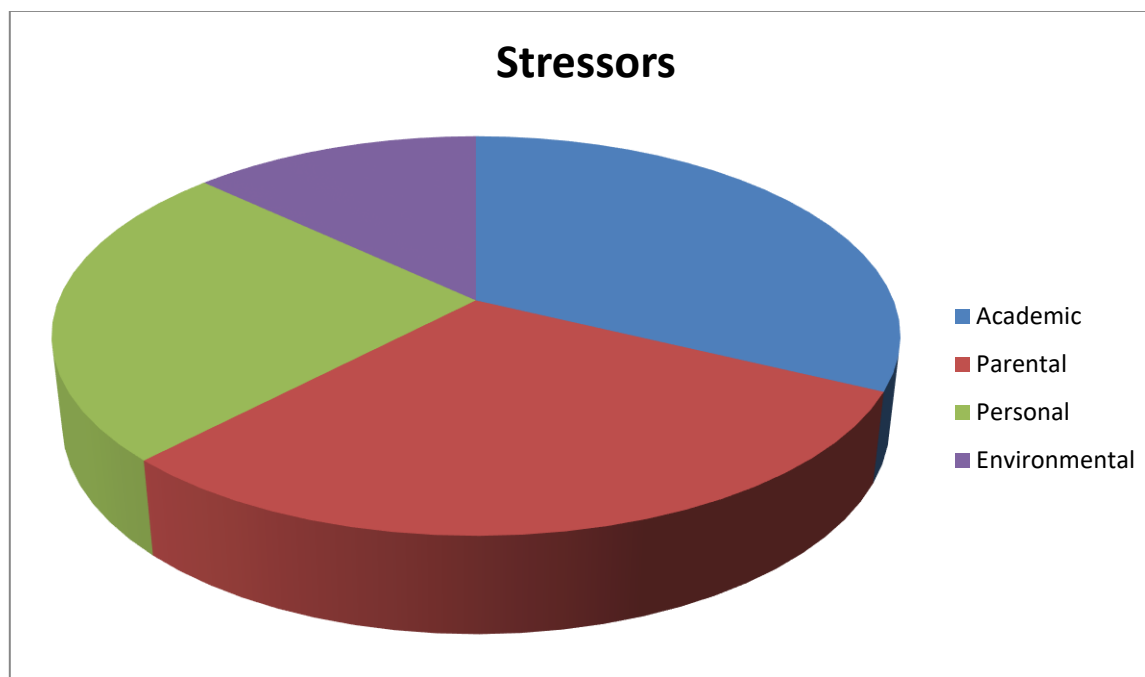


Fig1. Levels of Stressors in JEE Competitive Exam Aspirants in Delhi .

3. To Study the Influence of Social and Economic Variables on Academic Performance of JEE Competitive Exam Aspirants.

Table 3 Social and Economic Variables and its Influence on Academic Performance .

Social and Economic Variables		Academic Performance of Coaching Attending Students				Academic Performance of Non Coaching Attending Students			
		Low n%	Average n%	High n%	Excellent n%	Low n%	Average n%	High n%	Excellent n%
Father's Education	a) Non Graduate	94	28	11	17	110	17	15	8
	b) Graduate	35	83	25	7	13	79	36	22
	c) Post Graduate	16	26	93	15	24	41	68	17
Mother's Education	a) Non Graduate	99	25	13	13	100	26	10	14
	b) Graduate	33	81	31	5	15	74	32	29
	c) Post Graduate	19	30	90	11	20	43	71	16

Mother's Occupation	a)Business b)Service c)Unemployed	8 13 65	49 21 50	87 100 21	6 16 14	13 18 71	50 29 43	78 91 24	9 12 12
Father's Occupation	a)Business b)Service c)Unemployment	11 13 78	43 23 37	91 103 20	5 11 15	14 19 71	61 33 53	72 87 18	3 11 8
Father's Annual Income	a)Low b)Medium c)High	67 37 14	48 98 21	28 9 90	7 9 25	88 45 13	41 66 17	11 28 98	10 11 22
Mother's Annual Income	a)Low b)Medium c)High	90 56	26 63	24 20	10 11	93 49	32 61	17 25	8 13
Parental Moral Support	a)Low b)Medium b)High	93 35 8	34 48 16	17 47 94	7 20 32	89 41 16	32 57 33	22 37 79	7 15 22
Economic and Social Status of the Parents	a)Lower b)Medium b)Upper	109 36 15	23 55 40	11 32 87	7 27 8	99 28 20	32 61 28	9 51 91	10 10 11
Number of Private Tutors	a)1-2 b)3-4 c)None	20 15 68	46 51 44	67 86 19	17 11 19	21 17 70	45 49 65	65 80 15	19 4 3
Locality	a)Urban b)Rural	21 79	27 47	89 14	13 10	31 88	36 21	71 15	12 26
Family Size	a)Small b)Medium c)Large	10 37 107	41 33 19	98 67 19	1 13 5	10 55 90	44 53 30	87 31 17	9 11 23
Family Type	a)Nuclear b)Joint	17 77	35 39	86 16	12 18	21 2	43 18	75 93	11 37

Results of the above Table 3 indicated social and economic variables have positive as well as negative impact on academic performance of JEE competitive exam aspirants preparing in coaching classes and also the aspirants those who prepare by themselves in Delhi .94% of respondents preparing in coaching institutes and 110% of the respondents preparing by themselves responded low academic performance when their father's qualification is non graduate.93% respondents preparing in coaching institutes and 68% of the respondents show high academic performance when their father's qualification is post graduate. This shows that high educational qualification of parents is positively associated with high academic performance.87% of the respondents preparing in coaching classes and 78% of the respondents preparing by themselves reported high academic performance when occupation of mother is service or business, while 65% of the coaching classes respondents and 71% of self- preparing aspirants reported low academic performance when their mother is unemployed. Occupation of both mother and father is positively associated with the academic performance of the aspirants. Similarly father's and mother's annual income is positively associated with academic performance of the adolescent's.93% of the coaching preparing respondents and 89% Of the respondents preparing by themselves reported low academic performance when they have low parental moral support and have high academic performance when having high parental moral support. 109% of the coaching classes preparing aspirants and 99% of the aspirants preparing by themselves reported low academic performance when social and economic status of parents is low. 87% and 97% of the coaching classes and self - preparing aspirants reported high academic performance when social and economic status of parents is high. Similarly number of private tutors , locality of students ,family size , number of siblings and family type variables also positively and negatively influence academic performance of competitive exam aspirants preparing in coaching classes and also aspirants preparing by themselves. Therefore, social and economic variables influence the academic performance of the JEE competitive exam aspirants preparing in coaching classes as well as those who do prepare by themselves for the exam in Delhi.

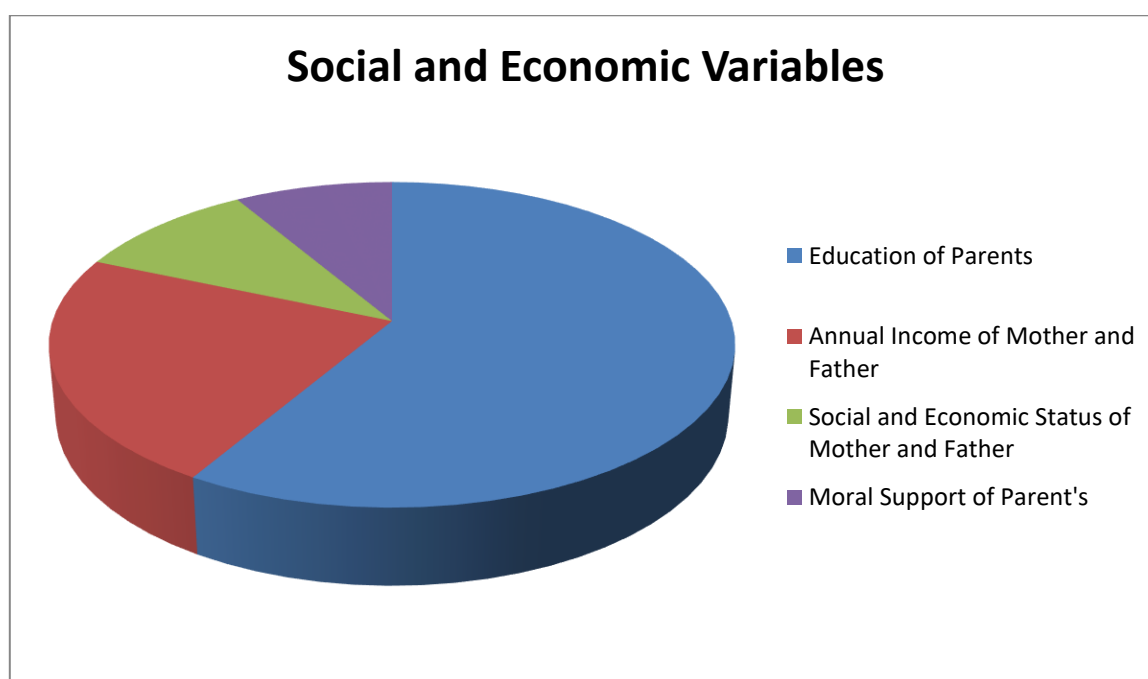


Fig 2. Social and Economic Variables Influencing Academic Performance of JEE Competitive Exam Aspirants.

Conclusion

The study concluded, the JEE Competitive Exam Aspirants ,preparing in coaching classes as well as those who prepares by doing self –study in Delhi face stress and the stress level was due a number of stressors namely parental ,personal ,environmental and academic. Academic pressure and parental expectations to perform well in JEE competitive exam create pressure in the students which ultimately results in increased stress levels of the students. The selected social and economic variables also impact student academic performance and affect their success in competitive exam. The findings and result of the study indicated towards the fact that the students whose parents are well qualified and whose social and economic status is well defined, their children perform well in competitive exams. Also parents moral support ,place of birth i.e urban or rural , type of family, family size also plays a crucial role in success of the engineering competitive entrance exam students .Students living in rural areas show less academic success rate then the students living in urban areas . Also the students living in joint families and having more members affect the preparations of the students as compared to those living in nuclear families preparing for JEE competitive entrance exams preparing in coaching centres and those who prepare by themselves for the competitive exam. So parents and teachers should provide a conducive environment at school and at home. Parents must co-operate the child and should give psychological support and other kind of support so that their children can attain success in the JEE competitive entrance exam.

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