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Abstract

In the recent years, there is an increasing number of suicides amongst the students, reflects the state of emotional imbalance. Which demands some concrete, effective, feasible proactive programmes to address the issues of the socio-emotional and health problems of the students appropriate to evolve more effective and student friendly educational system? This study was carried out on 311 engineering students to find out how they rate themselves on some cognitive parameters, state of anxiety, depression and general health problems, getting reflected in the form of psychosomatic symptoms and the whole effort has been made to explore cognitive, emotional and health profile of the student as they perceive on seven points scale with purpose of understanding of students on these cognitive competence, affective strength and physical health, which cause serious challenge to the educational institutions. The findings are alarming! A large percent of students are having severe anxiety, higher depression, problems in cognitive and health parameters. The results suggest that, the crisis among the engineering students is deeply rooted in to family, past educational system; many unresolved conflicts at 10+2 level travel to the new campus due to several social, educational and age specific factors. Findings strongly suggest for initiating effective programmes of counselling and guidance services for students, surveillance of those having poor family and peer groups support.

Keywords : *Adolescence, unresolved conflicts, stress, anxiety, depression, health problems.*

The increasing number of 'student suicides' as becomes a national concern. The year's board exam has emerged as a great area of anxiety and stress amongst the students and parents. A large number of student's suicides occur out of 'apprehension' that they are going to fail in the examination. The government of India through its national board of examination has shown its sensitivity by initiating reforms in the examination system; and it is aiming towards student friendly education system. The most significant reform is converting 'pass-fail' system into grading system just to manage the negativity among the students. The recent reform is to create an opportunity for the students to appear in the board exam or opt for 10th class result based on academic performance of 9th and 10th combined. How much these reforms would contribute would be matter of research in the

future. There are many cases of suicide being reported in the higher learning institutions, causing even more serious concern to the family, society and country. Incidence of issue is important in the view of ongoing rapid transitions seriously affecting the people of all ages on social and emotional adjustments. It appears that mental health problem is increasing along with development, therefore institutions of higher learning need to take cognizance of such unprecedented changes so as to address the needs of the students appropriately and create an environment friendly to their social and emotional health(Barbee, J. G. (2010)) [1]. We need to understand the process of transition of 10 + 2 students on several dimensions, e.g. social, emotional, and biological, how these transitions should be addressed in their family and institution of learning. These students fall under adolescence

phase of life; it is a very critical stage, where enormous stressors emerge in the family setup regardless of class, caste, region, religion, and remains unaddressed or wrongly addressed or ignored because of social and cultural bonds regarding expectations between parents and children, where parents remain in the role of commanding to their wards and children as recipient with anger and rebellion attitudes (Bae, J.H., Chang, H.K (2006)) [2]. The cultural and contextual realities create a situation of 'communication gap' between family, children, and educational institution. Several stressors are evident during adolescence. Many needs get manifested which family members hardly realize. They rather oppose all that adolescent students like to do, which results into conflicting relations and emotionally upsetting situations (Moore, H. E. (2007)) [5].

The stressors remain unresolved, channelized in different forms, may be positive, negative and destructive. Mostly the stressors get its outlet into anti-social, anti - family, anti-self activities. Conflict between the younger and older generation has perhaps always existed, but it has become more conspicuous in recent times for the simple reason that the society is moving today at a much faster rate than in the past. The rapid change in the modern civilization tends to accentuate parent youth conflict, or within a fast changing social order, the time interval between generations creates a hiatus between one generation and the next".

Rationale & Review : As per World Health Organization (WHO), the adolescents is defined in terms of age (10-19) years and characteristic of age specific phase of life which are: (i) rapid physical growth and development, (ii) physical, social and psychological maturity but not all at the same time, (iii) sexual maturity and on set of sexual activity, (iv) experimentation, (v) development of adult mental process and adult identity and (vi) transition from social, socio-economic dependence to relative independence. WHO classified youth between 15-24 and young between 10-24 years. Adolescent's orientation towards the social values is beset with difficulties. The main values of society are necessarily presented to adolescent in a highly selective way, with a strong idealistic emphasis. The relative unreality of these values are not given full ritual; create among world around them is dishonest and corrupt, they faces a problem of conflict. The adolescents seeks some frame-work for development for crystallization their identity, attainment of personal autonomy. In this crucial stage of development, rapid biological and psychological changes occur; the emergence of a new set of demands takes place. For example, need to enjoy life independently, strong curiosity, novelty in behaviour, need for exploration, attraction towards opposite sex, exhibitionism etc. become very strong and powerful nucleus of behaviour (S. Cohen, T. Kamarck, R. Mermelstein (1983)) [7].

With this background a 10 + 2 students make their entry in to the institution of higher learning after tough competition.

They enter into new campus of any nature like engineering, medicine, commerce, law etc. There are additional stressors in new campus which play confounding role to aggravate the situation of unresolved conflicts. Raging for example plays havoc especially for those who are emotionally weak and suffering with unresolved conflicts, confusion, and crisis. Today's students with the development and modernization do not possess identity what it used to be in the past, which was in conformity to the expected family behaviours and educational organizational setup. The modern students are bubbling with enormous desires to get suitable place for its outlet of both positive and negative energy. If the organization fails to visualize the dynamic changes in the students and remain confined to the model created a long back, it is likely to prove more draconian to the students. Therefore, there is a demand to introspect traditionally defined modalities of functioning of the educational institutions. Contrary to such pressing demand the institutions of higher learning are drawn in to complex web of knowledge growing across the world without recognizing efficacy and suitability to student community. It looks that 10+2 students joining institution of higher learning face enormous stressors. And they hardly get an environment of resolving their conflicts of different nature. It also looks that educational institutions are either ignorant or not aware of the complexities of socio-emotional and cognitive abilities of students and fail to create friendly environment and develop organizational opportunities which could help students to clear the cloud of life and place them into clear roadmap of their carrier (job as well as family).Lack of appropriate opportunities to meet these demands adequately creates ground for strong negative energy which disturbs social, behavioural, and emotional harmony and results into rebellious, aggressive and destructive activities along with other undesirable behaviours like, stealing, truancy, gambling, dropouts from the college, loss of interest in academic achievements and formation of gangs etc.

The sense of insecurity is increased due to 'identity crisis problem'. Socially conditioned expectations of parents further overload the burden of insecurity. The expectations in the family, college and society don't move along with the natural transition taking place amongst 10+2 students, making them vulnerable in the sense that they easily get away under the pressure of negative forces. Therefore, utilization of adolescent's energy is great challenge to be recognized by educational institutions. Inappropriate channelization of adolescence has association with robbery, adolescent murder, sexual abuse, rape, indulgence into sexuality, truancy and many other acts of anti social behaviours which are continuously increasing. Decay of social, moral, ethical, political and religious values in any country pushes adolescents into either extrinsic or intrinsic violence. Insecurity, uncertainty of job, unemployment increasing complex forces commercial values, decay in religious and moral

bindings, selfishness, filthy media explosion, market forces, and manipulations in every aspects of life, substantially add to crisis, conflicts and frustrations in adolescents. Frustrated youth, due to varied and multi-facet forces surrounding the family and the society, are more confused about future plan of actions. They are not even aware of their social and national responsibilities (Regier, D. A., Rae, D. S. et al (1998)) [8]. The root of the youth problem also lies with their parents. The parents, in the contemporary period, live under great dilemmas, majority of them are not clear about the direction and not able to help them for their future goals of life; and they fail to provide suitable guidance compatible to the competence of children; they rather impose their own set of values, which remain in the stage of conflict it aggravates these problem further (Thich, N. H. (2001)) [11].

Any country rich in economic and high tech cannot ensure good social and emotional health unless the energy of adolescent's youth is channelized in proper direction and creativity is appropriately nurtured. It requires in-depth scientific understanding of youth; growing mind and mould them within the broader frame with values of society and country. Merely expecting civilized behaviors for self and others without appropriate suitable social and creative educational environment looks as if we simply believe into impositions of selected moralistic ideology and refuses to recognize the reality of crisis through which students live their life. As it stands today, students and their parents carry enormous dilemmas and stress as a result of disaster decay in the institutes of learning. Unguarded coaching culture from early schooling to senior secondary level has emerged a cultural reality. Parents are struggling to cope up with unwanted financial burden. Even maidservants spend their hard-earned money in tuition in the city areas. Many of us have lost confidence in our educational system. A situation has reached to the point where if compulsory attendance for appearing in the examination is lifted out, the school campus would possibly become barren land like Kerala where government's school buildings are gradually converting into old age homes. The situation in the institution of higher learning may not be very different if attendance for appearing in exam is withdrawn. Student's presence in tutorial classes would reduce substantially. Such propositions, assumptions and speculations are common simply because the relationship between teacher and taught is conflicting in nature. However, we do not have any data to substantiate this. The teachers in institution of higher learning have to travel miles away to make the educational system students friendly, which demand clear understanding of the most of stressors with which students of 10+2 make entry in the institutions of higher learning viz. IIT's, NIT's, Engineering, Medical colleges, National law colleges, etc. Student's demands critical re-introspection of traditional system of educations to make it student friendly and job oriented. The parents are heavily paying the cost of educa-

tion with a great sense of insecurity and anxiety leading to insecurities among the students. Their energies are mis-channelized. In the absence of serious productive engagement of students, their involvements into anti-social activities are increasing. Management of adolescent energy into creative, socially productive activities and restraining them from negativity of life and exposing them to the right type of social, familial and national values demands debate on the appropriateness of educational system and its insensitivity to the student community. The purpose of this work is to (i) define the problems faced by engineering students while studying, (ii) to enlist psychological problems and existing limitations with the system and (iii) to investigate the influencing factors of stress, anxiety, depression and psycho-somatic health symptoms of engineering students.

Research design and Methodology : Study is a descriptive in nature with a sample of 311 students, both boys (192) and girls (115) in the age group of 18 to 23 Years. Study participants were juniors and seniors from Indian Institute of Technology, Delhi, India and Amrita Engineering College, Bangalore, India. The students met the selection criteria and gave consent to participate in the study.

Developing a subjective measures : Questionnaire is personal opinion; it is typically subjective view for the questions but not clear about the actual facts. Many questionnaire set and behavioural interpretation are already tried and validated to assess psychiatric exertion in adolescence by various researchers across different countries. It requires patience from both health workers and subjects. Careful behavioural study is also part of the evaluation. Sensitivity and specificity to identify the problem depends on many complex factors like patience, frame of mind, attention, full support from subjects, their family members, and health worker. Few international questionnaires and their limitations are considered in the study. (i) Perceived stress scale: It is used to assess the degree of stress in various life situations, with 10-item scale. It can assess the feeling and thoughts during special events of women with support of five point rating scale, i.e. 0 for 'never' and 4 for 'very often', its range is from 0 to 40, perceived stress is proportional to the score of the assessment. (ii) Interpersonal support evaluation list: it is 40-item scale designed to predict the effects of stress. Each item is a four point scale. In this scale 0 is used to address 'strongly disagree' and 3 to 'strongly agree', its value ranges from 0 to 48; greater social support is indicated from higher score, and vice versa. (iii) The Beck's Anxiety Inventory: It is used to measure the subject's degree of anxiety. It is widely used, validated measure of anxiety. The state anxiety scale consists of 21 statements to evaluate how the respondent feels about the present time; each question is answered on a 5-point scale from 0 to 4 points, with higher scores indicating higher levels of anxiety (Beck AT, Rial WY, Rickles K.(1974) - Beck. C.T. (1999)) [3-4]. (iv) The Edinburgh postnatal depression scale

(EPDS): It is a validated, reliable, and 10-item survey intended to assess the burden of depressive symptoms. Subjects can check off one of seven possible answers that are closest to how they felt during the past week. Responses are scored 0, 1, 2, and 3 based on the seriousness of the symptom. Items 3, 5 to 10 are reverse scored (i.e., 3, 2, 1, and 0). The total score is found by adding together the scores for each of the 10 items. Some controversies of this scale include more number of uncertainties in the scale like frequency, time points and cut-off levels, short of number of points. Effective interventions and risk concerns of depressive factors were very limited. EPDS is less effective in identifying psychomotor symptoms. Adaptations issues are not addressed in this scale (Ross LE, McLean LM. (2006)) [9]

(v) Limitations: Subjective assessment has a limitation to understand the intensity of the disease. It leads to over dosage which intern results in many side effects. In adolescence related cognitive impairments, mild to severe, questionnaire instruments are used for cognitive assessment. Questionnaires could induce stress; emotional variations due to many factors like subjects are not willing to reveal truth. Due to interaction about the past, the subjects might remember their stressors, which could induce the stress, anxiety and depression. For the questionnaire validation, degree of truthfulness is required; it is objectively determined by polygraph methods. Most Polygraph system is based on physiological parameter like skin resistance, pulse rate and respiration. The skin resistance is the most important signal in the polygraph. Physiology measures to identify notions of a person's intentions and affective state such as interest, happiness, and stress. Psychophysiology, stress, attention, and interest are intimately linked, and it is possible to infer

one from the other (Picard et al. 2001) [10].

The following measures are preliminary studies to extract the information on cognitive competence, anxiety, depression and psycho-somatic health problems amongst the engineering students in India. To provide fuzziness and vagueness about the subjective perspectives from the respondent all measures were evaluated on scale varying from 1 to 7. The measures are not full-fledged questionnaire set, before developing these measures review of literature was done with the support of professionals and students by formal and informal interactions. It was realized that scales developed on those are always available but the applicability of items included in these scales is not tested in the Indian context. So it was decided to develop some tentative measure, the details are as follows, (i) Cognitive Competence Measure contains a form with 20 questions to identify the cognitive competence, with higher scores indicating higher levels of declination in cognitive competence and vice versa. The reliability of this measure was found to be 0.92, (ii) Anxiety Measures was used to describe the subjective perspective of anxiety with 20 questions, used for self assessment of anxiety, with higher scores indicating higher levels of Anxiety and vice versa. The reliability of this measure was found to be 0.75; (iii) Depression Measures was used to assess the burden of depressive symptoms with 10 questions. The reliability of this measure was found to be 0.93, (iv) Health Measure was developed to identify psycho-somatic symptoms of the respondent with 27 items, with higher scores indicating higher levels of declination and vice versa. The reliability of this measure was found to be 0.97. Data analysis and reliability calculation was done using SPSS-17 software package.

Table I: Brief presentation of questionnaire

Cognitive Competence Measure	Anxiety Measure	Depression Measure
1. Fatigue	1. Lack of responsiveness	1. Incapable to laugh
2. Right word while speaking	2. Emotional disturbance	2. Less enjoyment
3. Absent mindedness	3. Wobbling in legs	3. Guilt
4. Indecisive	4. Incapable to calm down	4. Worried
5. Sadness	5. Shame (humiliation)	5. Afraid / fearful
6. Effectiveness at studies	6. Shaky (unsteady)	6. Not coping
7. Attentiveness	7. Heart throbbing or racing	7. Sleeping trouble
8. Remembrance	8. Trembling	8. Gloomy and unhappy
9. Anxiety	9. Anxious and unpleasant	9. Sentimental
10. Preoccupation	10. Disagreeable	10. Self harm feelings
11. Self respect	11. Insecure/wavering	
12. Intelligence	12. Apprehension for mismanage	Background Features
13. Attention to break up task	13. Fear of failing to control	1. Gender
14. Unhappy	14. Breathing difficulties	2. Year of course
15. Managerial ability	15. Fear of dying	3. Work pressure
16. Remember names	16. Stomach upset	4. Work satisfaction
17. Remember appointments	17. Weak/fragile	5. Emotional support
18. Aptitude to learn	18. Pale or giddiness	6. Number of breaks
19. Emotional firmness	19. Loveliness flushed	7. Hobbies
20. Memorize what you read	20. Irritation	8. Hours of rest

Table II : Health Measure from last six months

1	Do you wear yourself worrying about your health?				
2	Have you at times had a twitching of the face, head or shoulders?				
3	Do you often have bad headaches?				
4	Do you often have bad pains in your eyes?				
5	Does your heart often race like mad?				
6	Do you often have backache?				
7	Do you often suffer from an upset stomach?				
8	Do you suffer from indigestion?				
9	Do you feel tired most of the time?				
10	Do you usually have great difficulty in falling or staying asleep?				
11	Is your appetite poor?				
12	Have you ever had a nervous breakdown?				
13	Do you often get worried about things?				
14	Do people often annoy and irritate you?				
15	Do you often get into a violent rage?				
16	Do you often suddenly become scared for no good reason?				
17	Are you easily upset or irritated?				
18	Are you constantly keyed up and jittery (nervous)?				
19	Are you scared to be alone when there are no friends near you?				
20	Are you frightened of going out alone or of meeting people?				
21	How do you see yourselves after a span of 10 years from now?				
	Engineer	Academician	Researcher	Businessman	Politician
22	What is the motive of you coming to IIT/ Engineering field?				
	Interest	Knowledge Quest	Money	forced by Parents	Others
23	Have you ever regretted that you chose the wrong path by coming here?				
24	Are you comfortable in mingling with people (both gender)?				
25	Please rate your home sickness?				
26	Had you imagine the difficulties in completing the course you joined?				
27	Do you often feel miserable or depressed?				
28	Are you troubles with rheumatism or fibrosis?				
29	Does every little thing get on your nerves and wear you out?				
30	If you feel that you are not satisfied by your choice, and then please specify what you wish to do?				
	Cope up & continue	Discontinue	Alternative studies	Counselling	Suicide

Note :

With reference above questionnaire a 7-point scale is provided to select the suitable options by considering student's cognitive parameters affecting their studies.

For questions from 21, 22 and 30 special options are given

Ethical considerations : The students were informed about the purpose of the research, how long the study would take, they were free to decide whether or not to participate, and they could withdraw at any time. It was stressed that participation in this study was not part of the curriculum. It was also explained that the name of the respondent would not be disclosed; instead serial numbers and pseudonyms would be used. All participants provided written informed consent.
Data collection : Data collection was done on 400 engi-

neering students from two metropolitan cities of India on all the measures using both individual and small groups, after explaining the purpose of study and taking their consent. It has taken about an hour to complete all the measures with the support of concerned teacher and administrative authorities in the college. After collecting data, it was scrutinized, found only 311 data sets were completely filled without any mistakes, so only those data sets were considered for the analysis.

Table III: Cognitive Competence Measure

Cognitive Competence		1	2	3	4	5	6	7
1. Fatigue	n	18	23	59	81	67	32	18
	%	5.8	7.4	19	26	21.5	10.3	5.8
2. Right word while speaking	n	21	58	74	62	38	32	11
	%	6.8	18.6	23.8	19.9	12.2	10.3	3.5
3. Absent mindedness	n	53	70	66	48	33	20	11
	%	17	22.5	21.2	15.4	10.6	6.4	3.5
4. Indecisive	n	50	65	58	54	36	23	14
	%	16.1	20.9	18.6	17.4	11.6	7.4	4.5
5. Sadness	n	59	60	46	50	40	25	20
	%	19	19.3	14.8	16.1	12.9	8	6.4
6. Effectiveness at studies	n	25	74	76	62	36	19	5
	%	8	23.8	24.4	19.9	11.6	6.1	1.6
7. Attentiveness	n	35	61	66	64	39	23	13
	%	11.3	19.6	21.2	20.6	12.5	7.4	4.2
8. Remembrance	n	32	64	65	53	48	27	11
	%	10.3	20.6	20.9	17	15.4	8.7	3.5
9. Anxiety	n	26	39	66	68	48	33	17
	%	8.4	12.5	21.2	21.9	15.4	10.6	5.5
10. Preoccupation	n	33	42	67	67	43	22	2
	%	10.6	13.5	21.5	21.5	13.8	7.1	0.6
11. Self respect	n	49	78	71	56	28	8	5
	%	15.8	25.1	22.8	18	9	2.6	1.6
12. Intelligence	n	65	81	59	41	34	17	6
	%	20.9	26	19	13.2	10.9	5.5	1.9
13. Attention break up task	n	31	61	84	44	45	25	14
	%	10	19.6	27	14.1	14.5	8	4.5
14. Unhappy	n	62	73	51	47	33	14	24
	%	19.9	23.5	16.4	15.1	10.6	4.5	7.7
15. Managerial ability	n	30	62	76	56	45	19	11
	%	9.6	19.9	24.4	18	14.5	6.1	3.5
16. Remember names	n	78	64	57	39	24	30	11
	%	25.1	20.6	18.3	12.5	7.7	9.6	3.5
17. Remember appointments	n	63	83	55	32	33	18	14
	%	20.3	26.7	17.7	10.3	10.6	5.8	4.5
18. Aptitude to learn	n	68	76	65	42	25	18	7
	%	21.9	24.4	20.9	13.5	8	5.8	2.3
19. Emotional firmness	n	37	58	65	56	34	30	22
	%	11.9	18.6	20.9	18	10.9	9.6	7.1
20. Memorize what you read	n	39	65	72	55	36	24	13
	%	12.5	20.9	23.2	17.7	11.6	7.7	4.2

Table IV: Anxiety Measure

Anxiety Measure		1	2	3	4	5	6	7
1. Lack of responsiveness	n	80	58	79	28	29	13	6
	%	25.7	18.6	25.4	9	9.3	4.2	1.9
2. Emotional disturbance	n	59	48	90	38	36	14	6
	%	19	15.4	28.9	12.2	11.6	4.5	1.9
3. Wobbling in legs	n	109	54	60	23	27	7	8
	%	35	17.4	19.3	7.4	8.7	2.3	2.6
4. Incapable to calm down	n	69	45	74	31	48	15	12
	%	22.2	14.5	23.8	10	15.4	4.8	3.9
5. Shame (humiliation)	n	81	54	57	31	46	8	17
	%	26	17.4	18.3	10	14.8	2.6	5.5
6. Shaky (unsteady)	n	57	59	93	32	39	7	8
	%	18.3	19	29.9	10.3	12.5	2.3	2.6
7. Heart throbbing or racing	n	56	51	74	36	61	11	5
	%	18	16.4	23.8	11.6	19.6	3.5	1.6
8. Trembling	n	88	50	66	37	36	9	7
	%	28.3	16.1	21.2	11.9	11.6	2.9	2.3
9. Anxious and unpleasant	n	39	52	91	40	42	15	15
	%	12.5	16.7	29.3	12.9	13.5	4.8	4.8
10. Disagreeable	n	81	52	69	41	36	9	6
	%	26	16.7	22.2	13.2	11.6	2.9	1.9
11. Insecure/wavering	n	92	66	51	24	38	10	9
	%	29.6	21.2	16.4	7.7	12.2	3.2	2.9
12. Apprehension for mismanage	n	108	70	51	21	29	7	3
	%	34.7	22.5	16.4	6.8	9.3	2.3	1
13. Fear of failing to control	n	78	75	56	28	31	12	8
	%	25.1	24.1	18	9	10	3.9	2.6
14. Breathing difficulties	n	134	56	36	23	24	5	13
	%	43.1	18	11.6	7.4	7.7	1.6	4.2
15. Fear of dying	n	159	41	40	17	20	8	5
	%	51.1	13.2	12.9	5.5	6.4	2.6	1.6
16. Stomach upset	n	84	76	63	21	17	14	13
	%	27	24.4	20.3	6.8	5.5	4.5	4.2
17. Weak/fragile	n	95	63	61	25	25	14	7
	%	30.5	20.3	19.6	8	8	4.5	2.3
18. Pale or giddiness	n	103	64	53	25	32	6	4
	%	33.1	20.6	17	8	10.3	1.9	1.3
19. Loveliness flushed	n	70	54	52	41	40	19	13
	%	22.5	17.4	16.7	13.2	12.9	6.1	4.2
20. Irritation	n	73	47	92	37	23	10	10
	%	23.5	15.1	29.6	11.9	7.4	3.2	3.2

Analysis and Interpretation : The background variables reveal that, 63 % boys and 37 % girls participated in this study. Most of the students are from class A city, few are from class B, combining those results in 95.8 %. However 4.2 % were not aware about their identity about the city. Majority of the students were from 2nd year 44 %, followed by first year 36 % and third year respectively 20 %. 9.6 % students however avoided to respond their identity of year of course. 56.6 % spent less than 8 hours and 17 % spent between 8 to 10 hours in their study. 8.4 % used to put more than 10 hour in their study, 18%, however did not responded.

Only 60 % feels satisfied with whatever they are studying and remaining are either unsatisfied or indecisive about their career. With reference to emotional support only 45.3 % responded family support and 20.9 % mentioned about the support of peer groups. There was only 13.8 % having the support of both family and peer group. Background characteristics of students are depicted in figure 1. Student needs a very strong support from both family and peer group, absence of it leads to serious emotional and social adjustment problems. Therefore, it is a matter of great concern to built stronger emotional support to the students. The engagement

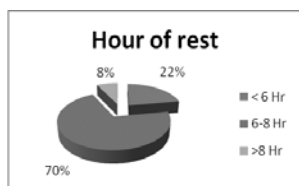
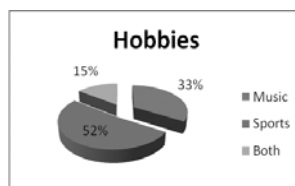
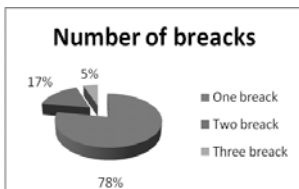
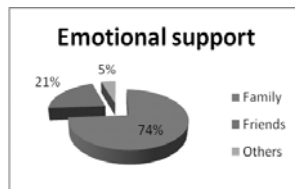
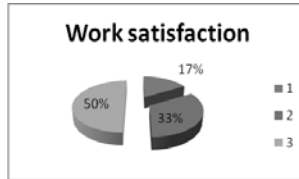
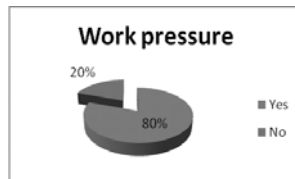
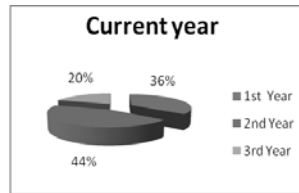
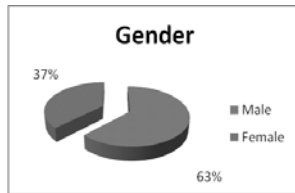
profile remains mainly with sports and music, therefore, the authorities of higher learning institutions need to facilitate them with appropriate infrastructure for extracurricular activities. The finding regarding hour of rest generally confirms that prevailing trend or per as average predictive hour of sleeping is concerned. However, 22 % students spend less than neither 6 hours of sleep with long hour of working, late night, may cause serious health problems both physical and emotional. There is need to study about sleep hours. A simple percent analysis was carried out using a SPSS 17 package. Results are reflected in table 1 to 7.

Overall performance of cognitive competence reveals that, more than half percent students (55.12) are seems to be normal, 17.3 % have moderate problems and 23.7 % suffer from severe cognitive parameters. The anxiety measures reveals that 66.8% students have minimum level, i.e. which does not affect the performance and quality of life. 9.64 % have

got moderate level of anxiety and 17.2 % have got higher level of anxiety, this is matter of great concern, because higher level of anxiety definitely affects the academic performance, emotional stability, and social adjustments. Almost same percent of students (6.1 %) are suffering with health problems which include headache and backache, it looks that they are suffering with higher anxiety are also affected on health parameters. The result on depression is alarming! Because 23.4 % students are suffering with higher level of depression, followed by moderate depression, which also affect the performance and 60.2 % of students suffer from minimal level of depression. The finding reveals relationship among all the 04 major dimensions included in the study i.e. cognitive competence, anxiety, depression and psycho-somatic health symptom measures which would be follow up in subsequent research.

Table VII: Selected features of psycho-somatic and cognitive competence in students

Around 30 % Cognitive deterioration			10-15% suffer from above point of anxiety		
1	Fatigue	37.6	1	Lack of sensation	15.4
2	Right word while speaking	26.0	2	Emotional	18.0
3	Sadness	27.3	3	Wobbling in legs	13.6
4	Remembrance	27.6	4	Dizzy of light headed	17.4
5	Anxiety	31.5	5	Shaky (unsteady)	16.8
6	Emotional firmness	27.6	6	Disagreeable	16.4
7	Attention to break up task	27.6	7	Insecure/wavering	18.3
Average		29.32	8	Apprehension for mismanage	12.6
			9	Fear of failing	16.5
20-25 % suffering from cognitive problems			10	Breathing difficulties	13.5
1	Absent mindedness	20.5	11	Fear of dying	10.5
2	Indecisive	23.5	12	Fearful	14.2
3	Effectiveness at studies	19.3	13	Stomach upset	14.8
4	Attentiveness	24.1	14	Loveliness flushed	13.5
5	Un happy	22.8	15	Irritation	13.8
6	Unable to manage	24.1	Average		15.02
7	Unable to remember name	20.8	15 – 20 % suffering with psychosomatic nature health problems		
8	Unable Remember appointment	20.9			
9	Unable to remember (read)	23.5			
10	preoccupation	21.5			
Average		22.10	1	Health anxiety	12.6
20-25% suffer from above point of anxiety			2	Twitching of face	12.9
1	Incapable to calm down	24.1	3	Bad head ache	19.0
2	Shame (humiliation)	22.9	4	Bad pain in eyes	12.9
3	Heart throbbing or racing	24.7	5	Heart race like mad	14.8
4	Anxious and unpleasant	23.1	6	Stomach upset	15.1
5	Loveliness flushed	23.2	7	Indigestion	13.2
Average		23.6	8	Difficulty in sleep	14.5
			9	Poor appetite	9.0
20-23 % Psycho-somatic problems			10	Nervous breakdown	8.6
1	Backache	22.2	11	Violent rage	18.3
2	Worried	21.2	12	scared	14.1
3	Remain irritated	21.5	14	Scared to be alone	14.8
5	Frightened	20.2	15	Constantly keyed	10.3
Average		21.05	Average		13.5



Findings and Conclusions : Students come across many new situations like lifestyle, friends, roommates, exposure to new cultures and alternate ways of thinking, they require to struggle to adopt themselves. Some time they feel that, are not adequate to new situations or not prepared to cope with the new environment due to unresolved conflicts. Stress is normal part of daily life; it affects both physically and mentally. Students who work over 30 hours a week have a strain on their health due to their busy schedules; it may leads to heart disease, cancer, and stroke and suppressed immune system. Students wish to sacrifice sleep and try to get everything done in one day/night might leads to cognitive impairment. Anxiety is natural and perfectly normal. It is quite natural to apprehend and fearful for new situations but if students debilitate regularly for all small reasons or simple situations, then it is considered as anxiety disorder. Depression is like any other disease and it can be treated and managed. From our studies, reveals that most students have problems with reference to cognitive competence, higher point of anxiety, depression and other psycho-somatic health problems. This study is limited to only engineering students from two metropolitan cities; thus, it is not completely representative of entire engineering student community in India. Also, the number of subjects is not large, and some subjects are not participated in the study. However, despite these limitations, the results of this study are consistent with reference to psycho-somatic and cognitive deterioration factors. The presence of consistency in the effects of the intervention and the results of this study are acceptable. Further studies in a larger sample size are required to

generalize the cognitive competence among students. The results of this study inform that stress coping programs based on scientific methodologies are effective in enhancing the cognitive competence among students. Programs for stress management include cognitive behavioural therapy, problem-solving and relaxation induction like meditation, autogenic training, muscle relaxation, and biofeedback. Thus a scientifically validated test procedure is very essential to monitor different cognitive competence and other physical, psycho-somatic parameters in the higher learning institutions. Every institution should think of creating a new supporting department with human resource component to address various psycho-somatic problems due to unresolved conflicts from their background and additional stress induced in any campus needs to be addressed systematically. Therefore, there is a need to develop screening procedure with reference to Indian context, their life style. Scientific procedures are very essential to how to handle stresses, how to depress the depression and frustrate the frustration. It might boost their strength, moral support and could result in suicide free nation (Nordentoft M, Dan Med Bull (2007)) [6].

References :

Barbee, J. G.(2010). Depression, substance abuse and college student engagement. A review of the literature. *National Centre for Addiction and Substance Abuse at Columbia University*, July 16.

Bae, J.H., Chang, H.K (2006). The effect of MBSR-K program on emotional response of college students. *The Korean Journal of Health Psychology* 11, 637–688.

Beck AT, Rial WY, Rickles K.(1974). Short form of depression inventory: *Cross-validation.Psychol.Rep.*34:1184–6.

Beck. C.T. (1999). Available instruments for research on prenatal attachment and adaptation to pregnancy, *The American Journal of Maternal Child Nursing* 24 (1), pp. 25–32.

Moore, H. E.(2007) University liability when students commit suicide: Expanding the scope of the special relationship. *Indiana Law Review*, 40, 423–451.

Nordentoft M, Dan Med Bull (2007). Prevention of suicide and attempted suicide in Denmark, *Epidemiological studies of suicide and intervention studies in selected risk groups*; 54(4):306-69.

S. Cohen, T. Kamarck, R. Mermelstein (1983). A global measure of perceived stress, *Journal of Health and Social Behaviour* 24, pp. 385–396.

Regier, D. A., Rae, D. S. et al (1998). Prevalence of anxiety disorders and their comorbidity with mood and addictive disorders. *British journal of psychiatry, supplement*, 4, 24-28.

Ross LE, McLean LM. (2006). Anxiety disorders during pregnancy and the postpartum period: a systematic review. *Journal Clinical Psychiatry*, 67:1285_1298.

R. Picard, E. Vyzas, and J. Healey.(2001). Toward Machine Emotional Intelligence: Analysis of Affective Physiological State, *IEEE Transactions Pattern Analysis and Machine Intelligence*, 23:10.

Thich, N. H. (2001). The Path of Emancipation: Study on ego states in the view of transactional analysis, coping style and health states of nursing students, *Journal of East-West Nursing Research Institute* 7 (1), 68–81.