



IJEAST

INTERNATIONAL JOURNAL
OF ENGINEERING APPLIED SCIENCE
AND TECHNOLOGY



VOLUME : 6 ISSUE : 4 Print / Issue Publication Date: 17-Oct-2021



ISSN : 2455-2143



Indexed In



WWW.IJEAST.COM

editor@ijeast.com



ANALYSIS AND IMPACT OF STRESS ON THE PSYCHOLOGICAL PARAMETERS AND BEHAVIOUR IN SCHOOL GOING STUDENTS IN SOUTH BANGALORE

Dr. Shivani Jain

Department of Physiotherapy
Krupanidhi College of Physiotherapy
Bangalore, Karnataka, India

Dr. Samson Vedamanickam

Department of Physiotherapy
Krupanidhi College of Physiotherapy
Bangalore, Karnataka, India

Dr. Milan Anand

Department of Physiotherapy
Krupanidhi College of Physiotherapy
Bangalore, Karnataka, India

Abstract— Background: Stress is a subjective experience that an individual may experience depending on his/ her own personality. Stress occurs when the resources to cope with situational demands and pressures are insufficient. The school environment may be highly competitive for few students than others. Apart from academic factors; there may be various other factors experienced in the school life like; peer pressure, competition with classmates, family problems, social issues etc. This makes the age group more vulnerable towards the impact of stress. Stresses of such nature and magnitude may have many psychological, social and behavioral impacts on these students. It therefore becomes more imperative to study such impacts so that appropriate measures can be taken to avoid and prevent adverse actions that may intend on the exposed population. It has been noted that there is a lack of literature on the effect of stress on school students and its impact on their psyche, especially keeping in view the Indian perspective. **Aim:** To study and analyse the impact of stress on psychological parameters in school going students. **Methods:** The research method is a descriptive- correlational study. The study sample were school going students. 320 students were included by random purposeful selection who participated in this study. The research instrument consisted of a questionnaire to record the demographic data of the subjects. Adjustment inventory for senior secondary scale (AISS) was administered to determine the stress level in the subjects. Based on the outcomes, Perceived stress scale (PSS) was administered to the subjects of mild and moderate category. **Results:** Paired 't' test and ANOVA was used to analyse the data. **Conclusion:** Positive educational stress (EuStress) helps the students to perform better academically whereas emotional and social factors don't have any effect on the stress.

Keywords— Stress, psychological, school going students, PSS, AISS

I. INTRODUCTION

Stress is a subjective feeling that an individual may experience depending on his own personality. Stress occurs when the resources to cope with situational demands and pressures are insufficient. The cognitive-transactional model of stress states a dynamic relationship between an individual and its surroundings, change of the subjects' environment (internal/external) disturbs or impacts an individual's homeostasis and the response to the changes in the surrounding environment, depending on exposure of the individual to the available resources.¹ Thus, implying that the more access to the resources an individual has, the lesser the chances to undergo stress. An individual's immediate response to the stress is expressed by feelings of anxiety, irritation, and depression or, it may be behavioral in the form of aggression, withdrawal, remorse etc. Signs of stress are seen in the form of physical ailments also and are expressed in forms such as headache, nausea, tremors etc.² Stress, depression and anxiety, have been found to cause altered functioning, and the various health problems like burnout- this can affect adversely, the individuals along with their society.³ Too much of stress also results in various mental and physical health problems and has also been reported to reduce the self-esteem thereby affecting the educational achievements and the personality development of an individual.⁴ Academic stress has been defined as the mental distress due to the anticipated academic challenge or failure or the awareness of the possibility of academic failure.⁵ Kouzma and Kennedy had reported that the school related aspects like the grades, exams, self-imposed pressure, other's expectations are the main source of stress in educational sectors.⁵ It is a well-documented fact that the educational system in India is highly stressful due to its competitive nature.⁵ Students may be



affected not only by the stress induced from the schools but also due to numerous extraneous factors such as family and peer pressure, high level of expectations, pressure/stress from exposure to social media platforms etc.^{6,7}

The students have been documented to face stress also due to adverse family events, love life challenges, and future career concerns etc.⁸ This makes the age group more vulnerable to stress. In 2016, the National Mental Health Survey reported that out of all the adolescents in urban India 13.3% suffered with mental morbidity, which is double the prevalence in Indian rural areas.⁸ In particular, the stress that occurs in an academic environment can affect students as much as teachers, at any educational level.⁹ Stress can thus, undermine the achievement of goals, both for individuals and organisations.² This highly competitive school environment may be difficult to survive for few students compared to others; which demands such students to rely on their coping abilities in handling these situations successfully. Adolescence is a critical period full of changes, and it must be carefully managed if teenagers are to develop a healthy personality.¹⁰ Stresses of such nature and magnitude may have many psychological, social and behavioral impacts on these students. It may even predict negative health behaviours such as smoking, alcohol abuse, illicit substance use, and sleeplessness, as well as recurrences.^{11, 12, 13}

It therefore becomes imperative to study such impacts so that appropriate measures can be taken to avoid and prevent adverse actions from the population. The social, physical and psychological needs of teenagers should be addressed to combat the possible negative effects of adolescent stress on health and academic performance.¹⁴

Coping or avoiding these stressful factors will form the basis for developing a healthy and positive personality as well as attitude towards life.^{15, 16, 17} Keeping in view the Indian perspective- it has been noted that there is a lack of literature on the effect of stress on school students and its impact on their psyche. This study explores the academic stress, and the situations in which the students live. Today's fast paced highly competitive environment also attributes to the stress level among the students and influences their behaviour, personality and social interactions.

Various surveys and questionnaires have been used in past to study the stress level in different populations such as the standard stress scale,¹⁸ stress questionnaire¹⁹, the work stress questionnaire²⁰, psycho physiological-stress test²¹ etc.

Adjustment inventory for senior secondary questionnaire (AISS) established by Sinha and Singh in 2005, is a reliable and valid instrument for assessing the adjusting problems amongst school going children, in India.^{22, 23} The Perceived stress scale (PSS) is also a high validity and sensitive scale which determines the stress level among the student population.²⁴

A psychologically stable and mentally healthy youth marks the progress of its society.

So being said, it becomes necessary to study and analyse the impact of stress on psychological and behavioural changes in these school going students, so as to prepare them to tackle the stressful environment, successfully. This study intends to measure students' stress levels, identify the sources of stress and to determine whether they have any mitigating or risk factors for stress.

II. METHODOLOGY

This is a perspective correlational study. The ethical clearance was obtained from the ethical committee of Krupanidhi College of Physiotherapy. 330 subjects were enrolled based on the inclusion criteria (14-16 years of age, both males and females). The subjects were excluded if they had any history of mental illness or neurological deficits. Informed consent was taken from all the subjects after a thorough explanation of the study, its necessity and relevance.

All the 330 subjects were administered Adjustment Inventory for Senior Secondary (AISS) scale, which consists of 60 items divided into 3 categories; emotional, social and educational (each category having 20 components).^{22,23} This questionnaire checks for any adjustment issues in the subjects. It is a nominal scale. For every "YES" student scores 1 and for each "NO" the student scores a Zero '0'. Based on the total score, subjects are categorized into 3 groups-

- Group 1- 0-20: Mild difficulty in adjusting
- Group 2- 21-40: Moderate difficulty in adjusting
- Group 3- 41-60: Severe difficulty in adjusting

The students who had mild and moderate difficulty (Group 1 and Group 2) in adjusting were then randomly given the Perceived stress scale (PSS) to study their stress levels.²⁴ Group 3 was excluded as there may be an underlying psychological disorder in these subjects.

PSS is scored as:

- 0-16 Low stress
- 17-27 Moderate stress
- 28-40 High stress

III. RESULTS

Table 1 showing the results of AISS scale

AISS	No. Of Subjects	Percentage of subjects
0-20	20	0.0059
21-40	316	0.9376
More than 40	1	0.0029
Total	337	



Total of 337 subjects were taken for the study. When AISS scale was administered, 20 students fell in the category of mild adjustment issues and 316 students were found to have moderate difficulty in adjusting in the school environment. Only one student had severe difficulty in adjusting in the school environment.

Table 2 Correlations in subjects with mild adjusting problems. This table shows the emotional, social and educational factors of AISS scale, PSS score and the Marks Obtained by the subjects having mild adjusting problem. (AISS 0-20)

Correlations							
		Emotional (a)	Social (b)	Educational (c)	AISS - <20	PSS	MAR KS
Emotional (a)	Pearson Correlation	1					
	p-value	...					
Social (b)	Pearson Correlation	-.510**	1				
	p-value	.004	...				
Educational (c)	Pearson Correlation	.062	.063	1			
	p-value	.743	.741	...			
AISS - <20	Pearson Correlation	.186	.525**	.688*	1		
	p-value	.324	.003	.000	...		
PSS	Pearson Correlation	-.157	.219	-.024	.104	1	
	p-value	.409	.244	.899	.584	...	
MARKS	Pearson Correlation	-.192	.134	.285	.207	.137	1
	p-value	.310	.481	.217	.272	.469	...
**. Correlation is significant at the 0.01 level (2-tailed).							

The results of this table showed that in the subjects having mild difficulty in adjusting in the school environment, emotional factors had a negative correlation with the social factors and vice versa. Both educational and social factors had a positive correlation with the AISS Score. There was no significant correlation found between AISS, PSS and Marks obtained by the subjects.

Table 3 Correlations in subjects with moderate adjustment problems

This table shows the emotional, social and educational factors of AISS scale, PSS score and the Marks Obtained by the subjects having moderate adjusting problem. (AISS 41-60)

Correlations							
		Emotional (a)	Social (b)	Educational (c)	AISS - 21-40	PSS	MAR KS
Emotional (a)	Pearson Correlation	1					
	p-value	...					
Social (b)	Pearson Correlation	-.087	1				
	p-value	.647	...				
Educational (c)	Pearson Correlation	.003	-.215	1			
	p-value	.988	.255	...			
AISS-21-40	Pearson Correlation	.512**	.687**	.268	1		
	p-value	.004	.000	.152	...		
PSS	Pearson Correlation	.115	-.172	.114	-.025	1	
	p-value	.544	.364	.547	.894	...	
MARKS	Pearson Correlation	-.300	-.208	.421*	-.153	.076	1
	p-value	.107	.271	.020	.419	.691	...
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

The results of this table showed that the subjects having moderate difficulty in adjusting in the school environment had positive correlation between the social factors and the AISS. The emotional factors affecting the adjustment, also was found to have positive correlation with the AISS. Educational factors had a positive correlation with the Marks obtained by the students. There was no significant correlation found between AISS, PSS and Marks obtained by the subjects.



IV. DISCUSSION

As per the results, each of the emotional, social and educational factors play some role in the adjustment and stress level of a students. In student's having mild problem in adjusting to the school environment, there is a negative correlation between the social and the emotional factors. This suggests that those who are emotionally weak are socially more active. Probably in today's fast paced life where parents are juggling to strike a balance between their work life and personal life, students loose on the emotional support and parental monitoring at home and land up being emotionally weak. Studies have shown that the emotional IQ affects the scholastic well-being²⁵. So, to compensate for their weak emotional strength and to get the extra pump, students may involve themselves more socially to get recognized and feel wanted. Thus, making up for their low emotional strength. On the contrary, an emotionally strong student from a well-knit family is so self-sufficient that he /she may not need much of the social obligations around himself.

Also, the social factors have a positive correlation with the AISS score suggesting that a socially amicable student is well adjusted in the academic environment. Since a students' environment essentially revolves around his peer group, it can be well understood that a socially active child will adjust better in his/her school environment than the others.

No correlation is found between the emotional factors and the adjustment level- so it will be wrong to infer that any child who is emotionally weak has an adjustment issue or an emotionally strong child will adjust better in his/her class. An emotionally weak child may surrender himself to the peer and academic environment and survive well by keeping it low whereas an emotionally strong student may have a problem adjusting in the same environment due to his indifferent attitude.

The students' group who faced moderate difficulty in adjusting in their educational environment, all the factors were found to be independent of each other but the emotional and social factors had a positive correlation with adjustment level. This suggest that the emotionally strong and socially active student adjusts the best in his environment and vice-versa. Educational factors have been found to influence the marks obtained by the child, positively. This means that an educationally stressed student performs better in his exams. This stress can be attributed to be a eustress. EuStress is the positive stress that pushes an individual to give his best. So, a positive stress is good for the good academic performance²⁶.

V. CONCLUSION

Positive educational stress (EuStress) helps the students to perform better academically whereas emotional and social factors don't have any effect on the stress.

VI. LIMITATION OF THE STUDY

Psychological factors were not included in the study. The mental state of the student could also have an effect on their academic performance.

VII. SCOPE OF FURTHER STUDY

The study did not show any correlation between the adjustment level of a student and their stress level. So, there is a scope of conducting further studies to find out how the stress is affected by the adjustment parameters in school going students.

VIII. REFERENCES

1. Folkman S. Personal control and stress and coping processes: a theoretical analysis. *Journal of personality and social psychology*. 1984 Apr;46(4):839.
2. Michie S. Causes and management of stress at work. *Occupational and environmental medicine*. 2002 Jan 1;59(1):67-72.
3. Ramli H, Hamizah N, Alavi M, Mehrinezhad SA, Ahmadi A. Academic stress and self-regulation among university students in Malaysia: Mediator role of mindfulness. *Behavioral Sciences*. 2018 Jan;8(1):12.
4. Oku AO, Owoaje ET, Oku OO, Ikpeme BM. Prevalence of stress, stressors and coping strategies among medical students in a Nigerian medical school. *African Journal of Medical and Health Sciences*. 2015 Jan 1;14(1):29.
5. Deb S, Strodl E, Sun J. Academic stress, parental pressure, anxiety and mental health among Indian high school students. *International Journal of Psychology and Behavioral Sciences*. 2015;5(1):26-34.
6. Deb S, Strodl E, Sun J. Academic-related stress among private secondary school students in India. *Asian Education and Development Studies*. 2014 May 6.
7. Chou PC, Chao YM, Yang HJ, Yeh GL, Lee TS. Relationships between stress, coping and depressive symptoms among overseas university preparatory Chinese students: a cross-sectional study. *BMC Public Health*. 2011 Dec 1;11(1):352.
8. Parikh R, Sapru M, Krishna M, Cuijpers P, Patel V, Michelson D. "It is like a mind attack": stress and coping among urban school-going adolescents in India. *BMC psychology*. 2019 Dec;7(1):31.
9. Reddy GL, Anuradha RV. Occupational stress of higher secondary teachers working in Vellore district. *International Journal of Educational Planning & Administration*. 2013;3(1):9-24.
10. Rueger SY, Malecki CK. Effects of stress, attributional style and perceived parental support on depressive symptoms in early adolescence: A prospective analysis. *Journal of Clinical Child & Adolescent Psychology*. 2011 May 1;40(3):347-59.



11. Kassel JD, Stroud LR, Paronis CA. Smoking, stress, and negative affect: correlation, causation, and context across stages of smoking. *Psychological bulletin*. 2003 Mar;129(2):270.
12. Herman JP. Neural pathways of stress integration: relevance to alcohol abuse. *Alcohol research: current reviews*. 2012;34(4):441.
13. Ellis JG, Gehrman P, Espie CA, Riemann D, Perlis ML. Acute insomnia: current conceptualizations and future directions. *Sleep medicine reviews*. 2012 Feb 1;16(1):5-14.
14. De la Roca-Chiapas JM, Solís-Ortiz S, Fajardo-Araujo M, Sosa M, Córdova-Fraga T, Rosa-Zarate A. Stress profile, coping style, anxiety, depression, and gastric emptying as predictors of functional dyspepsia: a case-control study. *Journal of psychosomatic research*. 2010 Jan 1;68(1):73-81.
15. Nath Y, Paris J, Thombs B, Kirmayer L. Prevalence and social determinants of suicidal behaviours among college youth in India. *International Journal of Social Psychiatry*. 2012 Jul;58(4):393-9.
16. Supe AN. A study of stress in medical students at Seth GS Medical College. *Journal of postgraduate medicine*. 1998 Jan 1;44(1):1.
17. Perales A, Sogi C, Morales R. Estudiocomparativo de salud mental en estudiantes de medicina de dos universidades estatales peruanas. In *Anales de la Facultad de Medicina* 2003 Dec (Vol. 64, No. 4, pp. 239-246). UNMSM. Facultad de Medicina.
18. Gross C, Seebaß K. The standard stress scale (SSS): Measuring stress in the life course. In *Methodological Issues of Longitudinal Surveys* 2016 (pp. 233-249). Springer VS, Wiesbaden.
19. International Stress Management Association UK – 2013, Stress Questionnaire
20. Frantz A, Holmgren K. The Work Stress Questionnaire (WSQ)—reliability and face validity among male workers. *BMC public health*. 2019 Dec 1;19(1):1580.
21. Neureiter E, Hajfani L, Ahnis A, Mierke A, Rose M, Danzer G, Klapp BF. An introduction to the ‘Psycho-Physiological-Stress-Test’ (PPST)—A standardized instrument for evaluating stress reactions. *PloS one*. 2017;12(12).
22. Hussain A, Kumar A, Husain A. Academic stress and adjustment among high school students. *Journal of the Indian academy of Applied Psychology*. 2008 Apr;34(9):70-3.
23. Gupta, Madhu & Mehtani, Dimple (2017) Adjustment among secondary school students: A comparative study on the basis of academic achievement and gender. *Bhartiyam International Journal of Education & Research: A quarterly peer reviewed*, 2277-1255. 6. 1-12
24. Leung DY, Lam TH, Chan SS. Three versions of Perceived Stress Scale: validation in a sample of Chinese cardiac patients who smoke. *BMC public health*. 2010 Dec 1;10(1):513.
25. Mascia ML, Agus M, Penna MP. Emotional Intelligence, Self-Regulation, Smartphone Addiction: Which Relationship With Student Well-Being and Quality of Life?. *Frontiers in Psychology*. 2020 Mar 6;11:375.
26. Rudland JR, Golding C, Wilkinson TJ. The stress paradox: how stress can be good for learning. *Medical education*. 2020 Jan.

IJEAST

INTERNATIONAL JOURNAL
OF ENGINEERING APPLIED SCIENCE
AND TECHNOLOGY

ABOUT IJEAST

International Journal of Engineering Applied Science and Technology (IJEAST) is a peer-reviewed, open access journal that publishes high-quality research papers in the field of Engineering, Applied Science and Technology.

IJEAST aims to provide a platform for researchers, academicians, and professionals to share their innovative ideas, research findings, and practical experiences with the global scientific community.

FOCUS AREAS

- Engineering
- Applied Science
- Technology
- Innovation & Development
- Interdisciplinary Studies



PEER REVIEWED

All submissions are rigorously peer reviewed to ensure quality.



OPEN ACCESS

Free and unrestricted access to research for all.



GLOBAL REACH

Connecting researchers and professionals worldwide.



TIMELY PUBLICATION

We ensure a swift and efficient publication process.



For more information, visit our website

www.ijeast.com



INTERNATIONAL JOURNAL
OF ENGINEERING APPLIED SCIENCE
AND TECHNOLOGY

✉ editor@ijeast.com

🌐 www.ijeast.com

📍 India



2455-2143