seen in the graph chronic stress may lead to distress with decrease in the performance of the students due to fatigue, exhaustion and failure .In 1985 [19] (1999). It is suggested that changes in posture might provide a most delicate test of the condition of vasomotor mechanism. It is well recognized that there is transient fall in blood pressure on standing, with stimulation of the carotid Baroreceptors and consequent reflex tachycardia and peripheral vasoconstriction that leads to fall in diastolic blood pressure.

Graph 4: showing the relation of performance and level of stress

Several studies from West and from Asia have reported that medical training is highly stressful particularly for those who are the beginner [14](1971), [20](2014), [13](2006).

Ratana Saipanish assessed stress among Thai medical students (64%) at Thai medical school [21] (2003). Guthrie et al reported higher percentage of 36.8% at a university in the North of England who had mental health problems as measured by the GHQ as compared to the present study with 26.92% by IHGT[22] (1995).

The young students populations have always been vulnerable to stressful life conditions especially in pursuit of higher professional education (medical) in a highly competitive environment [23] (2003), [24] (1993),[21] (2003). In the present study academic achievements and academic tests / exams were significantly related to stress level .The findings of the present study are consonance with study conducted by Reda Abouserie .He concluded that female students are more stress than males .He correlated between the locus of control and academic stress which suggest that students with external beliefs had more stress [25] (1994).

The highly competitive atmosphere in medical schools may be the result of stress, getting poor marks can increase stress. Human body responds to stress by alterations in Autonomic Nervous System (ANS). A study from Agha Khan University Pakistan has reported that more than 90% of students felt stressed at one time or the other during their course [26] (2004).The findings of the present study were consistent with those of other studies from Pakistan, India other Asian countries. In one of the study conducted in India 73% of first year medical students have reported to have higher level of stressed [27] (1998).

Everly, G. S. and Rosenfeld, R observed that stress is a psycho-physiologic arousal occurring in the body as a result of a stimulus which becomes a stressor by virtue of the cognitive interpretation of the individual [28] (1991). Emotional factors were found to be significantly more in first year medical students as compared to 2nd or 3rd year students. This may be due to entry into a large professional college which makes students feel insecure in the initial period [27] (1998).

The amount and severity of stress experienced by medical students may vary according to the settings of the medical schools, the curricula, evaluation (exam) system etc., Previous studies from medical school in different countries have reported varying level of stress[29] (2005), [30] (1991) ,[31] (1991, [32] (1992), [33] (1999) ,[34] (2010).

Faiyaz Qureshi et al concluded that academic examinations in medical students are stressful enough to produce changes in Blood pressure and blood cells parameters [35] (2002).Shruti JS and Hitendra MP concluded that there was increase in sympathetic activity in first year medical students by obtaining the highly significant in Pulse Rate, Arterial blood pressure, body temperature and significant reduction in galvanic skin resistance during pre exam period (5-7 days before exam) [36] (2014). ElizabethTharion et al also concluded that during exam there was significant decrease in cardiac R-R interval hence increase in Heart Rate and increase in Blood pressure [37] (2009).

From both IHGT and LST in the present study it was revealed that female medical students had borderline stress more that male medical students before academic examination .Similar findings were observed by Mohsin et al. However Cohen has reported that there was no significant difference in stress [38] (1998). Among academic stressors according to Mohsin et al tests or examinations were the chief sources of stress [34] (2010).

Those students who perceive test/examination as a burden may experience stressful situation while others consider examination as useful in their learning and experience less stress. Previous studies have also reported that academic /examination are common sources of stress among medical students .The present study is consistent with the study by Reda Abouserie who found the significant negative correlation between self esteem and both academic and life stress emerged, indicating that students with high esteem are less stressed that those with low[25] (1994).

In similar studies by SNB Inam et al 75% of male and 61% of female total of 65% of first year medical students had stress. It was significantly higher in first year comparatively .Western data suggest that females experience higher levels of stress as compared to males ,the same is true with the present study report. Similarly studies [39](2008),[25](1994),[40](2010) reported that female students' mean anxiety and stress scores were significantly higher compared to the male students .The same results were obtained from the study by Sherine M et al [41](2004).The present study is consistent with study conducted by Mustafa et al found in their study that female had higher level of stress (23.8%) compared to the male (17.1%) [42](2008).

Khadija Qamar et al showed that 41.7% of medical students had stress. Among them female showed significant higher level of stress [43] (2014). Similarly A study in Jizan university Saudi Arabia showed that 77.2% of first year medical students had stress .The prevalence of stress was higher in female(76.9%) as compared to male (63.7) [44] (2012).Hamza el also conducted similar study in Saudi Arabia showed stress in 74.2% in first year medical students [1] (2011).Similar findings by [40] (2010), [45] (2011) showed that mean perceived stress was significantly higher among females students , in contrast report by Supe AN showed that there was no such significant difference on the basis of sex[46](1998).

Simic and Mannica showed that cardiac R-R interval parameters were the same in the prestress and post stress examination periods. The same parameters declined in stress level during the exam situations indicating habituation to exam stress [47] (2012).

Zeller assessed the effect of real life mental stress situation on Blood pressure and Heart Rate in students [48] (2004). They also found that increase in Heart Rate at the beginning of exam followed by its decline during the rest of the exam similar to finding by Simic and Mannica.

7. Conclusion

It could be concluded from the present that academic activity like examination or viva voce in the medical students affect the autonomic nervous system by increasing the sympathetic activity. Even before academic examination the students were stressed more so in females. PreStress stress in first year medical students may be due to change in study environment, curriculum etc.In first year medical students academic performance and fear of failing are stressor that are of concern to the students' level of stress.

8. Recommendation

Several studies indicated a need for programs in colleges that students can cope up with .Physical activities like sports, and socialization are indispensible for individual growth and to foster personal development [49] (2003) Sports music, mediation or yoga be a made as part of curriculum.

Different stress management techniques such meditation, yoga support groups games etc help in better adaption of coping skills improved knowledge of stress and enhanced ability to resolve conflicts[50](2000). The students may be advised to take the advantages of meditation or yoga classes. Stress reduction workshops or stress relief seminars. Finally Earlier in the career one finds and masters the stress management techniques that works for oneself the sooner one will be ready to tackle the task of learning the full complement of skill necessary to become successful and able doctors in the society.

9. Future Scope of Study / Limitation of Study

This present study was non invasive and safe convenient and comfortable for the students .But the data did not estimate the blood cortisol level which is the marker of the stress condition and It did not analysis the hematological parameters. Since the General Health Questionnaire or anxiety scale was not used to estimate the level of stress in the students .The mental status of the students could not be evaluated .The family background with financial status, social status was also not included in the study which affect the performance and stress level in the student.

10. Acknowledgement

I extend vote of thanks and appreciation to all the students who as subjects exhibited enormous patience and so-operation during the tests conducted for this present study. I thank my BLDEA's Shri B.M.Patil Medical College Bijapur who has given me the opportunity to accomplish this challenging task. I am deeply grateful to Prof and Head of Department of physiology of BLDEA's Shri B.M.Patil Medical College Bijapur Manjunatha A and other staff members for their everlasting support and guidance. I am thankful to Dr Uma and Dr Faiyza for giving me their valuable time and information in completing my article. Above all it gives me immense pleasure to thank the authors whose articles are cited and included in references of my manuscript. I am also grateful for the authors / editors/publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

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