THE ASSESSMENT OF STRESS AS A RISK FACTORS FOR CARDIOVASCULAR DISEASES IN THE CARDIOLOGY DEPARTMENT OF A TERTIARY CARE TEACHING HOSPITAL JAIPUR; A PROSPECTIVE STUDY

OMVEER SINGH[a1], SUNEHA RANI[b], SHAILESH SHARMA[c] AND HANSRAJ BISHNOI[d]

[acd]School of Pharmaceutical Studies Faculty of Health Sciences, Dr. K.N. Modi University Newai, Tonk, Rajasthan, India
[b]Department of Pharmacology, Mahatma Gandhi Collage of Pharmaceutical Sciences, Jaipur, Rajasthan, India

ABSTRACT

Assessment of stress as risk factor for cardiovascular diseases. The 6 months present prospective & observational study was conducted on the subjects suffering with the cardiovascular diseases and was admitted to the cardiology or medicine department of NIMS Hospital which is a tertiary care teaching hospital of Jaipur District Rajasthan. the study identified the role of variables such as stress levels and there relation in respect to cardiovascular diseases. It was concluded that there is strong relation between stress level in the subjects and these one factor is controlled within the normal range. It will act as protective factors and will reduce the risk of cardiac disease and progression.

KEYWORDS: Stress, Cardiovascular Diseases, Factor

Stress is a accepted topic these days. There is scarcely a week that passes without hearing or study about stress is associated with harmful effects on health given the negative crash of stress on human body. Many types of stress management treatment have been put ahead in order to reduce stress and to assist well being. However, there is a significant contradiction in the field of stress research, and it relates to the reality that the well liked definition of stress is very different from the technical definition of stress. This unpredictability has left a multitude of human and specialist talking about, and working on very disparate aspects of the stress system. (Strazins *et al*., 2005)

Stress is your body way of answer to any category of the request or threat. When you feel intimidate, in your nervous system answer by rescue flood of stress hormones, counting adrenaline and the cortisol, which wake the human body for emergency activity. Your heart pounds speedy, muscles tighten, blood pressure increase, breath hurry, and your senses become sharp-edged. These physical changes raise your strength and the stamina, momentum your reaction time, and increase your focus. This is known as "flight" or mobilization stress result and your body way of save you. When stress is within your relief, it can assist you to stay attentive, energetic, and alert. In emergency condition, stress can save your body giving you extra power to protect yourself, for example, or stimulate you to bang on the brakes to circumvent an accident. Stress can also assist you increase to meet challenges. Stress is what stay you on your human foot during a presentation at work, hone your attentiveness when you're strive the game-winning free throw, or pilot you to study for an exam when you'd preferably be watching TV. But afar your pleasance, stress stops being obliging and can start create major injury to your mind and human body. (Jeanne Segal *et al.,* 2016)

METHODS OF MEASURING STRESS LEVEL

These are following methods by which stress cause can be measured.

Psychological Questionnaires

Questionnaire method was used in the study stress score was given depending on their answers.

Autonomic Measure

(a) Blood pressure (Blood pressure is a measure of the force that blood exerts on the valve of blood vessels. When blood pressure is measuring, two numbers appear 120/80mmHg.Systolic/diastolic.

(b) Vagal tone: The reorientations of parasympathetic impulse and measuring require the use of more advanced electronic device and the installation of leads.

(c) Salivary alpha amylase

(d) Salivary cartisol as a biomarker of stress-(Lupine SJ *et. Al*., 2006)

In this project only questionnaires method was used. In this method some questions were prepared 40 questions was used as the base of the questionnaire based

[1]**Corresponding author**

assessment of stress in patient which is associated with cardiovascular disease.

METHODOLOGY

The present prospective & observational study was conducted on the subjects suffering with the cardiovascular diseases and was admitted to the cardiology or medicine department of NIMS Hospital which is a tertiary care teaching hospital of Jaipur District Rajasthan.

All the subject suffering were be screened and enrolled for the study based as the following Inclusion and exclusion criteria.

Inclusion criteria-Male/Female, Adults above 18 year of age and suffering from cardiovascular disease.

Exclusion criteria- Out patients, Pediatric patients, Pregnant Women.

Duration of study– 6 Months.

Place of study- NIMS Hospital Jaipur Rajasthan.

(A)For stress Measurement- These methods we can measure stress.

Psychological questionnaires

Questionnaire method was used in the study stress score was given depending on their answers.

Scoring – Allocate (2) marks on "Always", (1) marks on "Sometime "and (0) marks on "Never". Sum up all the marks and explain in terms of state of stress.

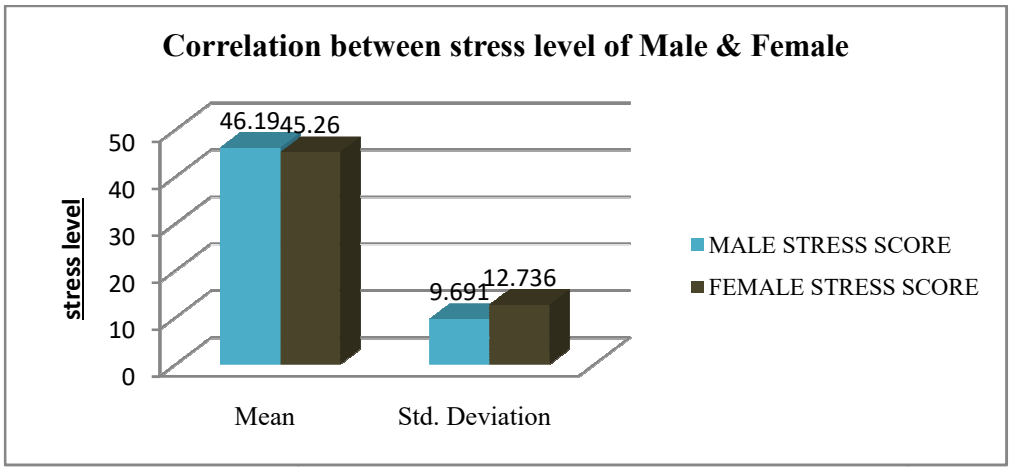
Table 1: Interpretation of raw scores as stress stage (Korchin *et al.*, 1986)

State of stress	Male	Female
Severe state	57 and above	59 and above
High state	47-56	49-58
Moderate state	37-46	39-48
Low state	27-36	29-38
Very low state	26 and less	28 and less

OBSERVATION AND RESULTS

Table 2: Correlations Between Stress Levels Male & Female

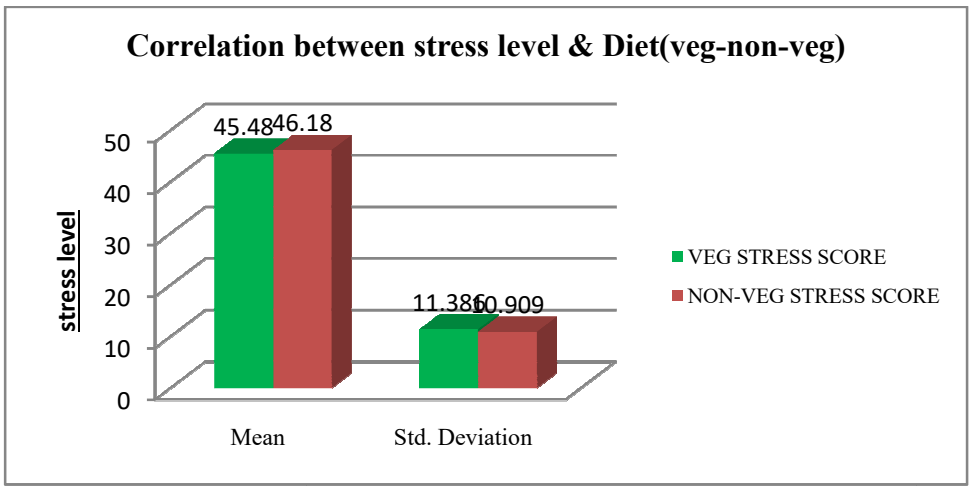
	Mean	Std. Deviation	N	r (Correlation)
Male stress score	46.19	9.691	73	-0.215
Female stress score	45.26	12.736	62	



On the basis of the data reported which is mentioned in the table number 2, the mean male stress scores and female stress scores were plotted on (Y) axis. Themean stress level and std. deviation of male and female were plotted on (X) axis using descripive statistics. The mean male stress score was found to be 46.19 with a std.deviation of 9.691 and female stress score mean was found to be 45.26 with a std.deviation of 12.736. The total number of subjects taken 135 in which male subjects were 73 andfemale subjects were 62 respectively. The correlation was found to be -.215 by using SPSS (V16.0).

Table 3: Correlation Between Stress Levels & Diet (Veg-Non-Veg) Descriptive Statistics

	Mean	Std. Deviation	N	r (Correlation)
VEG STRESS SCORE	45.48	11.386	80	-0.255
NON-VEG STRESS SCORE	46.18	10.909	55	



On the basis of the data reported which is mentioned in the table number 3,the mean veg subjects stress scores and non-veg subjects stress scores were plotted on the X axis along with std. deviation using descriptive statistics. The veg stress level and non veg stress level were plotted on the Y axis. It was found that the mean veg subjects stress score was found to be 45.48 with a std.deviation of 11.386 and non-veg subjects stress score mean was found to be 46.18 with a std.deviation of 10.909.

The total number of subjects taken were 135 and veg and non-veg subjects were 80 and 55 respectively.

The correlation was found to be -.255 using SPSS (v16).

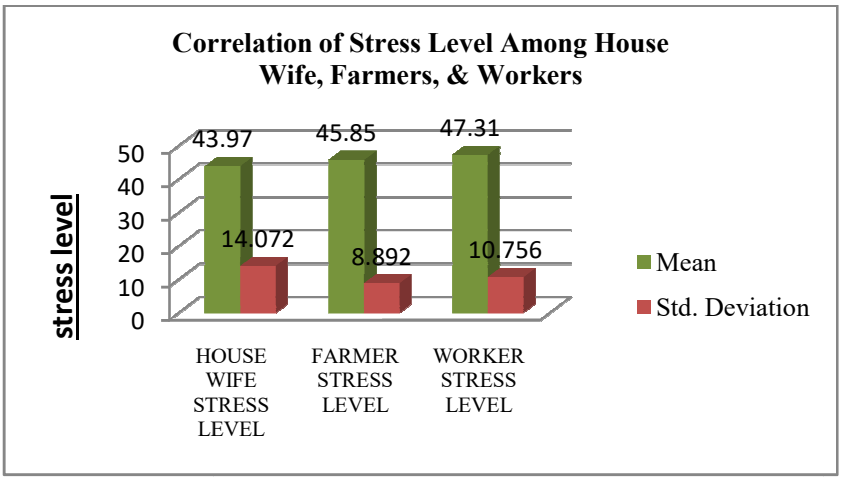
Table 4: Correlations of Stress Level Among House Wives, Farmers & Workers

Descriptive Statistics

	Mean	Std. Deviation	N
HOUSE WIFE STRESS LEVEL	43.97	14.072	39
FARMER STRESS LEVEL	45.85	8.892	54
WORKER STRESS LEVEL	47.31	10.756	42

Correlations

	House wife stress level	Farmer stress level	Worker stress level
House wife stress level		0.168	-0.240
Farmer stress level	0.168		-0.132
Worker stress level	-0.240	-0.132	



As above mentioned in the table number 4:-Result showed that there was significant correlation among house wife stress level, farmer stress level, and worker stress level. The total number of subjects were 135 in whichthe house wife patient taken in the study 39, farmers were 54 and workers were 42. correlation is calculated By using of SPSS (v16) the correlation between house wife stress level and farmers were found to be 0.168 and the correlation between house wife with worker were found to be-0.240. Which is significant when level of significant for two tailed test was found to be 0.10.

Also value of farmer stress level with house wifes, the correlation found to be 0.168 and farmer with worker stress level the correlation found to be –0.132 which is significant when level of signficn for two tailed test was 0.10.

Based on the descriptive statistics, it was found that the stress level with occupation following graph was plotted and as above mentioned in the table number 7. The occupational mean with std. deviation were arrange on the X axis and stress lrvel were plotted on the Y axis. It was found that house wife stress level was found to be 43.97 with a std. deviation of 14.072 and mean farmer stress level was found to be 45.85 with std. deviation of 8.892 and mean worker stress level was found to be 47.31 and std.deviation was 10.756.

CONCLUSION

A prospective observational singal cantred study was conducted for the assessment of stress as risk factors for cardiovascular diseases.

All the subjects were suffering from cardiovescular diseases and were enrolled for the study based on the predefined inclusion and exclusion criterias. The study was done in a tertiary care teaching hospital in Jaipur, Rajasthan.

Our study identified the role of variables such as stress levels and there relation in respect to cardiovascular diseases.

It was concluded that there is a strong relation between stress level in the subjects and if these one factor is controlled with in the normal range. It will act as a protective factor and will reduce the risk of cardiovescular disease progression.

REFERENCES

Jeanne Segal, Ph.D., Melinda Smith, M.A., Robert Segal, M.A., and Lawrence Robinson. Last updated: December 2016

korchin, S.L. Modern clinical Psychology CBS Publishjers and Distributorse, 485, KJ ain Bhawan, Bholanmath Nagar. Shahdara, Delhi 1986.

Strazins L, megerkortsbrent v, Dsavza RM boorm DH, kgd JM impoct of saliva collection methods on SIGA and cartisol assays and a acceptobilits to partiucipants, J immunol methods Dec.200-strazins L 2005,307(1-2)167,171.

Teching bulletin (1001-06):measurement validity of salivary cortisol compromised by lot-to-lot variation in the salivate device in lupine SJ, ed. State, collage PA salinetics LIC, 2006.