
Summary & Conclusion

Summary :

Each year there are more than thousand articles published on stress. Selye (1976) reviewed all over 10,000 different articles and noted that between 1936 and 1976 about 95000 articles, books and reviews on stress had been published.

There appears to be anatomical, physiological and neurochemical evidences that cognitive - affective responses to stress can alter the functioning of those vital corticolimbic - hypothalamic - pituitary pathways, that modulate endocrine, autonomic and immune processes. Alterations of these systems sets the stage for the concept of disease.

In the modern life the man is caught struggling to fulfill a number of complex demands in a limited time, giving rise to high degree of stress. Several lines of investigation contributed to the evolution of psychosomatic medicine from a stimulus specific to response specific, to a general interactional system model, applicable to all diseases. Psychosomatic medicine has now become a comprehensive approach to the study of all patients with disease that pays special emphasis to the interaction between psychological and biological dimension.

We took up the study with an idea of exploring the relationship between psychology and physiology of stress.

Among varied techniques and therapies for management of stress, yoga seems to be more holistic and comprehensive tool. Yoga is claimed to bring and maintain a perfect homeostasis in psychological and physiological functioning. It was aimed in the present work to study efficacy of some yogic techniques in bringing healthy alterations in psychological and physiological functioning of normal healthy people as well as people suffering with somatic ailments.

In chapter one, several definitions of stress are discussed, phenomena of stress in psychology and in physiology are explained. The process of psychosomatic ailment development is explored and various interventional techniques, with a special reference to yogic techniques are described.

Going through the review of literature one would get idea about the significance of the study. Chapter two elaborates various studies carried out by different workers in the areas of psychosocial stress, stress reactions, influence of stress on health and outcome of practice of yogic techniques in normal healthy people as well as patients with psychosomatic ailments.

In chapter three objectives and methodology are described. Subjects were selected randomly from various groups of people, who came for yoga training during the years 1992 to 1995 at Yoga Niketan and Aarogya Mandir, Vadodara. Basal psychophysiological data were collected. A scheduled yoga training was given following which follow-up measurements were carried out for the same parameters.

Results of the study are depicted in tabular as well as graphical forms in chapter four. And, chapter five includes discussion about comparison of our findings with results shown by other workers and also possible psychophysiological explanation for the alterations observed.

The results may be summarised as :

- i. Variety of stressors in the areas of physical family, job and career, socio-economic, political and environment, and emotional were found to be significantly high in subjects with somatic ailments as compared to the normals.
- ii. Psychological and physiological stress reactions were also found to be significantly high in somatic ailment group.
- iii. Cardiovascular (pulse and blood pressure) and respiratory functions were found to be influenced negatively in the somatic ailment group as compared to the normals.
- iv. Galvanic skin resistance was significantly less in somatic ailment group than normals.
- v. Biochemical parameters like, fasting blood sugar (FBG) and serum cholesterol (SCh) were higher in somatic ailment group.
- vi. Yoga is found to have its more effect on weight (reduction) in subjects with somatic ailments than normal subjects.

- vii. Significant improvement in cardiovascular and respiratory functioning was observed after practice of yogic techniques in normal subjects as well as in subjects with somatic ailments.
- viii. Overall relaxation and optimization of sympathetic activity was observed, in terms of raised GSR level after practice of yogic techniques in both the groups.
- ix. Fasting blood glucose and serum cholesterol decreased significantly after the practice of yogic techniques in both the groups.
- x. Situational stress (examination) alters the autonomic functions. Results of pre exams showed higher values in HR, BP, Temp. and RR and, lower values in GSR and RT in medical students when compared with their own post-examination data.
- xi. One month yoga training in these subjects could bring out the change in their parameters, such as increase in GSR, decrease in HR, BP, RT and RR, indicating healthier autonomic balance.
- xii. Initial level of subjective feelings in terms of percentages on visual analog scale showed clear difference between somatic ailment group and normals. Practice of yogic techniques improved these subjective feelings in both the groups.

Conclusion :

This study on psychophysiology of stress : Influence of yogic and related techniques indicates high level of perceived stress and exaggerated stress reactions among the subjects with somatic ailments. Deterioration in the physiological, biochemical and psychophysiological functioning is obvious in patients with different somatic ailments compared to the normals.

Specific stressor areas (viz. physical, family, job and career, socio-economic, political and environmental, and emotional) do not show conclusive relationship with any of the somatic ailments.

Situational stress in the form of examination leans autonomic balance towards hypersympathetic activity in normal healthy students.

Yogic techniques improve overall health in terms of psychological subjective feelings as well as biological functioning in normal subjects.

Definite improvement in health status of people suffering from various ailments like, low back pain, migraine headache, cardio-pulmonary disorders and many other stress related disorders can be achieved through regular practice of yogic techniques.

Thus, practice of yoga brings psycho-biological harmony and better health, proving its efficacy in the management of stress.

More valid and reliable psycho-testing tool giving quantitative assessment of stress is required to be developed, which can help in definite understanding of cause and effect relationship between psychological and biological parameters. More sophisticated studies with hormonal assay, polygraphic monitoring of the neurophysiological and cardio-respiratory parameters and, neuropeptide estimations, can give further inference regarding mechanism of influence of yogic techniques.