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INTRODUCTION

In order to implement the ALMA-ATA (USSR) declaration of "Health for all by the year 2000 AD" including promotion of mental health, preventive means are required in addition to curative, to live in harmony keeping pace with the detrimental effects of life's stress. According to World Health Organisation (1970), the term health refers to a positive state of physical and mental well-being with a high level of functioning and not merely the absence of diseases.

Stress has become an important dimension in the urban and industrial environments which will have an effect on productivity and performance and also is a causative factor for Psycho-somatic diseases. In this context, though drugs do control stress and give momentary relief but its continuous use will not show any positive and significant impact on the stress situation of the individual, and they may lead to detrimental affects in the long run.

Stress is a multi-dimensional phenomenon caused through a variety of factors - environmental, social, physical and psychological - which affect one's perceptions, thoughts and expectations. Thus, stress cannot be managed solely by any one technique. If the negative effects of stress are to be reduced, the individual's life style must change to a certain degree involving alterations in environment, personality, nutrition, exercise pattern and relaxation.
It is well recognised that 'Yoga', an ancient Indian Philosophy, aimed at obtaining liberation through perfect control of body and mind form part of our life style. In addition to daily practice of Asana, pranayama and meditation certain principles are to be adhered to in day to day life.

The research conducted on yoga both in India and abroad is mostly confined to explaining the usefulness of yoga techniques and practically no study has been undertaken on vital aspect of impact of yoga on management of stress. The present study aimed at bridging this gap.

1.2 Consequences of Stress:

According to Cox (1978), the consequences of stress include subjective, behavioural, cognitive, physiological and organizational problems including physical health effects. The actual aspects encompassed by them are referred to here.

The subjective effects include anxiety, aggression, apathy, boredom, depression, fatigue, frustration, guilt, shame, irritability, bad temper, moodiness, low self-esteem, threat, tension, nervousness and loneliness.

The aspect on behavioural effects encompasses accident proneness, drug abuse, emotional outbursts, excessive eating or loss of appetite, excessive drinking and smoking, impulsive behaviour, impaired speech, nervousness, laughter, restlessness and trembling.

Note: Words given in bold form in the text are having the origin from Sanskrit.
Inability to make decisions and concentrate, frequent forgetfulness, hypersensitivity to criticism and mental blocks are the main aspects falling under cognitive effects.

Increased blood pressure and urine catecholamines, corticosteroids, increased blood sugar levels, increased heart rate, dryness of mouth, sweating, dialation of pupils, difficulty in breathing, hot and cold spells, lump in throat, numbness and tingling in part of the limbs constitute the category of physiological effects.

In the aspect on organizational effects, absenteeism, poor industrial relations and productivity, high accident rate and labour turnover rate, poor organizational climate, antagonism at work and job dissatisfaction are included.

In the health effects, the taxonomy suggested by Cox (1978) include asthma, chest and back pain's, coronary heart diseases, giddiness and dizziness, frequent urination, headaches, migraine neurosis, nightmares, insomnia, psychosis psychosomatic disorders, diabetes mellitus, skin rash, ulcer, loss of sex interest and weakness.

Another author, Manuso (1978) has argued that as many as 25% of all Americans suffer due to excessive stress. According to him approximately 50% of all general patients in USA were suffering from stress related problems in 1979. The
office of U.S. Surgeon General department declared that when stress reaches excessive proportions, psychologic changes can be so dramatic as to have serious implications for both mental and physical health of Americans (Public Health Service, 1979).

1.3 Yoga

Before discussing the importance of yoga in effectively managing the stress, a detailed understanding of its origin, concept, significance etc., is necessary, as the word 'yoga' has been used in many connotations.

According to AMARAKOSHA, yoga means 1) Sammohana (i.e., protecting oneself with an armour), 2) Upaya (i.e., to an end), 3) Dhyana (i.e., meditation), 4) Samgati (i.e., Harmony), and 5) Yukti (i.e., union). The Sanskrit word yoga is derived from the root YUJ - YUJYATE AENAITI YOGAH, which means to join or yoke, the union being that of the personal soul and supreme soul.

Though the term yoga was referred to in the Indian ancient literature in a general way, a full fledged definition has been presented by PATANJALI in his famous work 'YOGA SUTRAS'. According to him yoga means 'yoga's citta-vritti-nirodha' and the context of each of the terms is as follows: 'Citta' is an instrument or medium through which
Jivatma materialises in the individual world and evolves in the world until it has become perfected and united with 'paramatma'. Broadly, therefore, citta corresponds to 'mind' in modern psychology. 'Vritti' is modification functioning. Since citta has a functional existence and come into being only when consciousness is affected by matter and last word 'Nirodha' is derived from the word NIRUDDHAM which means retrained, controlled, inhibited. All these meanings are applicable in different stages of yoga.

Restrain involves itself in the initial stages, control in the more advanced stages and inhibition or complete suppression in the last stage.

1.3.1 Yoga in Indus Valley Civilisation period

According to some scholars, yoga was a special feature of Dravidian civilisation. They mainly rely upon the evidence brought forward by the excavations of the Indus valley civilisation. The relics excavated in the Indus valley certainly indicate that yoga in some form was in vogue in that remote antiquity as well. Amongst the Mohanjodaro relics, it was found a figure seated in yogic posture.

Yoga in Vedic period: In Rig-veda, the word yoga occurs very frequently. Yoga was not developed as a system in the age of the Rig-veda. Only very subtle seeds of some of the yogic
concepts and practices can be traced in Rig-veda. In Atharvana-veda also it figures in most of the places to denote that body, speech and mind are chief means for self-advancements.

1.3.2 Yoga in Upanisads:

Upanisads consider yoga as an essential part of knowledge or understanding the process itself. It means it is conceived as a psychological process basically involved in all perceptions and perceptual discrimination relative to man as a biological entity and not necessarily as something peculiar to yogies. The relationship between yoga and Upanisads is very intimate, almost inseparable. They regard yoga as an intrinsic mechanism which is involved in all kinds of mechanism, knowledge and perceptions including the highest type, that is Atman.

The Upanisads seem to suggest that it is through the practice of meditation which they regard as a normal psychological process, one can have control over the inhibitory system. Such a control alone facilitates all kinds of perceptions and also problem solving. It can improve efficiency, character building, formation of new attitudes, values, etc., when directed to the existing world of experience and also realisation of Atman which can be the highest goal a man can cherish to free himself from the duality of Prakriti and Purusha.
1.3.2 Yoga in the age of Epics and Puranas:

Much information concerning development of yoga in Ramayana is not available. However, it can be said that different kinds of yogic practices were practised in the age of the Ramayana and only casual references have been made on yoga and yogic practices.

The Gita recognises four main paths, suitable for people with different temperaments and capacities. These main paths are Karma Yoga, Ganna Yoga, Dhyana Yoga and Bhakti Yoga.

1.3.4 Patanjali Yoga Sutras:

Patanjali lived in a critical period of Indian history when great upheavals were taking place on the religious, cultural, and political fronts in his time but also guided further courses of India history and left a great legacy for mankind.

Patanjali yoga sastra is a unique text as far as the psychological aspect of yoga is concerned and for our investigation, it is the main source of information. Patanjali yoga sastra has utilized all the available material on the subject in his times and added a new scientific dimension. Hence, it is no wonder that Patanjali has been recognized all through the subsequent times to this day as
the highest authority on yoga. Patanjali has recommended eight stages of yoga discipline (Aṣṭāṅga marga). They are 1) Yama (restraints), 2) Niyama (observances), 3) Asana (physical posture), 4) Pranayama (breathing control), 5) Pratyahara (withdrawal of sense organs), 6) Dharana (contemplation), 7) Dhyana (meditation) and 8) Samadhi (attainment of super consciousness). He has explained all these stages in detail to be followed in liberating human consciousness from the limitations of avidya and gaining self realisation. However, some modification is warranted to suit the present society. Thus, a combined practice of asana, pranayama and meditation in a sequence is the best combination to tackle the stress problems of the present day society. The significance of the results will be better appreciated if one follows yoga principles and understands yoga philosophy* in every day life.

1.4 Importance of yoga in daily life:

Yoga practices such as asanas, pranayama and meditation will not only improve and induce a state of tropotrophic responses but also provide relaxation in musculo-skeletal level. It is well quoted in classical yoga texts like "Hatha yoga pradipica and Ghranda Samhita" that there are specific

* Appendix-II provides the package of yoga principles, philosophy and techniques.
benefits of each asana and pranayama, for example, improvement in flexibility of spinal column and muscles, purify the nadis where pranic currents flow, relief from muscle and mental tension, anxiety, fear etc., and also provide a sense of well-being to the consciousness. According to Pratap (1969), Kocher and Pratap (1971) and Kocher (1972), it is claimed that the short term yoga training improves mental health.

Thus, various classical texts reflect sufficiently the use of yoga as a method of promoting and educating process for improving health status. Evidences are available of the way it has provided enormous benefit to the people all over the world at a minimal effort and cost. Yoga can also play a greater role provided proper scientific studies are conducted to establish its usefulness. It is felt that there is vast scope for carrying out research in the area of yoga in order to realise the maximum benefit in the context of improving both mental and physical health.

1.5 The history of stress

The word "stress" is derived from Latin, stringere which means to draw tight (Skeat, 1958). According to Skeat, the word was probably first used around the fourteenth century and for many years thereafter numerous variants of the word were used in English literature including stress, stresse, strest and even straisse.
Although the word and its variants have existed for centuries, the origin of the concept of stress is difficult to trace further back than the middle of the nineteenth century. At that time French Physiologist, Claude Bernard suggested that external changes in the environment can disrupt the organism and that, in order to maintain the proper adjustment in the face of these changes, it was critical that the organism achieve stability of the *milieu intérieur* (Bernard 1867). This appears to be one of the earliest - if not the first - recognition of the potential dysfunctional consequences of upsetting the balance of, or stressing, the organism.

In the 1920s the American Physiologist, Walter Cannon introduced the term *homeostasis* to designate the maintenance of internal milieu (Cannon, 1922). While his research focus was on specific reactions that are critical in maintaining internal balance during emergencies such as nervous irritation, he was clearly dealing with the concept of stress as it has evolved today in his later work. He adopted the term stress and spoke of "critical stress level" which he defined as those which could bring about a collapse of the homeostatic mechanisms. He even used the term in relation to social and industrial organisation. (Cannon, 1935).
The beginning of the modern usage of the term is not associated with Cannon, however, but with Dr. Hans Selye, an endocrinologist at the University of Montreal who is frequently referred to as the "Father of Stress". Selye's work provided the first significant breakthrough in stress research and formed the foundation for much of the subsequent work carried out up to the present.

Experts do not agree about the definition of stress or its essential properties. The most remarkable fact about the term stress is that it has persisted and grown into wide usage although there is almost no agreement over what it means.

1.6 Definition of stress:

Agarwala, Machan and Singh (1979) believe that the confusion in definition is primarily due to the fact that the same term is used differently by scholars of different disciplines. In physics, stress is a force which acts on a body to produce strain. In physiology, the various changes in the physiological functions in response to stress creative agents denote stress (rather than strain). In psychology stress refers to a state of organism resulting from some interaction with the environment. In psycho-physiology stress is "that stimulus which imposes detectable strain that cannot be easily accommodated by the body but presents itself as impaired health or behaviour."
There is still some ambiguity about the proper use of term stress. It has been used to refer to environmental circumstances that disrupt the normal activity of an organism (Appley & Trumull 1967; House 1972; Kagan 1977; Kollar 1961, Withey 1962). It has also been referred to the response of the organism either physiological or psychological to particular events (Beerchfield 1979; Mason 1971; Selye, 1974, 1976) or as a global label for a field of study that examines the processes by which organisms adopt to disruptive events (Averill 1979, Mechanic 1974).

Operational Definition:

Keeping in view of historical precedent and consistent with Selye’s original notion, the word (term) stress is used in the present study to refer to a physiological reaction or response, regardless of the source of the reaction. The term stressor is used to refer to the stimulus that serves to engender the stress response.

1.7 Stress management;

Though, there is no clear definition available in regard to stress management, according to Cohen & Lazarus (1979) the term MANAGE means to master, tolerate, reduce, minimise.

The following aspects are viewed as the constituents of stress management.
1. To master stressors/stress situations
2. To tolerate stressors.
3. To reduce stress reaction.
4. To minimise distress symptoms and
5. To adopt healthy coping strategies.

1.6 Yoga and stress management

Yoga experts claim that by regular practice of yoga one can achieve positive mental attitude, equanimity, poise and self-knowledge. Further, they stated that it could be utilised in the management of psycho-somatic disorders where stress is supposed to be the root cause.

Datey (1969), Patel (1975) and Benson (1975) who reviewed the authoritative texts (including Gheranda Samhita and Hata Yoga Pradeepika) on sciences of yoga conducted clinical studies on yoga postures, pranayama, and 'shavasana' technique and certain 'pranayama' or meditation techniques and found that they are highly effective in reducing high blood pressure. During these postures the person will be less conscious of external stimuli and more alert inwardly. In this deep state of relaxation, the higher cortical functions are lowered and the body will be in a state of equilibrium opposed to a state of stress.

According to Udupa (1975), yoga itself is a sort of small regulated dose of stress for an individual (because the
Yoga practices bring out certain bio-chemical changes as stimulated in stressful conditions. A regular practice of yoga includes varying degrees of stress resistance in the persons more or less in the same manner as an antigen used in a regulated dose produces immunity against particular infectious diseases. However, the yoga practitioner does not suffer from episodes of stress responses and even if it occurs, the tissues and other elements of the organism in that individual do not get so readily damaged during altered states produced by stressful episodes. Practices of different postures have a definite place in prevention and treatment of different kinds of mental and physical disorders, specially stress disorder.

According to Funder Burk (1977), yoga increases the efficiency in functions of various internal organs, muscular flexibility and strength. The individual's resistance to external influences increases and gradually internal control is achieved. Yoga induces a state of relaxation and lowers the hyper-aroused state. Self control and regulation develops with awareness of one's internal conditions.

Although many scholars were unanimous in their view about the importance of yoga in the management of stress, no specific empirical investigations were carried out to establish the same. With a view to bridging this gap, the
The present study is taken up which specifically aims at evaluating the efficacy of yoga package in the management of stress besides examining the concepts of stress and stress management as relevant in the context of Patanjali Yoga Sutras.