

A critical review on Occupational stress related health consequences and its treatment strategies in Ayurveda and Yoga

Anjali P. Kasar¹, Satish R. Shirsat^{*2}

1. H.O.D. & Professor (dept. Of Swasthavritta)
2. H.O.D. & Professor, Dept. of Roga Nidana & V.V.,
MAD Ayurved College & Hospital Babhulgaon, Yeola, Dist –Nashik, Maharashtra

*Corresponding Author: Ph. no. – 9226743571; Email Id- satishshirsats6@gmail.com

Abstract- An occupational disease is defined as a disease caused by certain well-defined factors in the working environment. Stress, whether good or bad, occurs when the mind, body, or emotions are overstimulated. Workplace stress occurs when the mind is unable to cope with day-to-day events and challenges. Ayurveda and yoga are easy to incorporate in their busy professional life. Yoga, which is a practical philosophy, is the best way to overcome the stress at the working place known as occupational stress. Ayurveda and yoga are providing promising solutions over it.

Keywords- Ayurved, Yoga, Occupational stress, *sattvavajaya Chikitsa*, Mental Disease

Introduction- An occupational disease is defined as a disease caused by certain well-defined factors in the working environment. A health impairment said to be work-related may result from multiple causation, the working

environment having been one cause to a greater or lesser extent. numerous epidemiological studies say that health is related to psychosocial factors at work and that their role in relation to both health status and the causation of disease is relatively wide in scope. Stress, whether good or bad, occurs when the mind, body, or emotions are overstimulated. Workplace stress occurs when the mind is unable to cope with day-to-day events and challenges. Some seem to cope with their daily challenges without stress, while others are stressed by the normal changes that the modern workplace brings. Workplace stress can cause a variety of symptoms, including anxiety, fatigue, increased anger, relationship problems, inability to focus properly, stress headaches, insomnia, and various stress-related illnesses. Stress in professional life is a relatively new phenomenon of modern lifestyles. The nature of work has gone through drastic changes over the last century and it is still changing at whirlwind speed. Rapid

urbanization is always accompanied by mechanization in industry. A concurrent problem is that different social institutions often seem to develop independently. Lack of coordination among social institutions connected with industrial development, housing, and transportation may lead to problems that are reflected in the health status of the workers. Nonspecific symptoms such as diffuse pain, sleep disturbance, anxiety and mild depression are relatively common in the working people. Although they may be of diverse etiology, they are often indicators of chronic work-related stress. Perceived symptoms may be accompanied by objectively measurable changes in the autonomic nervous system and hormonal function. These dysfunctions, if chronic, may lead to health impairment and a clinically definable disease state^{1,2}. The main causes of stress at work are the inadequate demands of a job in relation to the worker's abilities, frustrated aspirations and dissatisfaction with regard to valued goals. Stressful experiences at work may manifest themselves in a number of psychological and behavioral reactions.

Ayurveda and yoga are easy to incorporate in their busy professional life. Ayurveda, which is a holistic life science and Yoga, which is a practical philosophy, is the best way to combat the stress at the working place known as occupational stress. Here we aimed review the Ayurvedic and Yoga solutions over occupational stress.

Review Over Occupational stress-

Little attention has so far been paid by those concerned with occupational health to determining and controlling the psychosocial factors at

work that lead to adverse health effects. The mental health problems of workers have continued to be regarded from the point of view of established psychiatric disorders requiring referral for treatment and rehabilitation. Those working in the occupational health services have therefore to face the fact that, while allowing for differences in the individual life-styles and susceptibilities of the workers themselves, psychosocial factors associated with new working methods are emerging as one of the significant causes of ill health among working populations. The situation is perceived by one of the workers involved and thus becomes a psychosocial stimulus³. However, he has had extensive professional training and consequently hoped to be given a reasonably responsible work assignment⁴.

Impact of occupational stress over health:

- Hereditary factors make the worker prone to react with increase in sympathetic nervous activity and blood pressure that are genetic determinants of the psychobiological programme. His wife blames him for the assignment and refuses to offer social support-an interacting variable. As a result, he feels depressed, increases his alcohol consumption, and his blood pressure rises-mechanisms⁵. The experience at work and in the family continues and the worker's reactions, originally transient become prolonged precursors of disease. Eventually, a chronic depressive state and/or

alcoholism and hypertension develop-disease^{6,7}.

- Smoking is a habit that may have a number of both internal and external motives. It is often related to tension and anxiety⁸. A relation has been demonstrated between stress at work and smoking; the decision to stop smoking, in particular, is negatively related to various job stressors^{9,10}. In a study published in 1975 no differences were found among smokers, ex-smokers, and nonsmokers in the USA, in relation to the stress they reported in connection with their jobs. However, one cannot stop smoking in engineers and scientists was associated with job stress and high levels of quantitative work-load¹¹.
- A particular effect of work stress is called the "occupational neck shoulder-arm syndrome" or "*cervicobrachial* disorder". It comprises muscular fatigue; stiffness and pain in the neck, back, and forearms; coldness and hypo-aesthesia (or *paraesthesia*) of the hands; headache; insomnia; and secondary emotional complaints¹². Severe neurological disorders-e.g., neuritis or radiculitis-and various diseases of the muscles, tendons, and joints are among the suggested ultimate consequences^{13,14}.
- The cognitive, emotional, behavioral, and/or physiological and, under some conditions of intensity, frequency or duration and in the presence or absence of

certain interacting variables, they may lead to precursors of disease. Examples of emotional pathogenic mechanisms are feelings of anxiety, depression or alienation, mental fatigue, apathy, and hypochondriasis. Examples of behavioral pathogenic mechanisms are the abuse of alcohol, tobacco or drugs, unnecessary risk-taking in working life behavior towards a fellow human being or towards oneself (suicidal behavior)¹⁵.

- The prevalence of psychiatric disorders appears to be 2-3 times as high among recent migrants as among the local population. The etiology of these disorders lies in the depersonalization phenomenon in those migrant workers who are unable to adapt themselves to the surrounding cultural environment. They may manifest themselves as various somatic conditions, particularly of the digestive tract. The somatic and psychological disorders attributed to migration include duodenal ulcer, reactive depression, personality disturbances, and in extreme cases, psychotic illness^{16,17}.

Review over stress related pathological conditions in Ayurveda:

- The lack of skill to handle daily occupational stress is due to an imbalance or lack of coordination between the three main mental functions of *dhi* (learning), *dhriti* (retention) and *smriti* (long-term memory). In Ayurveda, there are many solutions for strengthening

these mental functions and thus giving the person more resilience to stress³³.

- Another cause of stress is that people overwork or overwork their minds, which leads to an imbalance in the *prana vata*, a *subdosha* of *vata* that is related to mental functioning. When the *prana vata*, the *subdosha* of *vata* that supports mental functions, is disturbed, the coordination of *dhi*, *dhriti* and *smriti* is disrupted. Result in Mental stress. For example, when someone takes a job that doesn't suit them or their abilities or if they use their minds for something that they know is wrong, that is misuse. Overwork is simply working long hours and is a common cause of stress in today's workplace. Uncorrected, misused, or overused minds also lead to impaired coordination between *dhi*, *dhriti*, and *smriti*³³.
- When *prana* and *vyana vata* (*heart subdoshas* that support circulation) are disturbed together, it affects not only the mind but also mind-to-mind communication, creating mental and emotional stress at the same time. Emotional stress is usually associated with an imbalance in the *sadhaka* her *pitta*, which supports the emotions and is the *pitta subdosha* that resides in the heart.
- These imbalances come into play when people are under pressure at work. People with any of these imbalances, when stressed, tend to blame their problems on their boss, the economy, or their

colleagues. It may be true, but in many other cases this blame pattern is due to an imbalance in *prana vata*, *vyana vata*, or *sadhaka pitta*. Because of these imbalances, the *dhi*, *dhriti*, and *smriti* mental functions do not work together in a coordinated manner, or the minds do not communicate normally. Unable to solve their own problems because of these imbalances, the person blames others.

- If one is unable to perceive the reality of blissful life, this indicates *pragyaaparad*, lack of intelligence. *Charaka Samhita*, an important *Ayurvedic* text, defines *Pragya His Aparad* as the lack of coordination between *Di*, *Driti* and *Smriti*. *Pragya-Aparadh* is the source of all diseases. Because illness occurs when the heart, mind, or body loses its connection with natural intelligence. Losing connection with our own essence in blissful memory, pure consciousness, is the cause of bodily illness, stress and ill health³³.
- *Aam* (toxin) plays a very important role in the pathogenesis of mental diseases. Mental disorders are mainly caused by *kama* (excessive desire), *sokha* (sadness), *bhaya* (fear), *klodha* (anger), *harsha* (joy), *irsha* (jealousy) and *moha* (agreement). This should be counteracted by evoking an opposing passion to neutralize the causative one¹⁸.

Relatedness of Dosha with Occupational stress Handling³³:

- When a person has more *vata dosha*, they may be more susceptible to psychological stress. Many *Vata* types do well in creative or mental work, but high mental workloads can cause undue stress. *Vata* types are most effective when they have moderately relaxing jobs without excessive mental or physical activity.
- *Pitta* types should avoid work that overwhelms their emotions, as they are prone to this type of stress. Also, both *pitta* and *vata* types should avoid jobs that require night work, as night work unbalances both *vata* and *pitta*.
- *Kapha* types may thrive in jobs that involve intense mental, physical, or emotional activity, which is undesirable from an *Ayurvedic* perspective. *Kapha* types need stimulating activity to keep their *Kapha doshas* in balance.

Ayurvedic Solutions over occupational stress:

Studies say that *Ayurvedic* lifestyle and medicine proved effective over stress. One can overcome this stress with the different *Ayurved* techniques.

Sattavajaya chikitsa (Ayurved Psychotherapy):

- *Sattavajaya chikitsa* is aimed at the control or restraint of the mind. *Charaka* defines it as a method of restraining the mind

from unwholesome *arthas*. This permits occupational, behavioral therapies. As per *Acharya charak*, its way goes through *jnanam* (knowledge), *vijnanam* (analytical thinking), *dhairya*, (courage), *smirti* (memory), and *samadhi* (concentration)¹⁸.

- Psychotherapy therapy Such as¹⁹ (a) Assurance. (b) Replacement of emotion (c) balancing of thought process (d) Retraining of Ideas (e) Channelization of presumptions (f) Correlation of objective and ideals (g) correct suggestions for taking decisions (h) good control of patience (i) Fear therapy or psycho shock therapy Can be used.
- Mindfulness meditation and counseling can be used.

Domains of SC used in the occupational stress-

SC has proved effective as a monotherapy or combination with other treatment modalities in the numerous *Manovikar* studies. SC has the potential to redefine the ancient art and science of psychotherapy and create new dimensions. SC evokes awareness, works at a discriminating level, discerns negative/maladaptive thoughts, provides firmness, strength, stability, and ultimately restrains the mind.^{29,30,31,32}

Lifestyle modification in the Ayurvedic Way^{20,21} :

- The purpose of lifestyle modification therapy is to help patients change behavior that contributes to stress and initiate new dietary and physical activity

& behaviors needed to change lifestyle. Behavior therapy for lifestyle should involve: i) Developing specific and realistic goals that can be easily measured e.g. walking for 20 minutes.

- Following an *Ayurvedic* routine is the most important thing you can do to avoid stress at work. A daily routine should prevent stress from drowning out the well-being of a balanced life. Morning routine includes waking up early before the sun rises and starting his day with *Abhyanga* or *Ayurvedic* oiling. *Abhyanga* does more than just remove toxins from the body. It stimulates the organs and activates the flow of intelligence in the body. After an oil massage and bath, you'll feel fresh, energized and awake, even if you don't need coffee to start your day. *Abhyanga* is especially helpful in alleviating mental stress caused by an imbalance between *prana vata* (governing mental function) and *vyana vata* (governing the circulatory system). The skin is the seat of Vata, and massaging the skin with gentle pressure and warm herbal oils balances Vata's five *subdoshas* and relieves mental stress.

Yuktivyapashraya Chikitsa -

- The *pancha karma* measures used are External *Snehana* and Internal *Snehapana* followed by *Vamana*, *Virechana*, *Vasti*, *Nasya*, *Shirodhara*, *Shiro Vasti*, *Thalam*,

Thalapothishil. Complete purification of body and mind with *panchakarma* treatment procedures like *Nasya*, *Shirodhara*, *Shirobasti*, *Vasti* and many others balance all the three *doshas* and help to stabilize the thought process for better mental strength. Ayurveda also describes a special class of enhancers called *Medhya Rasayana*, said to promote mental health. *Medhya Rasayanas* has significant anxiolytic properties in addition to its classic role of promoting mental health such as *Sankhapushpi* (*Convolvulus pluricaulis*), *Brahmi* (*Bacopa monnieri*), *Mandukaparni* (*Hydrocotyle asiatica*), *Ashwagandha* (*Withania somnifera*) etc. Most of these drugs give the significant anti-anxiety and *adaptogenic* i.e. anti-stress effect^{26,27,29}.

Ayurved Dietary Advices -

- Foods that enhance stress management include soaked walnuts, soaked almonds and sweet and juicy fruits. These are *medhya* or activated due to the connection between *dhi*, *dhriti* and *smriti*. Milk, like ghee, is also a medium. These foods provide your brain with smart, easily digestible proteins and glucose. A balanced combination of the highest quality glucose and protein is key to nourishing the brain. For example, soak nuts and seeds overnight and then mix

them into drinks with dates and raisins. This keeps your glucose and protein in balance²¹.

- Paneer (cream cheese made from milk), lentils, and other ground beans and legumes are also good sources of protein for the brain, but they're naturally heavy and should be cooked with spices to make them easier to digest. Always use olive oil or ghee for cooking and toast spices such as turmeric, black pepper and cumin. These widely used spices are great tools to nourish the brain and strengthen it against stress. Turmeric has been found to help prevent Alzheimer's and other degenerative brain diseases. Black pepper improves your ability to absorb more nutrients from food and helps deliver nutrients and oxygen to your brain. Black Pepper also has the property of increasing Medha Agni, the agni or digestive process that exists in the gap between Di, Driti and Smriti, which facilitates transformation of the mind. Cumin opens brain channels and improves coordination. Ginger also helps the brain absorb more nutrients by burning ama or toxins out of the digestive tract²¹.

Yoga^{22,23,26}. As Yoga increases one's Mental and physical strength, it can definitely prove effective in the health hazards caused due to occupational stress.

- The Transcendental Meditation program completes your morning routine. Practicing Transcendental Meditation morning and evening is the most effective way to reduce anxiety and stress. When comparing the Transcendental Meditation method to other personal development programs available today, we found that the Transcendental Meditation method far outperforms the rest in terms of results.
- Yogic relaxation techniques i) *Asanas* (Physical postures) – *Vajrasana, Padmasana, Savasana* ii) *Pranayama* (Breath control) *Nadi shodhana* & *Ujjayi pranayama* iii) *Yoga nidra* (Technique of yogic relaxation) iv) *Dhyana* (Meditation). Long-term yoga practitioners have reported musculoskeletal and mental health improvements. Physical exercises (*asanas*) can increase the flexibility, coordination, and strength of the patient's body, while breathing exercises and meditation can calm and focus the mind and develop greater awareness^{24,25}.
- As per yoga sutras of *Patanjali, yama* (ethical rules), *niyama* (principles for social well being), *asana* (yoga posture), *pranayama* (breathing techniques), *pratyahara* (control of sense organs), *dharana* (continued attention to object), *dhyana* (meditation), and *Samadhi* (super consciousness) are stages of the gradual withdrawal of consciousness from outward

contact and a simultaneous rising into wider and wider dimensions of itself, culminating in infinitude which is its standard essence^{20,25}.

- The set of asanas which has proven effect on management of depression are *Bhramaripranayama*, *Nadi Shodhana pranayama*, *Navasana*, *Bhujangasana*, *Urdhvaprasaritapadasana*, *Makarasana*, *Adhomukhasavasana*, *Ardamerudandasana*, *Tadasana*, *Ardakatichakrasana*, *Vrikshasana*, *Shalabhasana*, *Gomukhasana*, *Vajrasana*, *Mulabanda/mahamudra*, *Savasana*, and *Ardapavanamukthasana*.²⁸

Achara Rasayana ^{29,30}

- We encourage you to base your working relationship on the Vedic Ahimsa principle. Nonviolence, Ahimsa, Harmless to all Living Things, grows naturally as you grow within yourself through meditation practice. It falls under the action *Rasayana* called *Achara Rasayana*. Not only will it improve your relationships, but it will also improve your health and act as one. An elixir for the mind and body. A recent study found that positive behavior is associated with longevity. Cultivate positive and nurturing behaviors in the workplace and you'll find that behavior mirrored to you.

- Feeling safe at work is very important. When someone feels underpaid, overworked or treated badly at work, these thoughts can surface and affect the creativity and productivity of other workers. If you have a choice choose a work environment where employees are treated with respect and receive the emotional support they need.

Conclusion:

In the Occupational stress, Ayurveda and Yoga provides efficient solutions which may help employees to prevent and treat it. The synchronization between *manas* and *sharir* is achieved by Ayurved and yoga. It breaks down the *Samprapti* (pathogenesis) and provides a new cost effective, harmless and acceptable solution to prevent and manage stress. It is beneficial in achieving a happy and healthy life. By stabilizing *Dosha* and modifying mind-body connection at the workplace, transferring the worker to another job, decreasing his vulnerability, increasing his capacity to cope actively-to change the situation-or passively-to accept what cannot be changed-and encouraging fellow workers to offer social support.

References:

1. KANAWATY. G. ET AL. Managing and developing new forms of work organization. 2nd edition. Geneva. International Labour Office. 1982.
2. WHO Technical Report Series. No. 714. 1985 (Identification and control of work related diseases:

- report of a WHO Expert Committee).
3. BESTUZHEV-IADA, I. V. & BuNov, N. M .. ed. The modern conceptions of level of life, quality of life and way of life. Moscow, USSR Academy of Sciences, Institute for Social Research, Soviet Sociological Association, 1978 (in Russian).
 4. ELLion, G. R. & EISDORFER, C .. ed. Stress and human health: analysis of implications of research. New York, Springer. 1982
 5. KAGAN, A. R. & LEVI, L. Health and environment- psychosocial stimuli: a review .. In: Levi, L., ed. Society, stress and disease: childhood and adolescence. London, New York, and Toronto, Oxford University Press, 1975, Vol. 2, pp. 241-260
 6. LEVI, L et al. Stress and distress in response to psychosocial stimuli. Acta medica Scandinavica, Suppl. 528, 1972, Vol. 191.
 7. SELYE, H. A syndrome produced by diverse nocuous agents. Nature, 138: 32 (1936).
 8. McCRAE, R. R. ET AL. Anxiety, extraversion and smoking. British journal of social and clinical psychology. 17: 269-273 (1978).
 9. ScHAR. M. ET AL. Stress and cardiovascular health: an international cooperative study-II The male population of a factory at Zurich. Social science and medicine. 1: 585-603 (1973).
 10. SHIROM. A. ET AL. Job stresses and risk factors in coronary heart disease among five occupational categories in kibbutzim. Social science and medicine. 1: 875-892 (1973).
 11. CAPLAN. R. D. ET AL. Job demands and worker health: main effects and occupational differences. Washington. DC. United States Government Printing Office. 1975 (DEHW Publication No. (NIOSH) 75-160).
 12. MAEDA. K. Occupational cervicobrachial disorder in an assembly plant. The Kurume medical journal. 22: 231-239 (1975).
 13. LAVILLE. A. Cadence de travail et posture. Le travail humain. 31 (1-2): 73-94 (1968).
 14. LAViLLE. A. ET AL. Conséquences du travail répétitive sous cadence sur la sante des travailleurs et des accidents. Paris. Laboratoire de Physiologie du Travail et d'Ergonomie. 1973 (Rapport No. 29 bis).
 15. WHO Psychosocial Centre. Laboratory for Clinical Stress Research. Karolinska Institute. Stockholm. Sweden.
 16. ALMEIDA. Z. Aspects psychosociaux et psychopathologiques de la transplantation: la sante des migrants. Paris. Édition Droit et Liberte. 1972. pp. 105-12.
 17. INTERNATIONAL LABOUR OFFICE. Occupational health and safety of migrant workers: Seventh report of the Joint ILO/WHO Committee on Occupational Health. Geneva.

- 1977 (Occupational Safety and Health Series. No. 34).
18. Ramaratnam S, Sridharan K. Yoga for epilepsy. *Cochrane Database of Systematic Reviews*. 2000CD001524.
 19. Pilkington K, Kirkwood G, Rampes H, Richardson J. Yoga for depression: the research evidence. *Journal of Affective Disorders*. 2005;89(1-3):13–24.
 20. Uebelacker LA, Epstein-Lubow G, Gaudiano BA, Tremont G, Battle CL, Miller IW. Hatha yoga for depression: critical review of the evidence for efficacy, plausible mechanisms of action, and directions for future research. *Journal of Psychiatric Practice*. 2010;16(1):22–33.
 21. Chandrakar Yogita: Stress Disorder And its Psychological Management ; A Review ; ayurpub n Ayurveda ;III (4): 97
 22. Brown RP, Gerbarg PL. Sudarshan Kriya Yogic breathing in the treatment of stress, anxiety, and depression: part II—clinical applications and guidelines. *Journal of Alternative and Complementary Medicine*. 2005;11(4):711–717.
 23. Brown RP, Gerbarg PL. Sudarshan Kriya yogic breathing in the treatment of stress, anxiety, and depression: part I—neurophysiologic model. *Journal of Alternative and Complementary Medicine*. 2005;11(1):189–201.
 24. Sengupta P. Health Impacts of Yoga and Pranayama: A State-of-the-Art Review. *International Journal of Preventive Medicine*. 2012;3(7):444-458.PMCID: PMC3415184.
 25. Lin J, Chan SK, Lee EH, et al. Aerobic exercise and yoga improve neurocognitive function in women with early psychosis. *NPJ Schizophrenia*. 2015;1(0):15047- doi:10.1038/npj schz.2015.47.
 26. Ravi K. Golghate, Pranali A. Nagdeve;—Therapeutic intervention of yoga in manas vyadhies W.S.R. to post-partum depression, *Ayurline: International Journal of Research In Indian Medicine* 2018; 2(3) : 1-8
 27. Singh S, Tripathi JS, Rai NP. An appraisal of the bioavailability enhancers in Ayurveda in the light of recent pharmacological advances. *Ayu* 2016; 37:3-10. 19.
 28. Bhavanani, A.B. (2012). Yoga and health care. *Annals of SBV*,1(2).
 29. Singh S, Tripathi JS, Rai NP. An appraisal of the bioavailability enhancers in Ayurveda in the light of recent pharmacological advances. *Ayu* 2016; 37:3-10. 19.
 30. PR, Kathane V, Pathrikar V. Prevention of suicidal attempts in present era through Ayurveda. *Ayurlog Natl J Res Ayurvedic Sci* 2018; 6:111.
 31. Vidhyarthi AK, Vijay RP. Review article; Role of Manochikitsa (Psychological counseling) in the management of modern days Manovikar. *J Innovations Pharm Biol Sci* 2016; 3:203. 21.
 32. Dhanya T. Review article on Treatment of Manovikara in

- Ayurveda. Int J Innovative Res Med Sci 2017; 2:1268-71.
33. <https://www.proquest.com/openview/57b0573e4bea90ebe6ff175d7fca925d/1?pq-origsite=gscholar&cbl=18750&disss=y>
34. GV Raman et al; Ayurveda Coded Drug (Ayush-SR) for the

Management of Occupational Stress among IT Professionals: Study Protocol of a Randomized Double-Blind Placebo-Controlled Clinical Trial; Journal of Research in Ayurvedic Sciences, Volume 4 Issue 2 (April–June 2020).

Conflict of Interest: Non

Source of funding: Nil

Cite this article:

A critical review on Occupational stress related health consequences and its treatment strategies in Ayurveda and Yoga
Anjali P. Kasar, Satish R. Shirsat

Ayurline: International Journal of Research In Indian Medicine 2023; 7(2):01- 11

