



THE EFFECTS OF YOGA AND MEDITATION ON THE STRESS LEVELS OF INDIAN LOCO PILOTS: WITH REFERENCE TO PUNE DIVISIONAL RAILWAYS

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Abstract:

Indian Railways is one of the industries that contribute significantly to National Development and job generation. The Loco Pilot job is a prestigious and well-paid position, but it is also extremely demanding, and it is regarded as a job that causes occupational stress. Hypertension is a widespread medical issue that affects people all over the world. High blood pressure is caused by a combination of factors including work load and stress. It can lead to heart stroke and death if not treated promptly. Yoga is an ancient discipline that combines postures, breath control, and meditation. It's a type of alternative medicine that's said to help with blood pressure regulation. The purpose of the study on Occupational stress among Loco Pilots of Pune region was to determine the effectiveness of Yoga and Meditation in reducing hypertension caused by work stress. An intervention by a Clinical Psychologist was used in conjunction with an experimental test group of 63 Loco Pilots aged 25 to 50. For stress management, this group had to participate in a one-week meditation and yoga programme. This study also makes dietary and physical activity suggestions for reducing work stress in the experimental group.

Keywords: Yoga, Meditation, Loco Pilots, Occupational Stress, Indian Railways.

Introduction:

Occupational stress, which is caused by a combination of high job demands, has been related to the development of hypertension and is a primary cause of cardiovascular deaths in the world. Employees in India's railways are under a lot of stress at work. Overtime, shift work, and workplace accidents are some prime elements that contribute to stressful working conditions among Loco Pilots leading adverse health conditions, including hypertension.

Yoga has been shown to aid with a variety of health issues, as well as stress management. It is effective in the management of work-related stress which leads to cardiovascular disorders such as ischemic heart disease, coronary artery disease, angina, chronic heart failure, hypertension and also digestive disorders such as irritable bowel syndrome, hyperacidity, colitis and indigestion. Many Yogic poses are beneficial for stress relief and they are beneficial for maintaining excellent health, preventing sickness, and rehabilitation.

Mental silence-oriented Sahaja Yoga meditation is a safe and effective strategy for dealing with work stress and depressive feelings. Yoga meditations have unique benefits on job stress and, as a result, occupational health. Studies have revealed that certain Yoga postures like Shavasana and Sahaja Meditation can benefit employees in coping with Occupational Stress.

The objective of this study is to see how Yoga and Meditation will help Indian Loco Pilots with stress-related hypertension. The study group included 63 Loco Pilots from Pune Railway Division for the purpose of the experiment. An eight days program was organized in conjunction with a Clinical Psychologist and a Yoga trainer. Observations were recorded for employees with hypertension before and after the conduct of the program.

Objective of Study

1. The purpose of this paper is to determine the effectiveness of Yoga and meditation practices in lowering stress levels among Loco Pilots of Indian Railways.
2. This study will examine a variety of resources in order to determine the function of Yoga and meditation in occupational stress management.





Scope Of The Study

- i. The Scope of this research paper is limited to Loco Pilots of Pune Divisional Railways.
- ii. The Scope can be further extended to other sectors where the employees exhibit Occupational Stress.

Review of Literature

(Raja & Muthukumaran, 2015)¹ "A study about work place stress in Food Industries in Various Level of Employees in India" identified that the pressure in the workplace is inevitable because of the work demand. Total burn rate of people employed in the food industry is one of the highest. The pressure of work, labor demand, without control over labor, long working hours, trying to please all, miscommunication, the responsibilities of the job are important factors of the stress. Stress can be handled positively or negatively depending on the situation. Different strategies are used by them to manage stress as writing the wish list, time management, talk to others, exercise or meditation, review your goals, stop worrying and learn to say "no".

Bratman GN, Hamilton JP, Hahn KS(2015)² Nature experience reduces rumination and subgenual prefrontal cortex activation. American Heart association in their several articles like "10 Ways to Relax in Nature and Stress Less", "Spend Time in Nature to Reduce Stress and Anxiety" identifies the importance of nature in reducing the stress level of an individual. It suggests that if we spend time out in nature it can help us emotionally, mentally and physically. Spending time in nature can help relieve stress and anxiety, improve the mood and also boost feelings of happiness and well being. Research shows that a 90-minute walk in nature lowers activity in the part of the brain linked to negative rumination.

Najmoddin Nekzada and Selama witFisseha Tekeste (2013)³ in their thesis "A qualitative study on the causes of stress and management mechanisms at Volvo Trucks AB, Umea" discusses the kinds of stress that an employee of a multinational company has. The study was based on qualitative approach, with a descriptive and exploratory case study approach. The data used are collected through conducting semi-structured interviews with 6 different employees from Volvo Trucks AB, Umea one of whom works as a therapist at the company. The study concluded that the causes of stress at the work place range from personal problems to work overload physical working environment, work situation and conflicts among colleagues and managers. Many employees struggle with stress, in worst cases leading to uncertainties and severe impairments on health and performance.

Hari Kumar P (2012)⁴ "Stress among airport employees a case study of Bangalore International Airport" reveals that the stress among airport employees are at very high level because of the complexity in their work involved. According to several surveys, the main sources of stress reported by airport employees are connected both to operative aspects and to organizational culture. The airport employees, despite their rank or field of working, always have to run under the pressure of time to deliver the services which should not only be valuable to the customers but also proficient to the employer and therefore have to undergo tremendous stress during the working Title: Stress among airport employees a case study of Bangalore International Airport

Suparn Sharma and Jyoti Sharma (2008)⁵ "Stress and cope-up strategies of service sector executives" has studied Stress has become a part of everyday life Live each individual. Stress differs from person to person. Work demanding, stressful relationship and excessive working hours may be the cause. To overcome the problem, listen to music on medication for depression, attend social activities, balanced diet, go for a walk, etc., can reduce the stress level. Management programs stress

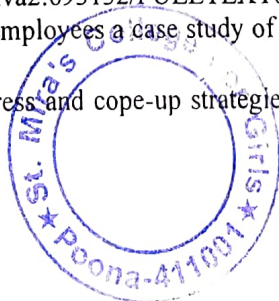
¹Raja, D. V., & Muthukumaran, M. (2015). A study about work place stress in Food Industries in Various Level of Employees in India. *International Journal of Advanced Research in Management (IJARM)* , 6 (2), 14-20

²Bratman GN, Hamilton JP, Hahn KS et al (2015) "Nature experience reduces rumination and subgenual prefrontal cortex activation". *Psychological and Cognitive Sciences*, doi: 10.1073/pnas.1510459112

³Najmoddin Nekzada and SelamawitF isseha Tekeste (2013), "A qualitative study on the causes of stress and management mechanisms at Volvo Trucks AB, Umea" Umeå School of Business and Economics, Spring semester 2013, Bachelor thesis, 15 hp.<https://www.diva-portal.org/smash/get/diva2:693132/FULLTEXT01.pdf>

⁴Hari Kumar P (2012), "Stress among airport employees a case study of Bangalore International Airport" PhD University of Mysore, <http://hdl.handle.net/10603/73373>

⁵Suparn Sharma and Jyoti Sharma (2008) "Stress and cope-up strategies of service sector executives" *Indian Management Studies Journal* 12 (2008) Pg.19-35





can be effective tools to control. It is essential to identify the factors that lead to stress in order to fight and overcome

Methods and Materials

The intervention period for the experimental group was 8 days, with 1-hour Yoga and Meditation sessions. The group was instructed to practice for 20–30 minutes twice a day at home. Each instructional session emphasized the need of abiding to this routine. Instructors for the experimental group were experienced and qualified meditation Clinical Psychologist and Yoga Instructors.

Participants

63 Participants in the age group of 25 to 55 who have been in service from 5 to more than 25 years in service were selected for the Yoga and Meditation sessions.

Interventions

An awareness programme was initially held under the supervision of a Clinical Psychologist to inform the group about the upcoming sessions. Questionnaires were given out to determine whether they had any stress-related health problems and if they had hypertension. A physical examination was performed to evaluate vital signs, as well as the measurement and recording of blood pressure.

Sukhasana, Balasana, Setu Bandha Sarvangasana, and Savasana were among the yoga poses demonstrated to the attendees. The experimental group was taught how to induce mental stillness, sometimes known as "thoughtless awareness." The method is based on Sahaja yoga, a noncommercial and "traditional" approach to meditation. The core approach is based on a conventional understanding of yogic psychophysiology and uses a simple series of silent affirmations. Meditation was promoted as subjects sat silently in a chair or in a comfortable position that aided their meditation experience.

Data Collection and Analysis

Primary and Secondary Data Collection method was used. Structured Questionnaire was administered to 63 Participants in the age group of 25 to 55 and Years in service from 5 to more than 25 years were selected as the experimental group.

Table 2.4. Perception regarding health complaints among Loco Pilots as per years of service (% of agree)

Statement	Up to 5	6 to 15	16 to 25	More than 25
You suffer from Hypertension	3	19	11	30
You quickly feel short of breath.	21	16	12	14
You occasionally feel pain in the chest or heart region.	20	15	12	16
You frequently feel tired.	20	15	17	11
You occasionally suffer from a headache.	28	7	3	25
You occasionally have an upset stomach.	19	14	17	13
You experience a numbing feeling or a tingling sensation in your limbs.	18	12	17	16
You occasionally feel pressure or swelling in your stomach	17	16	12	18

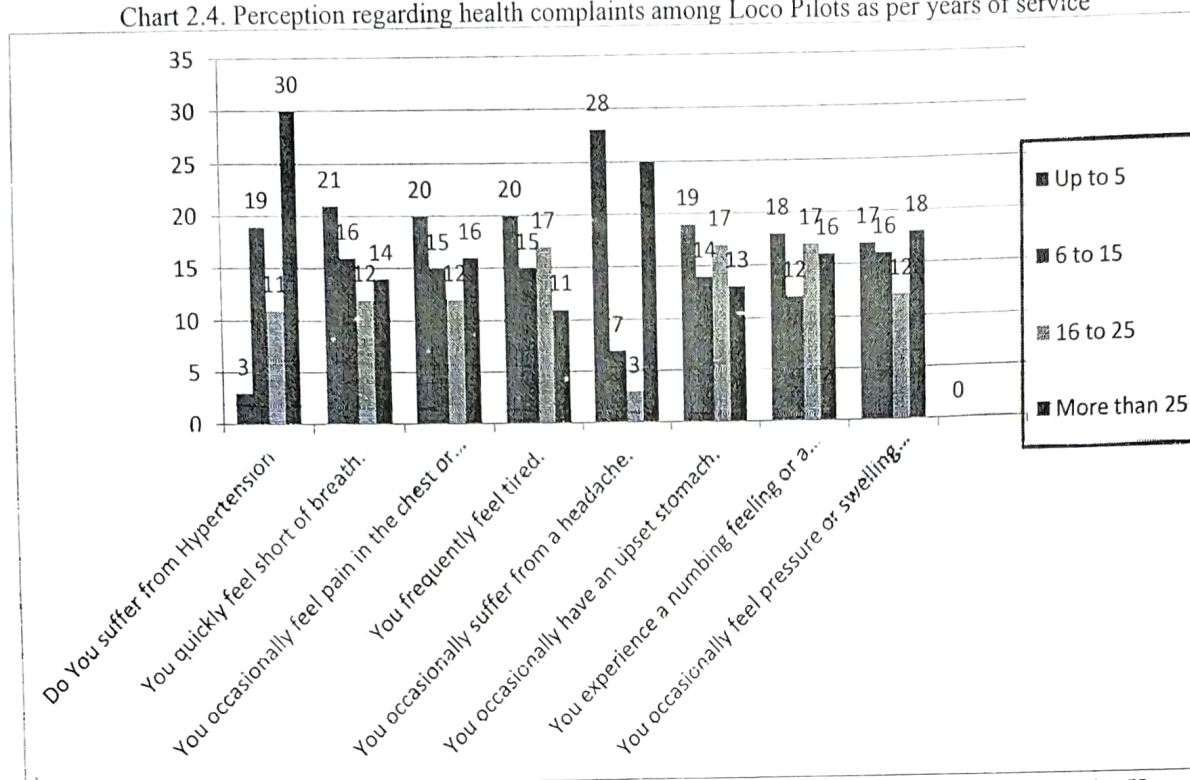
From the above table we can infer that Loco Pilots

1. In service for more than 25 years suffer from Hypertension and Headaches.
2. In Service up to 5 years suffer from Headaches, experience numbness in limbs and have stomach related complaints with occasional chest pain and shortness of breath.



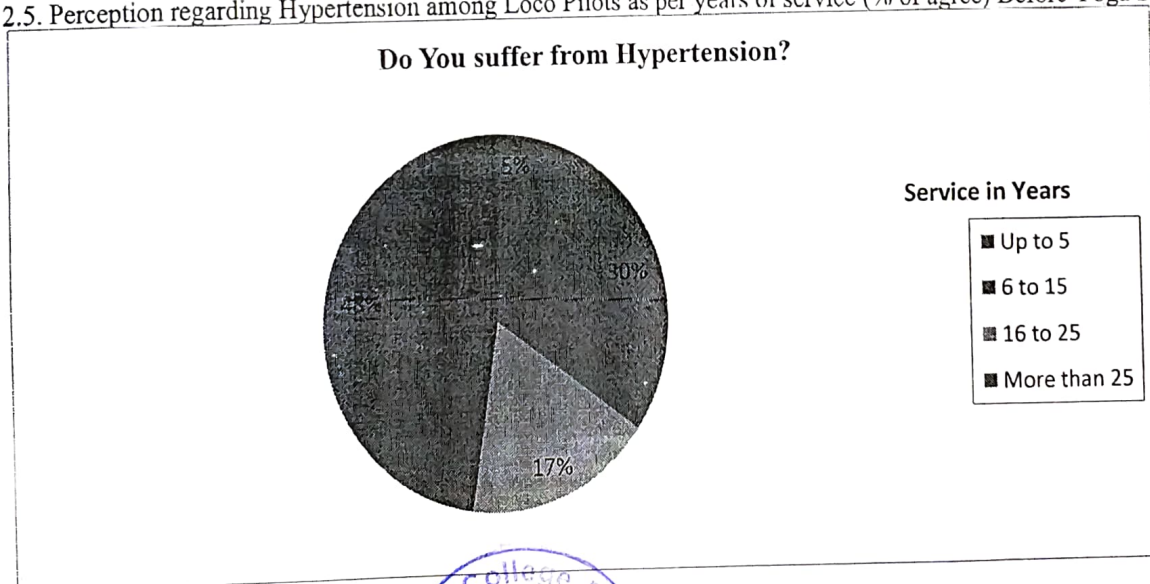


Chart 2.4. Perception regarding health complaints among Loco Pilots as per years of service



From the above Chart it is evident that Loco Pilots undergo Occupational stress and have symptoms related to Hypertension including chest pain, numbness, breathlessness and headache.

Chart 2.5. Perception regarding Hypertension among Loco Pilots as per years of service (% of agree) Before Yoga Session



Loco Pilots In service for more than 25 years suffer from Chronic Hypertension and Headaches. While those in Service up to 5 years suffer from Headaches, experience numbness in limbs and have stomach related complaints with occasional chest pain and shortness of breath.



Results

The percentage changes in primary outcome scores were labelled "1" for improvements of 50% or greater and "0" for changes of less than 50%. After completing the training, both Occupational Stress symptoms including Headache and Hypertension reduced significantly (HT). Diastolic and Systolic Blood Pressure were found to have reduced in 81 percent of the patients.

Findings

Yoga and meditation have traditionally been associated with stress reduction due to their capacity to diminish physiological arousal. Yoga Postures and Sahaj Yoga style of meditation efficiently reduce physiological responses to stress.

1. Out of 63 Loco Pilots, 47% working for more than 25 years exhibited chronic Hypertension, as compared to 25% Loco pilots working for up to 15 years who had occasional hypertension and chest pain.
2. Yoga Asana's including Sukhasana, Balasana, Setu Bandha Sarvangasana, and Savasana have proved to be an effective tool for occupational stress management, the study shows that in 81% of Loco Pilots in the experiment group, Hypertension was reduced significantly.
3. Sahaj Yoga style of meditation efficiently reduce physiological responses to stress by having a calming effect on the mind.
4. All 63 respondents i.e. 100% of the Loco Pilots under the study have concluded by stating that they have reduced depression, reduced headaches and chest pain. 81% of them have reduced Hypertension 10 normal BP Ranges (i.e. an average between 120/80 to 130/90).

Conclusion

1. This study presents preliminary data to support the use of a Yoga and Meditation (Sahaja Yoga) programme to reduce job stress and hypertension among Loco Pilots. While the findings are interesting, more research is needed to evaluate and explore them.
2. Given the low cost, noncommercial nature of the intervention, and the low risk of adverse effects, it is not unreasonable to propose that this meditation could be effective as a health enhancing technique with great socioeconomic value to individuals and society.

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