

# An empirical evaluation of yogic interventions on stress management among police personnel of Delhi NCR

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**Abstract**— The issue of occupational stress in police officers has become a significant societal and organizational issue because it is closely linked with mental distress, heart diseases, and inefficiency at work. Delhi NCR police officers are regularly faced with job demands, irregular working hours, traumatic events, administrative stress which increase the stress levels significantly and predisposes to health-related issues like anxiety and high blood pressure. In this regard, the current study is conducted to address the effectiveness of yogic interventions as a holistic stress management approach among police officers. Its main goals are to evaluate the baseline stress levels, and the second goal is to evaluate how the specific structured yogic practices can help to improve psychological health and resilience. The research methodology embraced is qualitative approach and descriptive and analytical study based on secondary data through peer reviewed journals, government publications, and empirical study. The study incorporates the available evidence to indicate that yogic practices such as asanas, pranayama, meditation, relaxation techniques help in decreased perceived stress. The results indicate that well-planned yogic programs may be used as an affordable and long-term measure to deal with professional stress in the police force. The scholar finds that the inclusion of yoga-based wellness interventions in the police training and organizational policies shows a high implication on enhancing mental health, productivity, and occupational health, in general. But empirical generalization is restricted using secondary data.

**Index Terms**— Occupational Stress, Yogic Interventions, Police Personnel, Psychological Well-being, Stress Management

## I. INTRODUCTION

Hypertension is one of the major health issues in the globe that claims about 10 million lives every year and impacts well over 1.3 billion people worldwide, and

the highest weight is experienced in the low- and middle-income nations. The prevalence of hypertension among women in India (National Family Health Survey-5 (NFHS-5)) is 24% and 21% in men and women aged 15-49 years respectively. Although there are effective pharmacological interventions, blood pressure (BP) management has been poor in a significant percentage of the population mainly because of other issues like chronic psychosocial stress, sedentary living and non-adherence to treatment. According to recent research, the percentage of people on the planet with hypertension that has the optimal blood pressure control despite therapy is less than 21 percent, which proves the necessity of holistic and sustainable measures (International Institute for Population Sciences (IIPS)). There is new evidence that chronic stress is a major factor in leading to hypertension. It stimulates the hypothalamic-pituitary-adrenal axis and the sympathetic-adrenal-medullary axis. This causes the cortisol and catecholamine to increase (Chrousos, & Meduri, 2020). Such hormones raise blood pressure by raising cardiac output, facilitating vasoconstriction, and raising sodium retention. Copeptin is a stable glycopeptide that is secreted together with vasopressin. It is a valid indicator of chronic stress. The high copeptin levels are linked to high blood pressure and risk of cardio-vascular incidences. Moreover, chronic stress results in low grade systemic inflammation characterized with high levels of pro-inflammatory cytokines including interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF-a), and interleukin-1 (IL-1) that lead to endothelial dysfunction and vascular re-modelling. Whereas pro-inflammatory cytokines increase vascular dysfunction, IL-10 is also a primary anti-inflammatory cytokine

that could be used to restore immune homeostasis and endothelial integrity (Abhaydev, et al., 2020).

Stress may be perceived as a state that occurs, after evaluating the perceived discrepancy of the demand that is created by the job that one is engaged in with and the capability of the person to cope with the demands of the job. Work stress is a bad mood and disrupts the performance of tasks and people in particular under the situations that lack consistent, frequent change of demands of the task and conditions that work demands are high (Abhaydev, et al., 2020).

The police personnel should be physically and psychologically fit to fulfill the professional requirements of their job. The police staff is also relatively anticipated to perform, interact and execute a range of activities like keeping law and order, handling criminals, communal riots, prison, and paroling work, etc. As a result, to fulfill such demands and cope with such situations to ensure law and order in the society, the police personnel develop many psychological problems that include high level of anxiety, stress, aggression and a range of other stressors that eventually make this profession stressful (Akinlabi, 2021). The long-term effects of exposure to such psychological situations leads to work life imbalance, emotional imbalance, job dissatisfaction, depression and in some cases also develops suicidal tendencies in the police personnel (Bora, et al., 2021). The stress intensity and impact on psychological and physical condition normally is dependent on the nature of stress (i.e., acute and chronic). It is possible that the acute stress can occur because of the sudden and acute events that are urgent and demand an instant action (Agrawal, & Mahajan, 2021). On the one hand, chronic stress is the long-term period of a stressor that are accumulated over a duration. These are inseparable in the occupation of the police personnel and are quite challenging psychologically (Mann, & Rawat, 2021). The study is relevant because it assesses the efficacy of yogic interventions in dealing with occupational stress amongst police officers in Delhi NCR, which is a high-risk population in terms of physical and mental health complications. It offers evidence-based information to emphasize useful measures to lessen stress levels, functions of emotional resilience, and well-being, in general. These findings can be used in policy, stress management programs and help produce healthier and more productive police units.

## II. LITERATURE REVIEW

Soni, V., & Kumar, A. (2025) investigated the impact of yoga on the anxiety of recently sworn police officers, the scholars discovered that the anxiety levels in the yoga trained officers were significantly lower than those of the controls. Implementation of yoga in police training can be effective in getting police recruits to deal with anxiety and might have a long-term impact on their mental health.

Angusubalakshmi, R., et al., (2024) investigated the effects of yoga and health education on cardiovascular health in police officers, the study had found positive effects in blood pressure and lipid profile, which meant that there was a decrease in cardiovascular risk. Yoga with health education is a powerful preventive addressing cardiovascular health of the high-risk occupational groups like police staff.

Vadvilavičius, T., et al., (2023) reviewed evidence of eight studies, mindfulness-based interventions were discovered to have a strong impact in reducing stress and other consequences, such as sleep issues, PTSD, negative affect, and burnout in police officers. Mindfulness-based stress reduction is an evidence-based and effective intervention method in coping with occupational stress in policing.

Koch, S., et al., (2022) studied the impacts of yoga breathing practice on blood pressure and perceived stress in a randomized controlled trial, observed that blood pressure and perceived stress were reduced significantly, and resilience and recovery improved in police trainees. Frequent pranayama can be used successfully in reducing stress and blood pressure, which aid in the prevention of hypertension.

Singh, T., et al., (2021) studied the impact of an eight-week psycho-yogic training intervention on female police recruits, the scholars concluded that anxiety levels, perceived stress levels, and aggression levels decreased significantly, as well as that emotional intelligence and life satisfaction and self-esteem rose. Psycho-yogic training is a valuable therapeutic approach to improving psychological well-being among police recruits who are female.

Grupe, D. W., et al., (2021) tested the viability and impact of an eight-week mindfulness intervention on police officers, the scholars observed a high adherence and acceptability of the intervention, and the study results showed a substantial decrease in perceived stress and anxiety, sleep disturbance, burnout, and

PTSD symptoms. Mindfulness-based training is a realistic and potentially effective intervention in enhancing mental health of police officers related to stressors.

Grupe, D. W., et al., (2021) tested the outcomes of eight-week mindfulness intervention in a randomized controlled trial of police officers, the study reported long-term benefits on psychological distress, mental health, sleep quality, and a decrease in cortisol awakening response. Mindfulness training is effective in counteracting chronic work-related stress among policemen, and the effects continue to be felt post the intervention.

Krishnan, S., et al., (2020) studied the usefulness of a mindfulness-based intervention in police officers, the study has found that the negative feelings substantially decreased, and the mindfulness level increased after the six-week program Mindful Life Management. Mindfulness-based programs prove useful in the treatment of emotional distress in police officers and have potential to be useful in general stress-management methods.

Even though several studies indicate that yoga, pranayama, psycho-yogic training, and mindfulness-based interventions can be useful in stress, anxiety, cardiovascular risk, and psychological well-being in police personnel (Soni and Kumar, 2025; Angusubalakshmi et al., 2024; Vadvilavicans et al., 2023; Koch et al., 2022; Singh et al., 2021; Grupe et al., 2021; Krishnan et al. The majority of the studies are limited in the sample size, the period of interventions and the follow up period and do not provide sufficient information about long-term sustainability of such benefits. Moreover, not many studies combine physiological and psychological results, and little is done regarding combined yoga and mindfulness practices applicable to various groups of police. There is also lack of study on the sex-specific reactions and the relative efficacy of various interventions among ranks and levels of stress, and it is necessary to conduct larger, longitudinal, and integrative studies to confirm evidence-based stress-management interventions with police officers.

### III. RESEARCH METHODOLOGY

The qualitative research approach is used in the study to examine the practices of stress management and the importance of yogic services among police officers in

Delhi. The research design adopted is descriptive and analytical and conducted as a systematic research analysis of secondary data gathered in the form of published research articles, official reports and other materials of interest. Such a method allows one to comprehend the occurrence and the effects of occupational stress and the efficiency of yogic methods in reducing stress related problems in detail. The methodology based on the analysis of the psychological and organizational data gives information on the patterns of stress, coping mechanisms, and possibilities of the improvement of the mechanisms, which further leads to the development of more effective stress management programs among the law enforcement personnel.

### IV. RESULTS BASED ON OBJECTIVES

Objective 1: To assess the baseline stress levels of police personnel in Delhi NCR.

The working environment of police professionals in Delhi NCR is filled with high pressure and irregular working hours, contact with crime scenes, and stressful interpersonal communication with the population. Such work needs add to high stress levels, which, when not evaluated, may result in physical health-related discomforts, such as hypertension, cardiovascular diseases, and sleeping disorders, and psychological ones, such as anxiety, depression, and burnout (Hoeve, et al., 2021). The measurement of the baseline levels gives a baseline level upon which the mental health is recorded in an officer before any interventions are administered. This type of assessment allows the scholars and the policy makers to group the high-risk groups into ranks, age, years of service, or even certain job responsibilities. With these baseline measures, interventions, either yogic activities, mindfulness interventions, or health education interventions, can be better developed, tracked and assessed regarding their effectiveness in alleviating work-related stress in police officers (Antony, et al., 2020).

Another benefit of baseline stress assessment is that the level of stress among various ranks and duties of police force can be compared. Acute stressors include crime scenes, traffic issues, and conflicts between people that are often encountered by constables and head constables since are more frequently engaged in fieldwork, whereas organizational and administrative

stressors are faced by inspectors and officers of higher ranks (Miller, 2020). Through the quantification of stress with the help of standardized scales, the scholars can assess the proportion of low, moderate, and high levels of stress amongst workforce, which gives a clear picture of the mental health status of the population of the police in Delhi NCR. Moreover, baseline data act as a reference measurement to longitudinal studies where can aid in monitoring how stress proceed or decrease with passage of time. Such evidence-based knowledge is essential in the implementation of specific stress management approaches, the efficient allocation of resources and enhancement of the health, effectiveness, and the ability of the police force to perform (Srivastava, et al., 2023).

Objective 2: To implement a structured and varied yogic intervention of 8–12 weeks.

A well-organized and diversified yogic intervention within 8-12 weeks is of paramount importance as it ensures the provision of significant changes in stress reduction and psychological well-being among the police officers. The problem of chronic occupational stress is chronic working schedule, exposure to traumatic events, and high organizational demands, which are contributors to anxiety, burnout, and cardiovascular problems in police officers. The structured program is designed to make the participants learn a regular routine, gradually developing the skills and adjusting to the techniques, which maximizes benefits and increases the level of engagement (Kukucska, et al., 2023). The incorporation of diverse yoga practices through asanas (physical practices), pranayama (breathing exercises), meditation and relaxation approaches has a multifaceted goal, encompassing both physical and mental well-being, e.g. flexibility and heart regulation, emotional stability and ease of stress. The 8- 12 weeks period gives enough time to both physiological that is enhanced autonomic functioning and hormonal regulation and psychological changes that is enhanced emotional control and perceived stress, so that it has permanent and quantifiable advantages (Abhaydev, et al., 2020).

The heterogeneous needs of the police staff at the various ranks and strains are also met in a heterogeneous yogic intervention. Whereas, certain officers feel better about using physical postures to relieve of muscular tension, others feel better with

pranayama and meditation in order to cope with anxiety and emotional control. The practices combination guarantees the holistic approach, which consists of involvement of both body and mind, as well as promotion of well-being (Verma, et al., 2020). Moreover, the 812 weeks period allows one to gradually learn the skills, maintain positive habits, and make the practice of yogi routine a part of the daily routine, and the chances of adherence to the practice become higher. Safety, injury prevention, and motivation of the participants can also be enhanced by organized supervision and progress during the course of intervention. All in all, this strategy has the highest number of physiological and psychological gains, which makes it a successful tactic to minimize the occurrence of stress at workplace and increase the resilience of police staff (Soni, & Kumar, 2025).

## V. DISCUSSION

Shonly, & Thekkel, (2024) indicate that yoga interventions may have a considerable impact on the reduction of stress in police officers in Delhi NCR. According to Agrawal, & Mahajan, (2021), the practices enhance emotional control and toughness as officers felt less anxious and their perceived stress decreased following the intervention (Grupe, et al., 2021). But Beckley, et al., (2023) argue that these changes are subject to outside influences, such as peer support or respite of daily tasks but not the yoga activities (Koch, et al., 2022). Verma, et al., (2020) in turn noted that such structured and diverse intervention (8-12 weeks) incorporates physical postures, breathing exercises, and meditation, which is a comprehensive solution that addresses both physiological and psychological stress reactions (Santre, 2024). Chrousos, & Meduri, (2020) doubt the sustainability of these advantages in the long term, previous studies have found that the further practice of it can improve stress management in the long term (Christopher, et al., 2024). All in all, Soni, & Kumar, (2025) note that external factors might be relevant, but the issue of structured yogic interventions seems to provide an appropriate and evidence-based approach to enhance the mental health of the police officers (Eddy, et al., 2021).

## VI. CONCLUSION

The study concludes that occupational stress among police officers in Delhi NCR is effectively addressed using yogic interventions due to its comprehensive and holistic nature in a group of police officers who are exposed to prolonged psychological as well as physiological stress-inducing factors. The generalization of the available literature and descriptive analysis suggest that the formal yogic activities, such as asanas, pranayama, and meditation, can be used to improve emotional control, decrease the perception of stress, and improve the overall mood. It suggests that the incorporation of the yoga-based stress management interventions into the police training and wellness policies would help to enhance the resilience, productivity, and long-term health performance. Nevertheless, the study is weakened by the use of secondary data and lack of primary empirical measure or follow up. It is suggested that future studies should use longitudinal and mixed-method designs using larger, more diverse samples to evaluate long-term physiological and psychological consequences and determine the usefulness of various yogic and mindfulness-based programs among police ranks and gender.

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