

Prevalence of Self-Reported Occupational Stress among the Police Personnel of Sahibzada Ajit Singh Nagar, Punjab: A Cross-Sectional Study

Running Title: Occupational Stress among Police Personnel

Alka Singh^{1*}, Himanshu Negandhi¹

Author Affiliations:

¹Indian Institute of Public Health- Delhi (IIPH-D), Affiliated to Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) Trivandrum, India

***Corresponding Author:** Dr. Alka Singh, Indian Institute of Public Health- Delhi (IIPH-D), Affiliated to Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) Trivandrum, India.

Email: dr.alkasingh07@gmail.com

Abstract: Introduction: According to a report published in 2017 on police reforms, India has only 138 police personnel per lakh population, placing the world's fifth-largest economy among the bottom five countries in this regard. So, here we have an overburdened police force, severely understaffed (approximately 24% of ~2.3 million positions lying vacant) and under-budgeted, receiving only 3% of state spending; accountable for a population of 1.3 billion where the crime rate has increased by 28% over the last decade. **Objectives:** The study aims to determine the prevalence of self-reported occupational stress among police personnel and explore various factors associated with it. **Methodology:** A cross-sectional quantitative study, conducted among 270 police personnel in Sahibzada Ajit Singh Nagar, Punjab. Data was collected on paper using a structured and validated questionnaire. Stress levels were measured using a composite score. Bivariate analysis was performed to establish associations between key explanatory and outcome variables. **Results:** Operational stress was observed at high levels in 95% of the participants, while 74% exhibited elevated levels of organisational stress. The study revealed an association between both types of occupational stress and factors such as family types, housing conditions, and the number of monthly holidays. **Conclusion:** This study emphasises a high prevalence of stress, primarily driven by operational factors, with staff shortages as the top stressor. Notably, none of the respondents reported being in the 'low stress' category. **Recommendation:** The study results call for immediate attention and action. Furthermore, a qualitative study must be conducted for deeper understanding of department-specific challenges.

Keywords: Cross-sectional study, Occupational stress, Police personnel, Punjab

Introduction

In recent decades, there has been a global recognition of occupational stress as a pervasive issue affecting employees and organizations worldwide [1, 2]. This form of stress arises when job demands do not align with the capabilities, resources, or needs of workers, leading to adverse physical and emotional responses [3]. Various studies across professions, including teaching, banking, construction, and the corporate sector, have highlighted the prevalence of occupational stress [4–7]. Another distinct group, first responders, comprising health workers, firefighters, and policemen, face unique stressors, both traumatic and non-traumatic in nature. [8, 9]. Healthcare professionals often encounter challenging environments, dealing with severe illnesses and death regularly [10, 11]. Firefighters routinely confront injury and death during natural disasters, risking their own lives [12, 13]. Policemen, often regarded as heroes, play a vital role in upholding law and safeguarding citizens' rights [14]. However, the evolving challenges of globalization, such as cybercrimes and human trafficking, add further complexity to their duties [15]. The stress experienced by the police force not only affects their physical and psychological well-being but is also underreported, underdiagnosed, and undertreated, contributing to a deteriorating workforce [16, 17].

In India, the police force faces heightened challenges due to the nature of their job, socio-political complexities, and a significant span of control. Despite being the fifth-largest global economy, India ranks poorly in terms of police-to-population ratio, with only 138 police

personnel per lakh of the population [18]. The force is overburdened, severely understaffed (with 24% of approximately 2.3 million positions vacant), and underfunded, with only 3% of state expenditure allocated. This situation, coupled with a rising crime rate, puts immense pressure on the police, impacting their family time and leading to the potential development of abusive habits, suicidal thoughts, and systemic diseases [16, 19–23]. Stress among police personnel is particularly pronounced during two career stages—initial adaptation to the profession and changing routines and the later stage of increased responsibilities with age [24–26]. Designations within the police force contribute to varying stress levels, as constables, inspectors, and officers experience different workloads. Political pressure has also emerged as a significant cause of occupational stress in the department [27–29]. Despite limited studies on the police force in India, especially the Punjab Police Force, and the accessibility of state police services, this area presents an apt focus for further research, considering the detrimental effects of stress globally [30].

Objectives:

- 1) To study the socio-demographic factors of the police personnel.
- 2) To understand the operational and organizational stress experienced by the police personnel.
- 3) To assess the influence of socio-demographic factors of the respondents on stress.

Materials and Methodology

Study setting

Job stress could be reported differently among the police personnel posted in different areas (rural vs. urban) and ranks (Punjab Home Guards - PHG, Constables - CT, Head Constables - HC, Assistant Sub-Inspectors - ASI, Sub-Inspectors - SI, and Inspectors - Insp), All four sub-divisions of Sahibzada Ajit Singh Nagar (Dera Bassi, Kharar, City-1, and City-2) were included in the study. Lists of all police stations and posts in each sub-division, along with the corresponding number of police personnel (both sanctioned and posted), were compiled. An additional police station for women was also included. This cross-sectional quantitative study spanned over a period of 3.5 months (December 2019 to March 2020).

Sampling Technique and Sample Size

Random sampling was employed for sample collection. The sample size, determined using n-Master software with an anticipated proportion of 80% and a 5% precision level at a 95% confidence interval, resulted in an estimated 270 participants, accounting for a 10% non-response rate [17, 31]. Using the stratified sample formula (sample size of each stratum = size of entire sample/population * strata size), the proportion of people in each subdivision was calculated. Once the number of police personnel to be interviewed from each subdivision was determined, the allocation to individual police stations and posts was made by dividing the number equally. For example, if 96 police personnel were to be selected from one subdivision with a total of 5

police stations, the allocation per station would be 96/5, resulting in approximately 18-19 police personnel to be interviewed from each police station or post. The detailed sampling framework is illustrated in Figure 1.

Ethical approval and Piloting

Ethical approval for the study was obtained from the Institutional Ethical Committee of Indian Institute of Public Health, Delhi (IIPHD_IEC_S_03_2019). The data were obtained after receiving written informed consent. Necessary permissions were taken from the Senior Superintendent of Police (Sahibzada Ajit Singh Nagar, Punjab) before conducting any interview. Prior to data collection, a pilot test was conducted involving 12 police personnel to ensure minor adjustments to prevent misinformation.

Survey tools

A structured, validated and interviewer-administered questionnaire was used for collecting data on socio-demographic profile and occupational stress. The tool was adapted using components from the following three questionnaires: General Information [32]], Operational Police Stress Questionnaire (PSQ-OP) [33], Organisational Police Stress Questionnaire (PSQ-ORG) [34]. Police personnel available during the data collection period were interviewed, and a second attempt was made after two days if the required number was not attained for a particular police station or post (Figure 1).

Statistical analysis

All participants were asked to rate each stressful activity using a Likert scale ranging from 'not at all stressful' (Score 1-

3), 'moderately stressful' (Score 4-6), to 'very stressful' (Score 7). Composite scores were calculated for each participant and categorized as follows: The mean total cut-off was adapted as the author suggested which was, for operational stress, 'below 2'- low, '2.1-3.4'- moderate and 'above 3.5'- high stress. On the contrary, for organizational stress the mean total cut-off was, 'below 2.6'- low, '2.7-3.9'- moderate and 'above 4.0'- high stress [35,36]. In addition to this, top stressors contributing towards stress were also identified by calculating the mean score of each stressor across all the participants. The data collected were coded and entered in Microsoft Excel. Then, it was further analysed using Stata 15.1. Continuous variables were reported as mean/ median (standard deviation/ inter-quartile range). Categorical variables were expressed using frequencies and percentages. To assess the association between organizational stress and operational stress with socio-demographic profile, chi-square test was performed.

Results

A total of 270 participants were interviewed across all the police stations and posts in Sahibzada Ajit Singh Nagar, Punjab. The questionnaire included details about their socio-demographic profile, operational stress and organizational stress. Newly emerging threats from globalisation like cybercrimes, human trafficking and many more, pose unprecedented challenges and exponentially increase the complexity of the police job [37]. All of this elevates the stress levels among police force, making it one of the most stressful professions in

public services domain. Hence, the current study focuses on occupational stress among the police personnel.

The results of the present study indicate that the police personnel are under extremely high levels of stress. These high levels can have serious repercussions in future, compromising the physiological and psychological health of the police personnel. The current study also realized that 95% of police personnel were experiencing high levels of operational stress and 74% were reported high levels of organizational stress (Figure 2). Similar studies have also reported high levels of stress among the police personnel; however, the difference lies in the fact that the proportion of respondents under stress in these studies varies widely. Masilamani et al and Selokar et al reported stress prevalence rate of 39% and 66% respectively; Ragesh et al., reported high levels of operational stress in 16.5% and organizational stress in 14% of the police personnel. The top-most stressor identified in our study was 'staff shortages' which is a widespread issue and exists across all disciplines (Table 1). The most startling finding of this study was the absence of even a single respondent reporting low stress which is an alarming situation that is totally going unreported and making this study unique compared to earlier such researches (Table 2). For instance, Ragesh et al., (2017) reported that 16.5% respondents experienced low levels of Operational stress, and 18% reported low levels of Organizational stress. Similarly, a study conducted by Salam and Reddy, (2019) found mild operational stress among 38.7% of the respondents. Another study conducted by Masilamani et al.,

2013 suggested that 18% of its respondents experienced mild stress. The difference in the results of these studies and the present study could be due to variation in method of data collection, study tool/ questionnaire used and the method of measurement used to assess the levels of occupational stress.

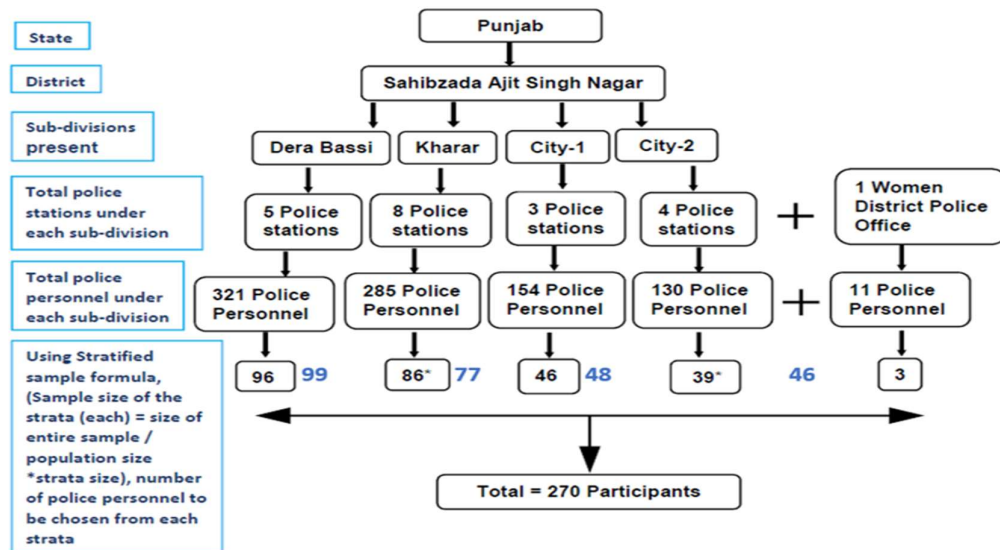


Figure 1: Sampling framework

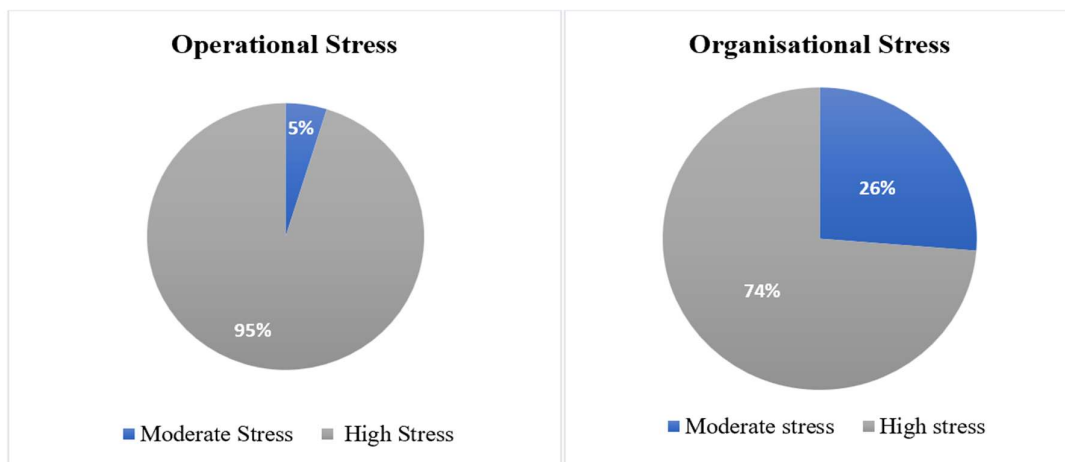


Figure 2: Type and intensity of stress

Table 1: Mean ranking of top-five stressful activities experienced by the participants (n=270)

S. No.	Stressors	Percentages of respondents who reported stress (moderate and above)	Mean (SD)
1	Staff shortages	100%	5.91 (0.80)
2	Unequal sharing of work responsibilities	98.53%	5.71 (1.03)
3	Over-time demands	98.89%	5.5 (1.05)
4	Occupation-related health issues (e.g. back pain)	99.26%	5.45 (1.08)
5	Feeling like you are always on the job	99.63%	5.44 (1.09)

Table 2: Distribution of participants according to stresses with respect to socio-demographic profile of the participants (n=270)

Variable	Operational Stress			Organizational Stress		
	Moderate	High	p-value	Moderate	High	p-value
Age (years)			0.809			0.715
≤30yrs	3	50		14	39	
31-40	4	69		16	57	
41-50	5	91		26	70	
51-58	1	47		15	33	
Gender			0.968			0.233
Male	12	238		68	3	
Female	1	19		182	17	
Highest Education			0.955			0.956
Primary	0	1		0	1	
Secondary	3	58		16	45	
Higher Secondary	6	125		33	98	
Graduation	3	64		19	48	
Post-graduation	1	9		3	7	
Designation			0.899			0.809
Inspector	0	2		1	1	
Sub-Inspector	1	22		7	16	
Assistant Sub-Inspector	3	48		13	38	
Head Constable						
Constable	6	101		31	76	
Punjab Home Guard	2	74		16	60	
	1	10		3	3	
Marital status			0.963			0.439
Single	1	23		4	20	
Married	12	233		67	178	
Widowed/ Separated	0	1		0	1	
Type of family			0.071			0.168
Nuclear	2	104		23	83	

Joint	11	153		48	116	
Housing condition			0.628			0.048
Rented	2	51		9	44	
Owned by you	11	193		61	143	
Government	0	13		1	12	
Duty Hours			0.439			0.599
10-12	5	89		23	71	
12-16	8	139		42	105	
16-18	0	29		6	23	
Total Service years			0.970			0.861
5-15	6	110		28	88	
16-25	4	76		21	59	
26-35	3	68		21	50	
≥36	0	3		1	2	
Addiction			0.525			0.867
No	8	135		37	34	
Yes	5	122		106	93	
Monthly holidays			0.008			0.001
1-3	2	136		24	114	
4-6	11	121		47	85	

Discussion

The results of this study are largely consistent with previous literature, indicating that various aspects of the police organization itself may be the significant source of stress among the police personnel [36,41,42]. The top-most stressor identified in our study was ‘staff shortages’ which is a widespread issue and exists across all disciplines (Table 2). These findings are coherent with the previous literature which also suggest that ‘staff shortages’ are a major stressor in police profession [36,41,42]. Another key stressor reported in the current study was the ‘unequal sharing of work responsibilities.’ Since women are typically assigned administrative duties and are often exempted from night shifts. [36, 43–45]. This makes their male counterpart to bear the burden of additional responsibility. As a result of these two factors, a third stressor, ‘over-time demands’ comes into play when duties are not met in time. These findings are consistent with other studies. [42, 46–

49]. The fourth most prevalent stressor identified in our study is ‘occupation-related health issues.’ These issues may range from a mere back-pain, insomnia, obesity to cardiovascular diseases, mental health problems, and other chronic diseases [50].

The fifth stressor ‘feeling like you are always on the job’ indicates a serious consideration for changes in the policing system. Researchers have pointed out stressors in a similar context such as ‘round the clock shift work’ and ‘never off duty’[46, 51, 52].

In the present study, none of the key explanatory variables were found to be associated with stress except, housing condition and number of monthly holidays. A similar finding was seen in a study conducted by Almale et al., . It is possible that no association was found in any other variable due to the fact that there was no variability in the data. Most of the respondents fell into the high – stress category. Despite these findings, this study has its own limitations.

One of the limitations of this study is its cross-sectional design. While such a study is easier to conduct and interpret; however, temporal relationship cannot be determined and the conclusions drawn from the data shall be considered tentative. It is also possible that some information bias may have occurred considering the police personnel who participated in the study were the ones who were willing and available at the police station during data collection. Also, the study has a predominance of males, which makes it rather difficult to study the gender-related patterns. Another limitation is that the study was conducted only among the police personnel posted at police stations and police posts, making it unjustifiable to generalize the findings to other ranks or the entire Punjab Police Force.

Despite these limitations, this study serves as a starting point for future studies in a population with no published research, contributing valuable insights to similar police studies conducted globally. This study provides valuable information regarding the level of occupational stress experienced by the police personnel. To add to the strengths, validated domain-specific instruments were used that have been used globally in various studies on the police force.

Based on the study findings, addressing the high prevalence of police occupational stress, evidence-based interventions are recommended targeting both organizational and operational factors. Key recommendations include implementing stress management training and counselling programs, conducting routine health screenings, addressing staff

shortages, ensuring equitable work distribution, managing overtime effectively, and guaranteeing regular time off. Additional measures should involve occupational health services, housing support, and peer support networks. These interventions directly target identified stressors while reforming organizational culture. Further qualitative research, using interviews and observations is essential to develop more nuanced and targeted solutions for the concerning stress levels (95% operational, 74% organizational) documented in this population.

Conclusion

This study reveals alarmingly high levels of occupational stress among police personnel in Punjab, with 95% experiencing high operational stress and 74% reporting high organizational stress. The key stressors identified include staff shortages, unequal work distribution, overtime demands, health issues, and constant job pressure. The study highlights the need for targeted interventions addressing both organizational and operational factors. Further, qualitative research is essential to develop more nuanced interventions tailored to specific needs of this population. In-depth research can provide deeper insights into stress triggers, enabling the design of more effective policies and support systems. Understanding the lived experiences of police personnel will help refine intervention strategies to better address their unique challenges and enhance overall occupational well-being.

Conflict of Interest

No conflict of interest declared.

Author's Contribution

AS-Concept and design, acquisition of data Singh, analysis and interpretation of data, drafting of the manuscript and provision of study materials; HN- Concept and design, drafting of the manuscript, critical revision of the paper for important intellectual content and provision of study materials and Supervision.

Acknowledgement

We thank the Punjab Police of Sahibzada Ajit Singh Nagar for their support and cooperation and all the participants for their participation.

Source of funding

No external funding was received for the research.

References

1. Health and Safety Executive. Work-related stress, anxiety or depression statistics in Great Britain.
2. Boyd D. Workplace Stress. Am Inst Stress. 2020;
3. Mohajan. 1) (PDF) The Occupational Stress and Risk of it among the Employees. 2012.
4. Anîtei M, Chraif M, Ioniță E. Gender differences in workload and self-perceived burnout in a multinational company from Bucharest. *Procedia-Social and Behavioral Sciences*. 2015 May 13;187:733-7.5. Silva N, Samanmali R, Silva HL. Managing occupational stress of professionals in large construction projects. *J Eng Technol*. 2017;15:488–504.
6. Desouky D, Allam H. Occupational stress, anxiety and depression among Egyptian teachers. *Journal of epidemiology and global health*. 2017 Jan;7(3):191-8.
7. Dhankar S. Occupational stress in banking sector. *International journal of applied research*. 2015 Jan 1;1(8):132-5.
8. Benedek DM, Fullerton C, Ursano RJ. First responders: mental health consequences of natural and human-made disasters for public health and public safety workers. *Annual review of public health*. 2007 Apr 21;28(2007):55-68.
9. Nazari Z, Hashemian AH. Comparison of occupational stress among personnel of firefighting and emergency medical stations of kermanshah (Iran) in 2013. *World Journal of Medical Sciences*. 2014;10(3):362-7.10. McCarthy VJC, Power S, Greiner BA. Perceived occupational stress in nurses working in Ireland. *Occup Med*. 2010;60:604–10.
11. Wu H, Chi TS, Chen LI, Wang L, Jin YP. Occupational stress among hospital nurses: cross-sectional survey. *Journal of advanced nursing*. 2010 Mar;66(3):627-34.12.
13. Stanley IH, Hom MA, Joiner TE. A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical psychology review*. 2016 Mar 1;44:25-44.
14. Jain A, Jha R. Status of policing in India. 2019.
15. C. The National Police Chiefs Council (NPCC). 2016.

16. Saya GK, Venkata NA. An assessment of perceived stress among police personnel in Puducherry, India. *International Journal of Advanced Medical and Health Research*. 2014 Jul 1;1(2):61-5..
17. Varghese RG, James P, Rasheed R. Occupational stress among female police officers in an urban setting in South Kerala. *International journal of community medicine and public health (Gujarat)*. 2019;6(1):325-9.
18. Avdija AS. Stress and law enforcers: testing the relationship between law enforcement work stressors and health-related issues. *Health Psychology and Behavioral Medicine: an Open Access Journal*. 2014 Jan 1;2(1):100-10.
19. Chaturvedi A. Police Reforms in India. *PRSIndia*. 2017;
20. Boyanagari M, Boyanagari VK, Shankar M, Ayyanar R. Impact of occupational and psychological stress on police health in South India. *Archives of Mental Health*. 2018 Jul 1;19(2):136-40.
21. Joseph JK, Nagarajamurthy B. Stress in Police officers. 2014.
22. Srinivasan S, Ilango P. Stress problems faced by police constables in North Chennai. *Global Research Analysis*. 2013 Apr 10;2(4).
23. Selokar D, Nimbarte S, Ahana S, Gaidhane A, Wagh V. Occupational stress among police personnel of Wardha city, India. *The Australasian medical journal*. 2011 Mar 31;4(3):114.
24. Ragesh G, Tharayil HM, Raj MT, Philip M, Hamza A. Occupational stress among police personnel in India. *Open Journal of Psychiatry & Allied Sciences*. 2017 Jun;8(2):148-52.
25. Almale BD, Vankudre AJ, Bansode-Gokhe SS, Pawar VK. An epidemiologic study of occupational stress factors in Mumbai police personnel. *Indian journal of occupational and environmental medicine*. 2014 Sep 1;18(3):109-12.
26. Parsekar SS, Singh MM, Bhumika TV. Occupation-related psychological distress among police constables of Udupi taluk, Karnataka: A cross-sectional study. *Indian journal of occupational and environmental medicine*. 2015 May 1;19(2):80-3.
27. Singh S, Kar SK. Sources of occupational stress in the police personnel of North India: An exploratory study. *Indian journal of occupational and environmental medicine*. 2015 Jan 1;19(1):56-60.
28. Bano B. 1) Job Stress among Police Personnel. 2011.
29. Tyagi A, Lochan Dhar R. Factors affecting health of the police officials: Mediating role of job stress. *Policing: An International Journal of Police Strategies & Management*. 2014 Aug 12;37(3):649-64.
30. McCreary DR, Thompson MMO.
31. Master. Get the software safely and easily. [Internet]. *Software Informer*. 2024 [cited 2025 Mar 31]. Available from: <https://nmaster.software.informer.com/2.0/>
32. Almale BD, Vankudre AJ, Bansode-Gokhe SS, Pawar VK. An epidemiologic study of occupational

- stress factors in Mumbai police personnel. *Indian journal of occupational and environmental medicine*. 2014 Sep 1;18(3):109-12.
33. McCreary, D. R., & Thompson, M. M-Op [Internet]. [cited 2020 Mar 29]. Available from: <https://www.midss.org/sites/default/files/psq-op.pdf>
 34. McCreary, D. R., & Thompson, M. M-Org [Internet]. [cited 2020 Mar 29]. Available from: <https://www.midss.org/sites/default/files/psq-org.pdf>
 35. McCreary DR, Fong I, Groll DL. Measuring policing stress meaningfully: Establishing norms and cut-off values for the Operational and Organizational Police Stress Questionnaires. *Police Practice and Research*. 2017 Nov 2;18(6):612-23.
 36. Varghese RG, James P, Rasheed R. Occupational stress among female police officers in an urban setting in South Kerala. *International journal of community medicine and public health (Gujarat)*. 2019;6(1):325-9.
 37. NPCC. The National Police Chiefs Council (NPCC) [Internet]. 2016 [cited 2019 Sep 29]. Available from: <https://www.npcc.police.uk/Home.aspx>
 38. Ragesh G, Tharayil HM, TP MR, Philip M, Hamza A. Occupational stress among police personnel in India [Internet]. 2017 [cited 2019 Jun 7]. Available from: <https://www.ingentaconnect.com/content/doaj/23942053/2017/00000008/00000002/art00008;jsessionid=1kt36p519yxml.x-ic-live-01>
 39. Salam SF, Reddy MR. Factors influencing the stress among the police personnel of Chitradurga city: a cross-sectional study. *International Journal of Community Medicine and Public Health*. 2019 May;6(5):2252.
 40. Masilamani R, Bulgiba A, Chinna K, Darus A, Isahak M, Kandiben S, Koh D. Prevalence and associated factors of stress in the Malaysian Police Force. *Preventive medicine*. 2013 Jan 1;57:S57-9..
 41. Arial M, Gonik V, Wild P, Danuser B. Association of work related chronic stressors and psychiatric symptoms in a Swiss sample of police officers; a cross sectional questionnaire study. *International archives of occupational and environmental health*. 2010 Mar;83:323-31.
 42. Parsekar SS, Singh MM, Bhumika TV. Occupation-related psychological distress among police constables of Udupi taluk, Karnataka: A cross-sectional study. *Indian journal of occupational and environmental medicine*. 2015 May 1;19(2):80-3..
 43. Acquadro Maran D, Varetto A, Zedda M, Franscini M. Stress among Italian male and female patrol police officers: a quali-quantitative survey. *Policing: An International Journal of Police Strategies & Management*. 2014 Nov 11;37(4):875-90.
 44. Mohanraj C, Natesan MR. Stress: an empirical study among women police constables. *Journal of Interdisciplinary and Multidisciplinary Research*. 2023;9(2):156-60.
 45. Sundaram MS. Female constable in Tamil Nadu [Internet]. 2012 [cited 2019 Jul 27]. Available from:

<http://www.isca.in/IJSS/Archive/v1/i3/3.ISCA-IRJSS-2012-034.pdf>

46. Furmeen S, Reddy MR. Occupational stress and its coping strategies among the police personnel of the Chitradurga city: A cross-sectional study. *Int. J. Community Med. Public Health (Gujarat)*. 2019 Aug;6:3454-9.
47. Onkari D, Itagi S. Occupational Stress of Men and Women Police. *Advance Research Journal of Social Science*. 2016;7:175-81.
48. Kumaran MJ, Sanderam S. A study on frequency of occupational stress among Grade 1 police constables. *International Journal of Business Management and Economic Research*. 2012;3(4):690-597.
49. Wang Z, Inslicht SS, Metzler TJ, Henn-Haase C, McCaslin SE, Tong H, Neylan TC, Marmar CR. A prospective study of predictors of depression symptoms in police. *Psychiatry research*. 2010 Feb 28;175(3):211-6.
50. Violanti JM. Serious Health Risks Among Police Officers Due To Stress [Internet]. 2012 [cited 2020 Apr 9]. Available from: <https://www.medicalnewstoday.com/articles/247781>
51. Ma CC, Andrew ME, Fekedulegn D, Gu JK, Hartley TA, Charles LE, Violanti JM, Burchfiel CM. Shift work and occupational stress in police officers. *Safety and health at work*. 2015 Mar 1;6(1):25-9.
52. Suresh RS, Anantharaman RN, Angusamy A, Ganesan J. Sources of job stress in police work in a developing country. *International Journal of Business and Management*. 2013 Jul 1;8(13):102-10.