



PREVALENCE OF STRESS IN THE INDIAN ARMED FORCES

¹ Gajendra Singh, ² Dr Megha Yadav,

¹ BPT 4th Year, ² Assistant Professor,

^{1,2} Division of Physiotherapy,

^{1,2} Galgotias University Greater Noida, Uttar Pradesh

Abstract: Background - Stress is very common among army individuals across the globe. More than half of Indian Army personnel seem to be under severe stress and the Army has been losing more personnel every year due to suicides Unless it is managed early, it leads to deterioration of Defence performance and overall dissatisfaction with life and different serious health problems including anxiety, depression, and suicide. The objective of this study is to assess the prevalence of career related stress among Army individuals. Method- A cross-sectional survey based study was conducted on a sample of 50 army individuals selected by stratified random sampling at Army centre in 2021. Data was collected using the Percieved Stress Scale (PSS) through google sheets. Data analysis was done under the Social Science Packaging Software SPSS 21.0 version. The level of significance of association for multivariable was determined at P value <0.05 Results: - Prevalence of stress among Army Individuals is 56% for low level of perceived stress and 44% individuals suffer from moderate level of stress. Whereas no individual suffer from perceived high stress Conclusion - This study showed that individuals who belong to Indian army showed moderate and low level of stress. Thus there is significant amount of stress in army individuals.

Index Terms – Stress, Anxiety, Depression, Dissatisfaction, Deterioration

I. INTRODUCTION

Different factors in our surroundings that cause physical and emotional tension in our body are referred to as stress. Stress is typically useful and might help in avoiding dangerous situations and performing more efficiently. Stress is often caused by lots of things like frustration, anger, nervousness. Stress existing for an extended time may also harm one's health both emotionally and physically.

Some hormones are released when the body reacts to fret which causes the brain to function more and makes the brain more alert, and it also causes a rise in pulse and creating tension in muscles. Hypothalamus a tiny region in the brain signals the adrenal gland releases the stress hormones cortisol, epinephrine which is also known as adrenaline, and norepinephrine into the blood stream as these hormones are released the liver is triggered to produce more blood sugar which gives an energy kick with which heart beat begins to raise and there in increase in the breathing rate.

Short-term stress is somehow good for the body as it can be a burst for the extra energy needed to carry out functions like when playing competitive sports or speaking in public it exercises the brain and teaches you about a way to handle stressful situations. But emotional stress is more harmful as there is no outlet for that extra energy. Stress is a hardwired physical response that travels throughout the entire body. When the brain senses stress it activates the autonomic nervous system. Through this brain communicates stress to the intestinal nervous system.

Prevalence of Stress in today's world

A study was conducted by a single individual with a sample size of over 400 soldiers in 2021 and it was concluded in this study that over 50% of army men are under severe stress. Earlier another study was conducted that showed around 950 soldiers ended their life because of stress since 2010 and around 100 soldiers take this extreme step of ending their lives every Year.

Effects of Stress

Long term activation of stress response system can cause major problems like anxiety, depression, digestive problems, heart disease, sleep problems, and memory and concentration impairment. Adrenaline causes the heart to beat faster and raises blood pressure over time causing hypertension. This primitive fight or flight response activated for too long not only affects the body but also damages many other organs and cells throughout the body.

Cortisol can also cause the endothelium or inner lining of the blood vessels to not function properly. The release of cortisol can also trigger the process of Atherosclerosis or cholesterol plaque build-up in arteries. These changes increase the chances of heart attack or stroke.

Stress In Army Individuals

There are multiple factors inducing stress in army individuals, these are not just pressure on the battle ground but other reasons as well. The progressive increase in both professional and domestic pressures induces stress of varying levels in army personnel. There are different components involved in the operational environment including habitable living environment with availability of recreational activities, indefinite working hours, job satisfaction is an aspect, low pay scale, and allowances as compared to working in difficult terrain/ environment, food, leaves, continuous postings to different locations, lack of interpersonal communication between colleagues, subordinates, and peers. In terms of the home environment, the aspects that have a substantial impact on performance within the restrictions of the organisational climate have been addressed. Domestic worries about housing problems, education of wards, marital discords, medical problems of family members, financial problems, and inability to resolve disputes during leave are among the domestic factors considered during the interaction, the compounded effect of which bears significance in the discharge of duties by army personnel.

Materials and Methods

Data analysis was done under the Social Science Packaging Software SPSS 21.0 version. Independent t test within the group was used to compare the pre and post readings. The graphical representation is done using MS EXCEL 2016. Table 1 contains description of demographic statistics long with their standard deviation and mean. Table 2 contains analysis of PSS score in which frequency of moderate stress and low stress is mentioned. Table 3 contains description of occurrence of PSS score along with their mean and standard deviation. Graph is comparing the occurrence of low stress level and moderate stress level in army individuals. These tables and graph clearly depicting the prevalence of moderate and low level of stress in individuals belong to Indian army. Thus, we will reject the null hypothesis and accept the alternate hypothesis which states that there is significant level of stress in individuals belong to Indian army.

Table 1: demographic statistics

VARIABLES	N	MEAN±SD
AGE	50	35.72±5.89
HEIGHT(CMs)	50	173.12±14.63
WEIGHT(Kg)	50	75.70±4.63
BMI	50	24.70±1.76

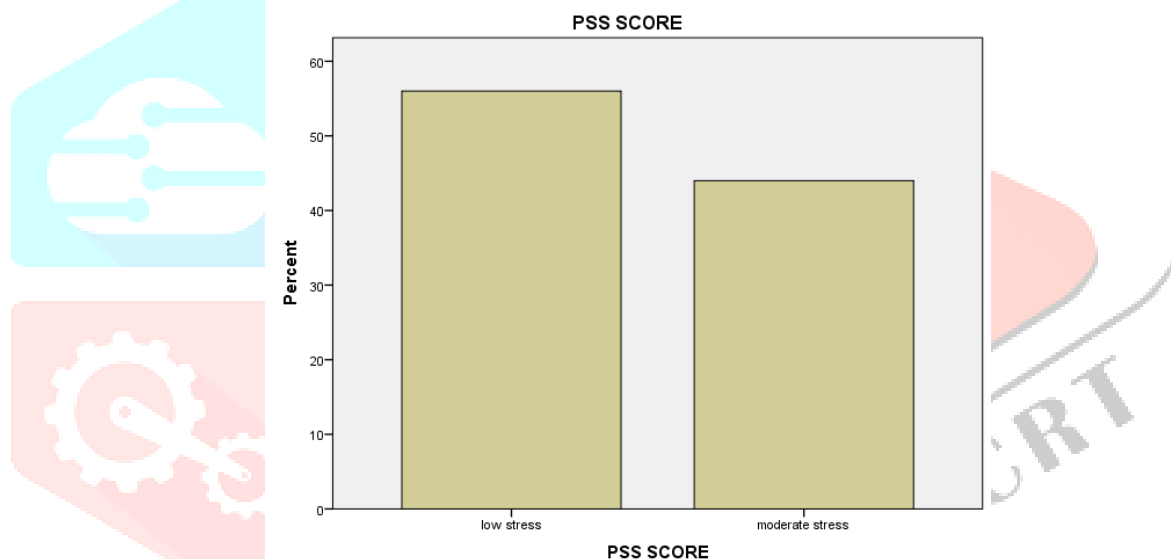
Table 2: analysis of PSS score

		PSS SCORE			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	low stress	28	56.0	56.0	56.0
	moderate stress	22	44.0	44.0	
	high perceived stress	00	00	00	100.0
	Total	50	100.0	100.0	

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
1. In the last month, how often have you been upset because of something that happened unexpectedly?	50	1.16	1.167	.165
2. In the last month, how often have you felt that you were unable to control important things in your life ?	50	1.80	1.125	.159
3. In the last month, how often have you felt nervous and "stressed"?	50	1.82	1.273	.180
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	50	2.54	1.328	.188
5. In the last month, how often have you felt that things were going your way?	50	2.50	1.266	.179
6. In the last month, how often have you found that you could not cope with all the things you had to do?	49	1.67	1.390	.199
7. In the last month, how often have you been able to control irritations in your life?	50	2.22	1.266	.179
8. In the last month, how often have you felt that you were on top of things?	50	1.90	1.249	.177
9. In the last month, how often have you been angered because of things that were outside of your control?	50	1.56	1.402	.198
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them ?	50	1.28	1.310	.185



Graph comparing occurrence of low stress level and moderate stress level

Results and Discussion

This study is done on the individuals belong to Indian army to observe the stress level in them by perceived stress scale and it is observed in this study that individuals belong to Indian army showed moderate and low level of stress, this study is clearly depicting the prevalence of moderate and low level of stress in individuals belong to Indian army. This study showed that army personnel showed significant amount of stress in perceived stress scale which is similar to the study done by suprakash chaudhary et al in 2006 in which it was concluded that service personnel showed higher score in mental fatigue subscale i.e., they showed amount of stress in them. This study is supported by the study done Sakshi Sharma in 2016 on army individuals in which it was observed that army personnel who worked for less than 10 years, young individuals and the individuals belong to lower rank showed higher prevalence of stress. This study also showed similarity to the study done by S Planz in 2001 in which it was observed that majority of 60% of the soldiers were suffering from a significant work stress under which almost half 42.5% reported that work stress was a significant contributor for their mental stress. This study is supported by the study done by Lilian Cristina X Martins et. Al in 2013, the result of this study showed that the job stress and rank was linked with higher levels of occupational physical activity. Job stress and psychological distress were related with lower levels of physical activity in sports and exercise. This study is also supported by the study done by L C X Martins et. Al in 2012 and this study concluded that job stress among armed forces personnel was associated with common mental disorder

and specific occupation characteristics can lead to higher prevalence common mental disorder. Many studies have made earlier to compare the various factors that may or may not be associated with prevalence of stress in army personnel but this study is done to check for the prevalence of stress by perceived stress scale and it was observed that army individuals showed moderate and low level of stress for which various factors may be responsible.

CONCLUSION

This study is done on the individuals belong to Indian army to observe the stress level in them by perceived stress scale and it is observed in this study that individuals belong to Indian army showed moderate and low level of stress. Thus there is significant amount of stress in army individuals.

Future scope of study:

This study can be further done on large scale on larger sample size including more participants.

Acknowledgments

Author would like to thank the individual Army personnel for cooperating and for conducting the successful survey during covid lockdown.

REFERENCES

- Altan Essizoglu, I. K. (2014). Post-Traumatic Stress Disorder in Internally Displaced People Subjected to Displacement by Armed Forces. *Journal of Traumatic Stress Disorders & Treatment*, 03(02). <https://doi.org/10.4172/2324-8947.1000122>
- Baik, S. H., Fox, R. S., Mills, S. D., Roesch, S. C., Sadler, G. R., Klonoff, E. A., & Malcarne, V. L. (2019). Reliability and validity of the Perceived Stress Scale-10 in Hispanic Americans with English or Spanish language preference. *Journal of Health Psychology*, 24(5), 628–639. <https://doi.org/10.1177/1359105316684938>
- Chaudhary, S., Chakraborty, P. K., Pande, V., John, T. R., Saini, R., & Rathee, S. P. (2005). Impact of Low Intensity Conflict Operations on Service Personnel. *Industrial Psychiatry Journal*, 14, 69–75.
- Col S S Cheema, C. S. S. C. (2013). Meditation for stress reduction in Indian Army- An Experimental Study. *IOSR Journal of Business and Management*, 10(2), 27–37. <https://doi.org/10.9790/487x-1022737>
- Delahajj, M. R., & Gaillard, A. W. K. (2006). Stress Training and the New Military Environment. *Human Dimensions in Military Operations – Military Leaders' Strategies for Addressing Stress and Psychological Support. Meeting Proceedings RTO-MP-HFM-134*, 17A – 1 – 17A – 10.
- Dixit, K. C. (2011). Addressing Stress-Related Issues in Army. In *Institute of Defence Studies and Analysis* (Issue February).
- Langston, V., Gould, M., & Greenberg, N. (2007). Culture: What is its effect on stress in the military? *Military Medicine*, 172(9), 931–935. <https://doi.org/10.7205/MILMED.172.9.931>
- Pflanz, S., & Sonnek, S. (2002). Work stress in the military: Prevalence, causes, and relationship to emotional health. *Military Medicine*, 167(11), 877–882. <https://doi.org/10.1093/milmed/167.11.877>
- Pietrzak, E., Pullman, S., Cotea, C., & Nasveld, P. (2012). Effects of deployment on mental health in modern military forces: A review of longitudinal studies. *Journal of Military and Veterans' Health*, 20(3), 24–36.
- Prabhu, V. S. M., Prakash, J., Bhat, P. S., & Gambhir, J. (2011). Study of events in serving personnel and its association with psychopathology in their children: A multicentric study. *Medical Journal Armed Forces India*, 67(3), 225–229. [https://doi.org/10.1016/S0377-1237\(11\)60046-4](https://doi.org/10.1016/S0377-1237(11)60046-4)
- PURI, S., SHARMA, P., NAIK, C. K., & BANERJEE, A. (1999). Ecology of Combat Fatigue Among Troops Engaged in Counterinsurgency Operations. *Medical Journal Armed Forces India*, 55(4), 315–318. [https://doi.org/10.1016/s0377-1237\(17\)30358-1](https://doi.org/10.1016/s0377-1237(17)30358-1)
- Raju, M. S., Srivastava, K., Chaudhury, S., & Salujha, S. K. (2001). Quantification of stressful life events in service personnel. *Indian Journal of Psychiatry*, 43(3), 213–218.
- Ruben Martin and Stephen L. Buchwald. (2008). 基因的改变NIH Public Access. *Bone*, 23(1), 1–7. <https://doi.org/10.1177/0095327X0102700304.The>
- Ryali, V. S. S. R., Bhat, P. S., & Srivastava, K. (2011). Stress in the Indian Armed Forces: How true and what to do? *Medical Journal Armed Forces India*, 67(3), 209–211. [https://doi.org/10.1016/S0377-1237\(11\)60041-5](https://doi.org/10.1016/S0377-1237(11)60041-5)
- Sharma, S. (2015). Occupational stress in the armed forces: An Indian army perspective. *IIMB Management Review*, 27(3), 185–195. <https://doi.org/10.1016/j.iimb.2015.06.002>
- Sinha, A., Gupta, S., Ray, M., Kumar, S., & Gupta, A. K. (2021). Lessons Learned from Psychological Autopsies in Armed Forces. *Indian Journal of Psychological Medicine*, 43(2), 150–153. <https://doi.org/10.1177/0253717620950254>
- Sivasubramanian, V., & Rajandran Professor, K. (2017). A Study on Effect of Family Separation on Stress Level of Soldiers Deployed in Rajasthan Sector of Indian Air Force. *International Journal of Management (IJM)*, 8(1), 145–151. <http://www.iaeme.com/IJM/index.asp145editor@iaeme.comhttp://www.iaeme.com/ijm/issues.asp?JType=IJM&VType=8&IType=1JournalImpactFactor%0Awww.jifactor.comhttp://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=8&IType=1>
- Varma, D. P., & Ashok Kumar, L. C. (2020). Satisfaction With Life and Mental Health of Indian Armed Forces. *International Journal of Engineering Applied Sciences and Technology*, 04(10), 372–376. <https://doi.org/10.33564/ijeast.2020.v04i10.067>