

# A Cross-Sectional Study on Assessment of Occupational Stress Level among Security Guards

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**Abstract:** ***Background:** Stress is an important aspect of strenuous jobs and one such job is that of the Security guards, who are exposed to various risk factors leading to stress, so this study was planned to assess the prevalence of such risk factor and determine the level of stress faced by the security guards. **Methodology:** Cross sectional study conducted at Datta Meghe Institute of Medical Sciences (DU), Wardha, Maharashtra. Total of 68 security guards are included in this study. PLSS pretested stress questionnaire was used to determine the stress level. **Results:** Results depicted that 98.53% of subjects had moderate range of stress for a busy professional person. **Conclusion:** Those reported occupational stress also reported increased exposure to potentially stressful working conditions. The sample in general was in quite good health and showed no biases.*

**Keywords:** Stress, security guards, PLSS, occupational stress

## 1. Introduction

Occupational stress is very common in today's time owing to long hours of work and various environmental and social factors. Stress among the workers not just reduces the output and effort of the worker but also can lead to various cardiovascular diseases, obesity and various mental healthy disorders [1, 2]. Etiological research can be found which demonstrates relation between workplace stressors and stress to adverse health conditions.

The occupational stress index model determines stress from an ergonomic and cognitive view. The PLSS ( professional life stress score ) can be used to determine the level of stress amongst various population groups namely doctors, teachers, police officers, security guards and other professional and mainstream occupations. PLSS determines stress and categorizes it among 4 levels starting form no stress to excessive stress.

The occupation of security guards is particularly a very stressful one, which involves working in non conducive environment to night shifts .The security guards working in a hospital setup have more to add on this with unruly and violent relatives to thievery and various other factors. This study aims to determine the stress level among the security guards, their sociodemographic profile and their exposure to various risk factors.

### Objectives

- 1) To assess the level and severity of occupational stress amongst security guards.
- 2) To study the socio demographic profile and the percentage of exposure to various risk factors among security guards
- 3) To suggest recommendations based on the study findings.

## 2. Material and Methods

**Study Setting:** Datta Meghe Institute of Medical Sciences University, Sawangi, Wardha

**Study Design:** A cross-sectional study design

**Study Participants** Security guards

**Sample Size:** Complete insertion of those Security guards which come under inclusion and exclusion criteria.

**Duration of study:**1<sup>st</sup> October to 31<sup>st</sup> October 2019 (1 month).

**Study Variables:** Age, sex, education, income, area, height, weight, BMI, duration of service, working hours per week, risk factor due to work place, general conditions, risk factors due to climatic changes, risk faced by female security guards, risk due to physical environment, risk due to biological and chemical environments.

**Data Collection (Methodology):** The security guards were interviewed using a predesigned and pre-tested questionnaire. Information regarding age, sex, education, income, area, height, weight, BMI. Data thus collected were compiled, analyzed and valid conclusions drawn. **Consent:** Verbal consent was taken from all security guards.

### Analysis:

- Score = 15. Stress isn't a problem in your life.
- Score = 16-30. This is a moderate range of stress for a busy professional person, but the person should strive to reduce the stress level.
- Score = 31-45. Stress is clearly a problem, and immediate measures are required to bring stress under control. Prolong working in such stress can lead to increase in stress level.
- Score = 45-60. At these levels, stress is a major problem, urgent and immediate help and therapy is required. The person may be nearing exhaustion, the stress must be reduced.

Statistical analysis was done by using descriptive analysis i.e. frequency and percentages.

3. Results

**Table 1:** Level and severity of occupational stress amongst security guards

Level	PLSS Score	No. of subjects	Percentage (%)
Level 1	No stress (15)	1	1.47
Level 2	Moderate range of stress(16-30)	67	98.53
Level 3	Stress is clearly a problem(31-45)	0	0.00
Level 4	Stress is major problem(46-60)	0	0.00

**Table 2:** Age and Sex wise distribution

Age Group(yrs)	Male	Female	Total
20-30	24(35.29%)	0(0.00%)	24(35.29%)
31-40	32(47.06%)	1(1.47%)	33(48.53%)
41-50	11(16.18%)	0(0.00%)	11(16.18%)

**Table 3:** Education wise distribution of subjects

Education	No. of subjects	Percentage
SSC	8	11.76
HSC	59	86.76
Graduate	1	1.47

**Table 4:** BMI (kg/m<sup>2</sup>) wise distribution of subjects

BMI(kg/m <sup>2</sup> )	No. of subjects	Percentage
<18	0	0.00
18-25	33	48.53
>25	35	51.47

**Table 5:** Distribution of subjects according to Risk due to violence at work place (Related to patients and their relatives)

Risk due to violence at work place	No. of subjects	Percentage
Yes	26	38.34
No	42	61.76

**Table 6:** Distribution of subjects according to Risk due to work load

Risk due to work load	No. of subjects	Percentage
Yes	33	48.53
No	35	51.47

**Table 7:** Distribution of subjects according to Risk due to psychological stress

Risk due to psychological stress	No. of subjects	Percentage
Sleepless Nights	15	22.06
Thieves	18	26.47
People's Attitude	29	42.65
Traffic	0	0.00
Insult	6	8.82

**Table 8:** Distribution of subjects according to Presence of addiction

Addiction	No. of subjects	Percentage (%)
Tobacco	38	55.88
Alcohol	1	1.47
Other(specify)	2	2.94
No	27	39.71

**Table 9:** Distribution of subjects according to Satisfaction with duty

Satisfaction with duty	No. of subjects	Percentage (%)
Yes	66	97.06

No	2	2.94
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**Table 10:** Distribution of subjects according to Engagement in any kind of physical activity

Any kind of physical activity	No. of subjects	Percentage (%)
Sports	11	16.18
Yoga	28	41.18
Meditation	11	16.18
Any other	18	26.47

**Table 11:** Distribution of subjects according to Satisfaction with income

Satisfaction with income	No. of subjects	Percentage (%)
Yes	65	95.59
No	3	4.41

**Table 12:** Socioeconomic status

	No of persons	%
Upper	0	0
Upper Middle	3	4.41
Lower Middle	59	86.76
Upper Lower	6	8.82
Lower	0	0

4. Discussion

The perceived stress symptoms<sup>[4]</sup> among the security guards identified were trouble in concentrating, feeling tensed and anxiety, increased appetite, feeling restlessness, worries and thinking of concerns at night, lack of energy. However, some security guards also disagreed with stress symptoms such as taking OTC medications, higher affinity to drinking and smoking, raised B.P. Stress can cause both physical and psychological effects on a person health.<sup>[6]</sup>

With the criteria of complete enumeration a total of 68 security guards were included in the study. After due permission from hospital and college management and after taking informed consent from the security guards their data was collected and evaluated. The results of PLSS and a personalized questionnaire are tabulated and discussed below.

Table 1 shows the PLSS score with 1.47 % population having no stress, (score below 15) and 97.53 % of population having moderate level of stress (score between 16 to 30) and no person having stress level of 3 or 4. From table 2 onward data regarding socio demographic profile of the sample and there percentage exposure to various risk factors and entities are tabulated. Table 2 shows the age and sex wise distribution of the sample with 24% between 20 – 30 yrs, 33% between 31-40 yrs, and 11 % in > 40 yrs of age. Of the 67 persons 66 were male and 1 female security guards. Table 3 shows education wise distribution with 11.76 % being SSC graduate, 87.76% being HSC graduate, and 1.47 % having higher education. Table 4 shows BMI wise distribution with the maximum 86.76 % having BMI between 18 -25. Table 5 shows 38.34 % saying they face risk (stress) due to violence at work place. Table 6 shows 48.53 % having stress due to excess work load. Table 7 shows risk due to various stressful conditions with 22.06 % due to sleepless nights, 26.47 % due to thieves, 42.65 % due to peoples attitude and 8.82 % due to insults. Table 8 shows

presence of various addictions among the sample population. Table 9 shows that 97.06 % of subjects are satisfied with their duty. Table 10 shows engagement in various physical activities by security guards, increased physical activity has been known to reduce stress. Table 11 shows that 95.59% of population is satisfied with their income. Table 12 shows socioeconomic state of the sample according to modified kuppuswamy scale with 86.6 % of population being in lower middle class.

The job of security guard involve them dealing with people both good and anti social elements, and to carry out their duties effectively they should have proper mental physical fitness. Even though the job of security guards cannot be without stress, efforts should be made to reduce the occupational stress faced by the security guards.

The management should understand that different strategies may be required for different individuals to manage stress. For eg. On exposure to a horrific sight or to a death in the hospital premise a less experienced guard may face higher stress than an experienced guard. Similarly their ability to deal with grieving relatives and patients also varies with the experience. Security guards on different assignment will have different stress levels, for eg- a guard in night duty may perceive more stress than guards on day duty. This different perception and experience of guards should be taken into account while assigning tasks to them.<sup>[8]</sup>

## 5. Recommendation

- Reduce duty hours of security guards.
- Provide medical insurance to all security guards.
- Provide life insurance to all security guards.
- Security guards should engage in regular physical activity
- Practicing relaxation techniques, yoga.
- Training junior security guards on managing patients and helping them better perform their duties

## 6. Limitations

The study was done in DMIMS campus and thus the geographical coverage was limited. The study was done among the security guards in a hospital setup and thus its application amongst guards of other setup is subjected to further research. Further research on correlation between various risk factors of stress, their exposure and the stress level faced by each person need to be done to better

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