



## Prevalence of Workplace Violence, Stress among Workers and Facilities available in the Industries of District Una, Himachal Pradesh, India

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**Abstract:** Violence at workplace is described as the most prevalent human rights violation in the world. Violence and stress have emerged serious problems among workers in industries, as violence, stress and non-availability of proper facilities in the context of Factory Act at workplace cause many physical and mental health problems. To assess the Prevalence of Violence and Stress descriptive cross sectional study was carried out among 246 industrial workers, and facilities available were assessed in 20 industries of district Una, Himachal Pradesh using interview method with pretested structured questionnaire. Data was entered and analyzed using SPSS version 20. The study revealed that prevalence of violence was 37.8%, out of which emotional violence was 29.7% which was more than three times the physical violence (9.3%). None of worker reported about sexual violence. Fairly low stress was reported by 26% of respondents and moderate stress by 1.6% and no one reported severe stress. Statistically significant association was found between violence and stress ( $p < 0.01$ ). No child labour was found in the industries. None suffered from sexual violence. Some difference was found between facilities documented by the industries and the facilities provided to the workers in different industries.

**Violence; Stress; Facilities; Industries; Industrial workers**

### I. INTRODUCTION

Workplace violence has emerged as the most prevalent human rights violation that has increasingly become common in many countries including India. It is very contextual, and can be physical, psychological and sexual in general across workplace settings.[1] Violence and stress are related; workplace stress plays a dynamic role in causing violence as it precedes violence (ILO). In addition, the workplace facilities available to workers as against the provision in the Factory Act may be interwoven in one way or the other with their simmering. It is widely considered that a safe environment for employees and employers must be maintained to ensure health of all in the workplace which is essentially a conducive condition for production.

World Health Organization (WHO) has defined violence as the intentional use of physical force or power, threatened or actual, against oneself, another person or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.[2] It pervades the lives of many people significantly in all professional groups, both gender and all work settings around the world, and touches all of us in some way.[3]

It is more common in SEAR countries including India where most of the cases of violence are hidden due to no strict implementations of laws and regulation mechanism.[4-5] While the physical violence has always been recognized at the workplace, existence of psychological violence has been underestimated; but in recent times it is receiving due attention.[2] All this has led to the formulation of anti-violence policies to help prevent negative consequences for workers.[6-7]

Stress is man's adaptive reaction to situation which would lead to physical, mental and behavioral changes and many problems to the person who is suffering from it.[8] While moderate stress is facilitative, severe or negative stress can lead to violence. Negative stress though depends upon multiple factors including conditions and facilities; it may generate long lasting deleterious effects on health.[9]

It also affects the workers' job performance, reduce safety and increase chances for occupational injury of workers. [10] Workplace stress can also impact employees' productivity through increased absenteeism and imposing a direct economic cost on employers. Various steps can be taken by organizations to reduce work stress and mitigate its effects on the employees including their mental and physical health.[11]



Violence and stress must be addressed by the industries as well as the government in order to ensure a safe working environment. Preventive measures, which include a wide range of interventions from education to social support for the victims have been emphasized in various researches. In view of different factors operating in each factory, special needs for effective interventions should be determined for every workplace separately according to the type of work and working conditions.[12]

The past studies has highlighted different prevalence rate with various forms of violence. International Labour Organization found that 35% were workers exposed to physical violence, of which 34 % were bullied and 31 % of those exposed to sexual harassment were found to be absent from work, compared to an average of 23 per cent among workers in general.

Various studies conducted on different workplace settings in India and other countries have found violence in one form or the other ranging up to 30% in developed countries and above 30% to 87%.[13,1]

A cross-sectional study conducted on female workers in banks, educational institutes, and shops in Mangalore, revealed that about 28% of the participants experienced some form of harassment, the majority of violence (67.3%) was verbal.[14]

The physical design of a workplace can be a factor in either defusing or triggering stress or violence. Poor ventilation, bad lighting, uncomfortable temperatures, dirty and noisy premises can generate stress and experience higher rates of violence than well-designed workplaces.

Everybody has the right to work in safe working environment with minimal conflict and violation of human right.[1] Labour welfare occupies a place of significance in the industrial development and economy. It is a comprehensive term including various services, benefits and facilities offered by the employer. Government of India enacted Factories Act, 1948 to regulate the facilities for the workers by the industries. This law was applicable to only those factories, which employed 10 or more employees use power supply and 20 or more employees do not use power for work purpose. [15]

Violence in any form need to be identified prevented and dealt with appropriately. It has been estimated that two-thirds of the workers of the world still work in conditions that do not meet the minimum standards set by ILO and there is also a need to strengthen preventive general health services for the working population.[16]

The negative outcomes of workplace stress are pushing the governments towards for making laws in favor of employees. The problems created because of workplace violence and stress are not limited to a particular profession or a particular country; it has caused long-term effects everywhere in the world. [17]

The overview of research literature of this field reveals patchy and inadequate research studies regarding violence and stress among industrial workers in India. Also, most the available work does not relate to gap between provision of facilities for these workers and practice allowed by the industries. Therefore, the present study was conducted to estimate the prevalence of workplace violence and stress among workers and facilities available in the industries of district Una, Himachal Pradesh, where no study has been reported so far.

## II. MATERIAL AND METHOD

### Study Design

Descriptive cross sectional study was carried out to assess the Prevalence of Violence and Stress among 246 industrial workers, facilities available in 20 industries of district Una, Himachal Pradesh. Quantitative method using interview method with structured questionnaire and face to face interview method was adopted for the study in different industries. Data was entered and analyzed using SPSS version 20. Pilot study was done on 10% of the sample size prior to data collection.

### Selection Criteria

#### Inclusion Criteria

- Both male and female industrial workers of any age who were present at the time of data collection and who voluntarily participated in the study.

#### Exclusion Criteria

- Workers who refused to participate in the study, who had mental illness and who were included in the pilot study.

## III. DATA COLLECTION TOOLS AND TECHNIQUES

Violence for the past 12 months was assessed with the structured questionnaire. Stress was assessed with the help of stress assessment scale by North heaven CT and American Institute of Stress, Yonkers, NY. In this scale score was given and according to that level of stress was assessed. The responses were scored and categorized as per standard i.e. 15 or lower as chilled out and relatively calm, 16-20 as fairly low, 21-25 as moderate stress, 26-30 as severe stress and 31-40 as potentially dangerous score given to assess the level of stress at the industrial area.

The facilities available to workers at industrial area assessed according to the factory act.



#### IV. DATA PROCESSING AND ANALYSIS

Data entry and analysis was done in SPSS version 20.0. The entered data was checked to correct error and coding was done to categorize the variables. Chi-square test and Fisher test were applied to test statistical significance between dependent and independent variables.

#### V. ETHICAL CONSIDERATION

The research was conducted after taking approval from the Ethical Committee of Eternal University. Approval was also taken from management authority of different industries to conduct the study. All the respondents were informed about the purpose of the study. Informed written consent was taken and the confidentiality of the information was maintained.

#### VI. RESULTS

##### Demographic profile of respondents

**Table 1: Demographic profile of respondents (n=246)**

Demographic Variables	Frequency	Demographic Variables	Frequency
<b>Age (in years)</b>		<b>Marital Status</b>	
a) 21-30	99 (40.2)	a) Unmarried	50 (20.3)
b) 31-40	88 (35.8)	b) Married	189 (76.8)
c) >4	59 (24.0)	c) Widow	07 (2.8)
<b>Sex</b>		<b>Type of Employee</b>	
a) Male	140 (56.9)	a) Unskilled	210 (85.4)
b) Female	106 (43.1)	b) Skilled	36 (14.6)
<b>Duty shift</b>		<b>Migrated Population</b>	
1. Morning	38 (15.4)	a) Yes	13 (5.3)
2. Day	208 (84.6)	b) No	233(94.7)
<b>Education Status</b>		<b>Permanent Residence</b>	
a) Illiterate	22 (8.9)	A. Rural	223 (90.7)
b) Primary	47 (19.1)	B. Semi-urban	17(6.9)
c) Secondary	122 (49.6)	C. Urban	06 (2.4)
d) Higher secondary	19 (7.7)		
e) Graduate/Postgraduate	36 (14.6)		
<b>Industry Type</b>		<b>Work Experience (in years)</b>	
a) Small scale	209 (85)	a) 0-5	149 (60.6)
b) Medium scale	37 (15)	b) >5	97 (39.4)

#Figures in parenthesis indicate percentage

##### Violence at Workplace

**Table 2: Workplace Violence**

Workplace Violence	Frequency (n=246)	Effects of Violence	Frequency (n=93)
Yes	93 (37.8)	<b>Physical effects</b>	
No	153 (62.2)	Do not have any effect	22 (8.9)
		<b>Emotional effects</b>	
		Feeling of shame and guilt	01(1.4)
		Irritability	13(18.1)
		Feeling like crying	04(5.6)
		Do not have any effect	54(75)
<b>Type of Violence</b>	<b>Frequency (n=93)</b>	<b>Response to Violence</b>	<b>Frequency (n=93)</b>
Physical Violence	23 (9.3)	Yes	8(8.5)
Emotional Violence	73 (29.7)	No	85(91.5)
Sexual Violence	00 (00)		
<b>Physical Violence</b>	<b>Frequency (n=23)</b>	<b>Reason for non-response to Violence</b>	<b>Frequency (n=85)</b>
Battering	23(9.3)	Threat to expel from work	30 (34.8)
		No action on filing complaint	(18.6)
		Do not feel need to response	(43)
<b>Emotional Violence</b>	<b>Frequency (n=73)</b>		
Verbal degradation	57(78.1)		
Threat of expulsion Threat to not give wages	03(4.1)		
Punishment for being late	07(9.6)		
	06(8.2)		

#Figures in parenthesis indicate percentage



Association between Violence and Socio-demographic variables  
**Table.5 Association between Violence and Socio-demographic variables**

Socio-demographic variables	Violence		Test value $\chi^2$	P value (<0.05)
<b>Type of industry</b>	<b>Emotional Violence</b>		5.525	0.019*
	Yes	No		
Small scale Medium scale	56(26.8) 17(45.9)	153(73.2) 20(54.1)		
<b>Age (in years)</b>	<b>Emotional Violence</b>		6.367	0.041*
	Yes	No		
21-30 31-40 >40	32(32.3) 18(20.5) 23(39.0)	67(67.7) 70(79.5) 36(61.0)		
<b>Age(in years)</b>	<b>Frequency of Violence</b>			
	Rarely	Often		
21-30 31-40 >41	38(97.4) 23(88.5) 17(70.8)	1(2.6) 3(11.5) 07(29.2)		
<b>Sex</b>	<b>Physical Violence</b>		10.741	0.001**
	Yes	No		
Male Female	21(15.0) 02(1.9)	119(85.0) 104(96.1)		
<b>Sex</b>	<b>Perpetrators in Violence</b>		4.070	0.044*
	Senior employers	Male coworkers		
Male Female	41(77.4) 37(94.9)	12(22.6) 2(5)		
<b>Migrated Population</b>	<b>Faced Violence within one year in Industrial area</b>		10.775	0.001**
	Yes	No		
Yes No	11(84.6) 82(35.2)	02(15.4) 151(64.8)		
<b>Migrated Population</b>	<b>Emotional Violence</b>		5.163	0.023*
	Yes	No		
Yes No	8(61.5) 65(27.9)	5(38.5) 168(72)		

\*Significant at p<0.05

\*\*Highly significant at p<0.01

#Figures in parenthesis indicate percentage

#Underlined figures indicates Fisher's exact test

**Stress at Workplace**  
**Table 3: Prevalence of Stress (n=246)**

Stress at Workplace	Frequency
Chilled out and relatively calm	178(72.4)
Fairly low stress	64(26)
Moderate stress	4(1.6)

#Figures in parenthesis indicate percentage

Association between Workplace Stress and Socio-demographic variables  
**Table 4: Association between Workplace Stress and Socio-demographic variables**

Socio-demographic variables	Stress			Test value $\chi^2$	P value (<0.05)
<b>Sex</b>	<b>Level of Stress</b>			7.188	0.016*
	Chilled out and relatively calm	Fairly low	Moderate stress		
Male Female	108(77.1) 70(66.0)	32(22.9) 32(30.2)	00(00) 4(3.8)		
<b>Marital Status</b>	<b>Level of Stress</b>			15.016	0.003**



Unmarried Married Widow	Chilled out and relatively calm	Fairly low	Moderate stress		
	32(64.0)	17(34.0)	1(2.0)		
	143(75.7)	45(23.8)	01(0.5)		
	3(42.9)	2(28.6)	2(28.6)		
<b>Migrated Population</b>	<b>Level of Stress</b>			<u>7.930</u>	<u>0.027*</u>
Yes No	Chilled out and relatively calm	Fairly low	Moderate stress		
	5(38.5)	8(61.5)	00(00)		
	173(74.2)	56(24)	7(1.7)		

\*Significant at p<0.05

\*\*Highly significant at p<0.001

#Figures in parenthesis indicate percentage

#Underlined figures indicates Fisher's exact test

**Association between Violence and Stress at Workplace**  
**Table 5: Association between Violence and Stress at Workplace**

Faced violence	Frequency	Mean	Std. deviation	T	Df	Sig. (2tailed)
Yes	93	1.5054	.58279	5.069	137.831	.000
No	153	1.6634	.37094			

\*Significant at p<0.05

\*\*Highly significant at p<0.001

### Provision of Facilities

Only those facilities, which were included in Factory Act and were documented by the factories but were not made available to the workers, have been mentioned herein.

**Table 6: Provision of Facilities in the industries (N=20)**

Provision of Facilities	Documented Facilities	Provided Facilities
Separate toilet facilities	17(85)	08(40)
Toilet per person	15(75)	09(45)
Disposal of waste	16(80)	15(75)
Use of protective measures	12(60)	09(45)
Washing facilities	05(25)	03(15)
Sitting facilities	10(50)	07(35)
First aid services	20(100)	20(100)
No proper first aid articles	00(00)	12(60)
Crèche (>30 women)	00(00)	00(00)
Ambulance Services	10(50)	06(30)
Ambulance (>500)	01(25)	01(25)
Covering of pits and opening in floor	19(95)	15(75)
Benefits for affected person after hazard	14(70)	06(30)
ESIC facilities	08(40)	08(40)

#Figures in parenthesis indicate percentage

## VII. DISCUSSION

The current descriptive cross sectional survey documents prevalence of workplace violence, stress among 246 workers and facilities available in the 20 industries of district Una, Himachal Pradesh, India. The demographic characteristics of the sample revealed that more than half of respondents (56.9%) were males, 8.9% were illiterate, 49.6% were educated up to secondary level and 14.6% were graduates and above, 85.4% from small scale industries and only 5.3 % were migrated workers.

Present study found 37.8 % prevalence of violence among the respondents which was lower than that of the studies conducted among Turkish workers (44.8%)[2] and Nepalese (49.5%)[18] in Gender based Violence study. Likewise prevalence of workplace abuse and sexual harassment among female faculty and staff in Ethiopia (39.5%) and workplace violence towards Australian paramedics (87.5%) [19] were higher than that of the present study. In the present study males (15%) were more victim of physical violence than females (1.9%).

The most common type of violence was reported as verbal abuse (78%) in the current study; this finding was similar to that of the study done on Australian paramedics which found 82.7% verbal abuse [19]. However, the study on Turkish workers found 38.7% verbal abuse which was found to be the most common form of violence in workers.[2]



In the present study 43.4% of respondents did not report against violence in contrast to 15.4 % findings of Turkish workers.[2] Majority of respondents anticipated that if they complain against violence, they would either not get positive response from the authority or they might lose their job.

In our study none reported sexual violence, whereas 16.5% had reported the same in study conducted in Australian paramedics [19]. This may be because most of women were married, seasonal workers, used to work in groups and probably there was least scope of sexual violence in surveyed industries.

The prevalence of workplace stress in present study was fairly low in 25%, while moderate stress was found 1.6%. These findings were lower as compared to the finding that >50% employees of business, organization had work stress of Matsasya industrial area, Alwar district, Rajasthan.[20] However, the prevalence of stress among industrial workers of Bangalore was less (18%). [21]

In the present study statistically significant association ( $p < 0.001$ ) was found between the workplace violence and stress. In line with this, in Ethiopian study association was reported between the workplace abuse and symptoms of depression [22], which may be taken as indicator of stress and violence.

Herein it is revealed that facilities which were included in Factory Act and which were documented by the factories were not adequately made available to the workers. In other words, the data indicated that the facilities alleged to have been provided by the management and observed facilities available to the workers were deficient in terms of sanitation facilities, safety arrangements and welfare facilities. In a similar study conducted in Haryana in 2014 stressed the need for improvement and maintenance of facility in industries like washing, storing, restroom and first aid. [23]

No child labour was found in present study in contrast to the study which found 80% involved in the child labour belonged to age group of 11-30 years in rural area of Wardha.[24] This may be because of improvement in enforcement of laws in this context over the time.

## VIII. CONCLUSION

The prevalence of violence was higher among industrial workers and physical violence was more prevalent among male workers than female workers. No worker suffered from sexual violence in the industry. No sexual violence was reported in the industries. Majority of workers were not suffering from any type of work related stress in the industrial area. There were differences between documented facilities by the industries and observed facilities that are provided to workers.

The sample of present study was not inclusive of large scale industries, even the small and medium scale industries were not adequately represented taking the large no. of industries in the district. As such the current cannot be generalized.

## IX. RECOMMENDATIONS

- Further studies are required to find out violence and stress and their determinants to suggest ways to alleviate the problems of workers.
- The workers should be educated regarding their rights and responsibilities through various methods such as training, in-service education and campaigns so that they use facilities as recommended through factory act for their safety and welfare.
- A grievance committee should be formed at every industry to look into the complaints of violence and assess the work related stress and devise measures to reduce the same.
- Govt. should enforce laws strictly for the safety and welfare of workers and industrial management should evolve conflict resolution mechanism as and when the stress arises.

## X. CONFLICTS OF INTEREST

There are no conflicts of interest in any form.

## REFERENCES

1. Dhakal G. Women's Experience of Sexual Harassment in Carpet Factories. *Journal of Nepal Health Research Council*. 2009;7(2):98-102.
2. Aytac S, Bozkurt V, Bayram N, Yildiz S, Aytac M, SokulluAkinci F, Bilgel N. Workplace violence: a study of Turkish workers. *International journal of occupational safety and ergonomics*. 2011 Jan 1;17(4):385-402.
3. Violence WI. *Ending Violence Against Women*. 1999;27(4).
4. Siddiqi DM. The sexual harassment of industrial workers: strategies for intervention in the workplace and beyond. CPD-UNFPA Publication Series No. 2003 Jun;26.
5. Malla SP. Sexual Harassment in the Workplace in Asia. In *Violence against women: Good practices in Combating and eliminating violence against women*. Expert Group Meeting Organised by: UN Division for the Advancement of Women In collaboration with: UN Office on Drugs and Crime 2005 (Vol. 17).



6. Glenn S, Melis S, Withers L. Gender (in) equality in the labour market: an overview of global trends and developments. Brussels: International Trade Union Confederation. 2009.
7. Cruz A, Klinger S. Gender-based violence in the world of work: Overview and selected annotated bibliography. International Labour Office; 2011.
8. Nirmala R. A Study on Stress Management Among the Employees of Banks. *International Journal of Science, technology & management* ISSN.2015:2394-1539;(4):11–4.
9. Di Martino V. Relationship between work stress and workplace violence in the health sector. Geneva: ILO/ICN/WHO/PSI Joint Programme on Workplace Violence in the Health Sector. 2003
10. Karasek Jr RA. Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly*. 1979 Jun 1:285-308.
11. Australia MP. The cost of workplace stress in Australia. Australia: Medibank Private Limited. 2008.
12. Singh V, Aggarwal S. Employees awareness towards the Welfare Provisions of Factories Act 1948 and its Implementation in the state of Haryana. *International Journal of Commerce, Business and Management*.2014; 3(2).
13. Unnikrishnan B, Rekha T, Kumar G, Reshmi B, Mithra P, Sanjeev B. Harassment among women at workplace: A cross-sectional study in coastal South India. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*. 2010 Apr;35(2):350.
14. Hanson C G, Perrin A N, Moss H, Laharnar N, Glass N. Workplace violence against homecare workers and its relationship with workers health outcomes: a cross-sectional study. 2015 Dec; 15:11.
15. International Labour Organization. The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987). International Labour Organization. [Internet] [Cited 2015 November,5] Available from: <https://www.ilo.org/dyn/natlex/docs/WEBTEXT/32063/64873/E87IND01.htm>
16. World Health Organization. Global strategy on occupational health for all: the way to health at work, recommendation of the Second Meeting of the WHO Collaborating Centres in Occupational Health, 11-14 October 1994, Beijing, China.
17. Sohaïl M, Rehman CA. Stress and Health at the Workplace-A Review of the Literature. *Journal of Business Studies Quarterly*. 2015 Mar 1;6(3):94.
18. Radhakrishnan R. A Study of Work Stress and Coping Strategies among Tile Factory Workers in Calicut District in Kerala. *International Journal of Scientific and Research Publications*. 2014;4(4):1–9.
19. Brešić J, Knežević B, Milošević M, Tomljanović T, Golubović R, Mustajbegović J. Stress and work ability in oil industry workers. *Archives of Industrial Hygiene and Toxicology*. 2007 Dec 1;58(4):399-405.
20. Prado-Lu D, Leilanie J. Organizational work factors among workers and supervisors in export processing zones which support global markets (Special issue: Good practices to promote occupational safety and health in the new era of globalization). *Industrial health*. 2008 Sep;46(5):435-42.
21. Minh KP. Work-related depression and associated factors in a shoe manufacturing factory in Haiphong City, Vietnam. *International journal of occupational medicine and environmental health*. 2014 Dec 1;27(6):950-8.
22. Caplan RP. Stress, anxiety, and depression in hospital consultants, general practitioners, and senior health service managers. *Bmj*. 1994 Nov 12;309(6964):1261-3.
23. Boyle M, Koritsas S, Coles J, Stanley J. A pilot study of workplace violence towards paramedics. *Emergency Medicine Journal*. 2007 Nov 1;24(11):760-3.
24. Shukla H, Garg R. A study on stress management among the employees of nationalized banks. *Voice of Research*. 2013 Dec;2(3):72-5.