

**RISK LEVEL FOR OCCUPATIONAL HEALTH HAZARD AMONG INDUSTRIAL
WORKERS**

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Abstract

Background: Occupational health is a discipline with a broad scope involving many specialized fields. The main objective of occupational health is to prevention of disease and maintenance of the highest degree of physical, mental and social well being of workers in all occupations. It is very important to safeguard from various hazards during work by the industrial workers.

Methods: A descriptive survey approach was used to assess the risk level for occupational health hazard. The samples comprised of 200 workers were selected by using proportionate stratified random sampling technique. Formal written permission from the authority of the factory and informed consent from the workers were obtained prior to data collection process. Data was collected by administering a self structured risk assessment rating scale for occupational health hazards. Data were analyzed using descriptive and inferential statistics (unpaired t- test and chi - square test).

Results: Majority of the subjects 95 (47.5%) were in early adult hood (19-27 years) and others 105 (52.5) were age above 27 till 55 years. Majority of the subjects were male 186 (93%) and only 14(7%) were female. Majority of the subjects 155 (77.5%) were Hindus. Most of the participant 85(42.5%) completed S.S.L.C. Majority were laborer 138 (69%) and only few 62 (31%) were technical workers. Majority 124n (62%) of the workers were in moderate risk, followed by 45 (22.5%) were in low risk and 31 (15.5%) were high risk for health hazard. calculated chi-square value is greater than the table value for the demographic variables

education ($X^2=87.92$) & nature of work ($X^2=164.107$) at 0.05 $p<0.05$). Hence H_2 was accepted there is significant association between risk level and education & nature of work variables.

Conclusion: The findings of this study suggest the requirement for educating the workers about health and safety measures at workplace. The workers must get correct information about the health risk involved in their work place. They must be encouraged to adapt safety measures to promote and protect their health from occupational health hazards.

Key words: Occupational health hazards, occupational health risks, skilled and unskilled workers, Health education material.

Introduction

The health and prosperity of a nation, together with many other things, depend on the health of its workforce. If people have to work in unfriendly, unhealthy or unsafe surroundings, their health will be affected which, in turn, will affect the work ability, productively and economy¹.

Occupational health is a discipline with a broad scope involving many specialized fields. The main objectives of occupational health is to prevent and maintenance of the highest degree of physical, mental and social well being of workers in all occupations. The practices of occupational health and safety practices requires the collaboration and participation of both employers and workers in health progress and involves the consideration of issues relating to occupational nursing, industrial hygiene, health education². It was estimated that at least 250 million occupational accidents occur every year world wide³. Hazard and lack of attention given to health and safety, work related accidents and diseases are common in all parts of the world⁴.

Objectives

1. To identify the risk level for occupational health hazards among workers.
2. To find out the association between risk level for occupational health hazards and demographic variables.

Methodology: A descriptive survey approach was used to assess the risk level for occupational health hazard. The samples comprised of 200 workers were selected by using proportionate stratified random sampling technique. The rating scale for assessing risk for occupational health hazards was prepared with the distribution of 24 items, which has three categories of response

such as always, sometimes, and never with a score of 2,1 and 0 respectively. The sum of the scores on the positive statements represented the less risk of occupational hazards and sum of the scores on the negative statements represented the high risk of occupational hazards. Content validity, reliability and pilot study was done. Formal written permission from the authority of the factory and informed consent from the workers were obtained prior to data collection process. Data was collected by administering a self structured risk assessment rating scale and asked them to fill the tool within 25 minutes. Data were analyzed using descriptive and inferential statistics (Chi -square test).

Results:

Section I: Demographic Variables

Majority of the subjects 95 (47.5%) were in early adult hood (19-27 years) and others 105 (52.5) were age above 27 till 55 years. Majority of the subjects were male 186 (93%) and only 14(7%) were female. Majority of the subjects 155 (77.5%) were Hindus. Most of the participant 85(42.5%) completed S.S.L.C. Majority were laborer 138 (69%) and only few 62 (31%) were technical workers.

Section II: Classification of workers into their risk status

Table 1: Frequency and Percentage distribution according to Risk level for occupational health hazard **n=200**

Risk status	Scores	Frequency	Percentage (%)
Low risk	34 and above	45	22.5
Moderate risk	24 - 33	124	62.0
High risk	Below 24	31	15.5
Total		200	100.0

Table 1 shows that most of 124 (62%) workers were in moderate risk, followed by 45 (22.5%) were in low risk and 31 (15.5%) were high risk for health hazard.

Section III: Association between risk status and demographic variables

Table 2: Association between risk level for occupational health hazards and demographic variables of industrial workers **n=200**

Sr. No.	DEMOGRAPHIC VARIABLES	RISK LEVEL			X ²	Df	'P' VALUE & LEVEL OF SIGNIFICANT
		Low risk	Moderate risk	High risk			
1.	Age(years)						
	19-28	16	59	20	11.668	6	.070 N/S
	29-37	19	46	4			
	38-45	9	13	5			
	46-55	1	6	2			
2.	Gender						
	Male	40	116	30	1.904	2	.386 N/S
	Female	5	8	1			
3.	Religion						
	Hindu	34	99	22	5.013	4	.286 N/S
	Christian	4	17	4			
	Muslim	7	8	5			
4.	Education						
	Less than S.S.L.C	0	19	2	87.925	8	.000 S
	S.S.L.C	3	73	9			
	PUC	16	29	9			
	Graduation	20	3	8			
	Diploma	6	0	3			
5.	Nature of work						
	Laborer	45	0	17	164.107	2	.000 S
	Technical	0	124	14			

p value < 0.05 considered as Significant, S - Significant, NS – Not Significant.

The table 2 shows that the calculated chi-square value is less than the table value for the demographic variables age, gender, religion. Hence H₂ was rejected; there is no significant association between risk level and age, gender, religion. However, calculated chi-square value is greater than the table value for the demographic variables education (X²=87.92) & nature of work (X²=164.107) . Hence H₂ was accepted there is significant association between risk level and education & nature of work variables.

Discussion

In present study found that Majority 124 (62%) of the workers were in moderate risk, followed by 45 (22.5%) were in low risk and 31 (15.5%) were high risk for health hazard. Almost relevant to my study conducted by Ndejjo R, Musinguzi G, Yu X, Buregyeya E, Musoke D, Wang J et al.

revealed that overall, 50.0% of respondents reported experiencing an occupational health hazard. Among these, 39.5% experienced biological hazards while 31.5% experienced nonbiological hazards. And also they found that subjects who experienced work related pressures were more likely to report occupational hazards⁵. Work related pressures have been reported to have negative impacts including the compromise of patient care thus resulting to a diminished quality of life for both healthcare workers and patients^{6, 7}. This current study found significant association of risk level for occupational hazards of industrial workers with their education & nature of work. However, other studies have reported that working long hours was associated with adverse health effects^{8,9, 10}.

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