"ASSESSMENT OF RISK FACTORS OF OCCUPATIONAL HAZARDS AMONG ADULTS"

Abstract

Professionals in industrialized countries have reportedly used less personal hard hats (PPGs) than those in developing countries because of a lack of awareness of the risks associated with their jobs. Although extremely effective antibiotics are available today, 14 to 15 adults are admitted to hospitals each year due to a variety of health issues that affect 40 to 50 adults annually. However, about nine workers get severe asthma attacks and respiratory problems per year. After the first week of commencing a welding work, some adults suffer of sneezing and breathing issues, such as throat inflammation. The main objective of the study is to assess the risk factors of occupational hazards among adults. Quantitative descriptive approach has been adopted in this research study. Of the 150 samples, it has been found that the level of evaluation among staff adults regarding occupational health hazards was assessed about 197 (98.5%) adults who had mild risk of having health hazards, about 03 (1.5%) adults who had moderate risk involved in having health hazards. None of them were having severe risk associated with occupational hazard among the staff adults. It is also reveals that more than 90% within low level of evaluation regarding risk associated with occupational hazards among adults at the study sample n=200; 197 (98.5%), with mean and standard deviation (1.04 ± 0.88).

Keywords: Assessment, Risk Factors, Occupation hazards and adults.

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I. INTRODUCTION

Nursing assist as well as execute greater outpatient operations than other clinicians, grown-ups make up the majority of clinicians and are more likely to be exposed to employment dangers. Adults are more vulnerable to workplace hazards and damages in medical companies due to their diverse and complicated surroundings. Adults face a variety of potential dangers such as chemical, biological, environmental, economic, and emotional danger in relation to the type of their current job, responsibilities, and obligations. To ensure that people, households, and regions achieve or regain ideal wellbeing, professional nurses within the hospitals. As they consult and execute additional bedside operations than other doctors and nurses, adults make up the majority of healthcare professionals and are more likely to be exposed to employment dangers. Adults are more vulnerable to occupational risks and illnesses in insurers due to their diverse and complicated surroundings. Adults face a variety of occupational risks such as chemical, biological, environmental, mechanical, and emotional danger in addition to the nature of their job role, tasks, and obligations.

Stunning somatic and metabolic risks are connected to nursing. Professionals in industrialized countries have reportedly used less personal hard hats (PPGs) than those in developing countries because of a lack of awareness of the risks associated with their jobs. Although extremely effective antibiotics are available today, 14 to 15 adults are admitted to hospitals each year due to a variety of health issues that affect 40 to 50 adults annually. However, about nine workers get severe asthma attacks and respiratory problems per year. After the first week of commencing a welding work, some adults suffer of sneezing and breathing issues, such as throat inflammation.

II. REVIEW OF LITERATURE

Amare TG et al., (2021), conducted a cross- sectional study on exposure to occupational health hazards among nursing and midwifery students during clinical practice at Mekelle University, USA among 151 students. The findings of the study reported that the prevalence of psychosocial hazards, mechanical hazards, biological hazards and physical hazards was 140(92.7%), 128(84.8%), 100(66.2%) and 100(66.2%) respectively.[5]

Amal Ahmed Elibilgapy et al., (2019), conducted quasi-experimental research on occupational hazards and safety nursing guidelines for pediatric adults in the health care setting at Mansoura University, Egypt among 173 Pediatric adults. The study's findings showed that physical hazards exposure caused weariness, back discomfort, and leg pain in more than two thirds of the adults who were evaluated (77.9 percent, 69.5 percent and 56.8 percent respectively). 6 In the Bhubaneswar Block of the Khordha district in the state of Odisha, from January to December 2017, a cross- sectional study comprising 172 medical professionals working in 22 urban primary health centers and four community health centres was carried out. Semi-structured interview questions were used to gather pertinent data. Results The majority of participants—143 (83.1%)—reported seeing employment health risks, with 89 (51.7%) facing biological risks and 130 (75.6%) confronting non-biological risks. The most frequent causes of needlestick injuries (34.3%), stress (38.9%), assault (38.4%), and direct exposure to harmful specimens (32.6%)[7]

David Chinaecherem Innocent et al., (2022), conducted a cross- sectional study on Examination of common occupational hazards among health worker in a university healthcare center in South-eastern Nigeria. A total of 94 respondents who participated in the study and among the participants, 33.3% (31) of the respondents were aged 31 - 40 years, andthe majority of the health workers, 43.6% (41) had stayed between 1 - 5 years. Also, 92.6% 87) of the health workers have heard of occupational hazards. The study showed that 84.0% (79) of health workers had good knowledge of common occupational hazards. Biological hazards among health workers are 47.9% (45) cuts and wounds, 29.8% (28) direct contact with contaminated specimens/hazardous materials, and 26.6% (26) sharp related injuries, while for non-biological hazards, 44.7% (42) have slipped, tripped or fallen, and 35.1% (33) have been stressed. Common safety measures include 86.2% (81) washing their hands regularly; 78.7% (74) using hand gloves; and 85.1% (80) agreeing they use face masks.[2]

Ewnetu Ayenew et al., (2022), conducted a cross- sectional study on prevalence of work- related health hazards and associated factors among health workers in public health institution of Gambella Town, western Ethiopia. Risks to industrial hygiene were present in 36.5 percent of clinical staff (95 percent CI: 31, 42). Working more than eight hours per day (AOR = 7.9, 95 percent CI: 3.1, 19.7), functioning the late shifts (AOR = 8.1, 95 percent CI: 2.5, 26.1), not having safety gear (AOR = 3.6, 95 percent CI: 1.5, 8.4), and not having effective leadership in the health facility (AOR= 5.2, 95 percent CI: 1.9, 14.5) were factors linked to the occurrence of.[1]

III. AIM OF THE STUDY

The main aim of the study is to assess the risk factors of occupational hazards among adults.

IV. RESEARCH METHODOLOGY

1. **Research approach and design:** Quantitative descriptive approach and descriptive design has been used.

2. **Setting of the study:** The study has been conducted in Narayana Hospital, Gurugram

3. **Population:** All the adults working in different wards of Narayana Hospital, Gurugram

4. **Sample:** All the adults working in different wards of Narayana Hospital, Gurugram and who are willing to participate in the study.

5. **Sample Size:** 150 adults

6. S**ampling technique:** Probability simple random sampling technique has been used for this study.

7. **Research variables:** age, gender, qualification, designation, year of experience, department, occupational status, immunization, work load.

V. CRITERIA FOR SELECTION OF SAMPLES

1. **Inclusion Criteria:** All the adults are working in different wards (general wards, ICUs, Paediatric wards, pulmonary ward, OT, cancer ward, radiation therapy ward, chemo ward) of Narayana Hospital, Gurugram. and those who are available and willing to participate in the study.

2. **Exclusion Criteria:** Those adults who are not willing to participate in the study.

- **Data collection process:** Data collection procedure will be carried out after obtaining prior permission from authorized person of Narayana Hospital, gurugram, haryana Data collection will be done for a period of 15 days. After getting written informed consent from the subjects, data will be collected by using self-structured questionnaires.
- **Reliability of the tools:** Split- half method
- **Pilot study:** It will be conducted on $1/10^{th}$ sample size excluded from main study to find out feasibility of the study for reliability of the tool.
- **Type of study**: Single centered.

VI. RESULTS

The main objective is to assess the risk factors of occupational health hazards among adults working in hospital

Table 1: Factors associated with occupational hazards of the study participants

S. No.	Items	Pattern of Risk Factors						M.S.	S.D.	Eva.
		Always		Sometimes		Never				
		F	%	F	%	F	%			
1.	Lack of equipment and tools for protection	32	16.0	109	54.5	59	29.5	0.87	0.66	L
2..	Lack of lifting tools and transport of patient	27	13.5	101	50.5	72	36.0	0.78	0.65	L
3.	Improper preparation of health care provider	29	14.5	94	47.0	77	38.5	0.76	0.70	L
4.	Lack of information regarding use of modern tools and equipment	30	15.0	66	33.0	104	52.0	1.68	0.73	M
5.	Lack of educational and developmental program for the health care provider in the unit	49	24.5	59	29.5	92	46.0	0.98	0.85	L
6.	Lack of policies and procedure for occupational safety in the unit	45	22.5	119	59.5	36	18.0	1.87	0.80	M
7.	Lack of a regular medical examination	92	46.0	70	35.0	38	19.0	1.34	1.59	L

8.	Ineffective supervision	19	9.5	104	52.0	77	38.5	0.73	0.62	L
9.	Non-availability of medical immunization/vaccinations	75	37.5	56	28.0	69	34.5	1.05	0.83	L
10.	Insufficient light, heat, and air conditioning	10	5.0	104	52.0	94	47.0	0.40	0.62	L

No. = number of variable, F=frequencies, % = Percentages, M.S.= mean of score, Std. Dev.= standard deviation, Eva. = Evaluation; Evaluation levels: (1.00-1.66) = Low; (1.67-2.33) = Moderate; (2.34-3.00) = High.

The above table shows that 16% of adults were always had lack of equipment and tools for protection, 54.5% were sometimes and 29.5% were never faced lacking in protection due to lack of concerns. Around 13.5% staff adults were always lacking in lifting the tools and transport of patient, 50.5% were sometimes and 36% were never lacking in it. 14.5% participants had improper preparation for health care services provider, 47% and 38.55 had sometimes and never had the same. Furthermore, 15% of the study participants were always had lack of information regarding use of modern tools and equipment, 33% among them were sometimes had and 52% were never had knowledge regarding the modern technology.

Around 24.5% participants were always lacking in promoting educational and developmental program for the health care provider, 29.5% and 46% were sometimes and never lacking in promotion of such programs in the ward unit. 22.5% of staff adults had lack of policies and procedure for occupational safety in the unit, 59.5% and 18% had sometimes and never had lack of same.

Among 200 staff adults, 46% of staff adults had lack of a regular medical examination in the unit, 35% and 19% of adults sometimes and never had lack of regularity in medical examination in a hospital unit. 9.5% adults had always ineffective supervision, 52% and 38.5% had sometimes and never had ineffective supervision of the unit. It also shows that 37.5% of staff adults always had no medical immunization/vaccinations while remaining 28% and 34.5% had sometimes and never had medical immunization/vaccinations available in a hospital. 5% of adults always had insufficient light, heat, and air conditioning whereas 52% and 47% adults sometimes and never had the same facilities in the hospital.

(Table 1) reveals that low level of evaluation for mean of score in all items except items four and six of the occupational health hazards among staff adults at the study sample. It can be concluded that there is low level of mean score in all domains related to occupational health hazards.

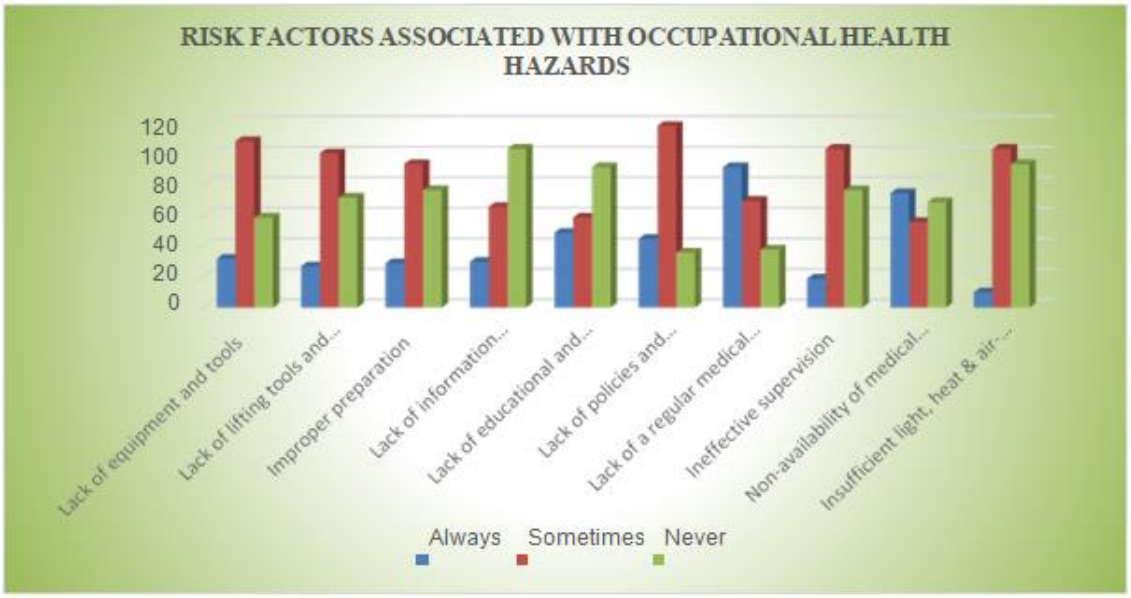

Figure 1

Table 2: Overall evaluation of pattern of risk factors of occupational health hazards among adults

Levels of Evaluation	Frequency (No.)	Percentage (%)
Low (1.00 - 1.66)	197	98.5
Moderate (1.67 - 2.33)	03	1.5
High (2.34 - 3.00)	-	-
Total	200	100
$\bar{X}$ ± Std. Dev.	1.04 ± 0.88	

The present table projected the category of evaluation level with marks scored provided by selected adults regarding the risk factors associated with the occupational health hazards. The risk patterns category has been allocated on the basis of total 10 items (100%) marks with no division of parts with occupational health hazards. The existed evaluation level under 3 categories such as low, moderate and severe was measured in a given study.

In the present study, the level of evaluation among staff adults regarding occupational health hazards was assessed about 197 (98.5%) adults who had mild risk of having health hazards, about 03 (1.5%) adults who had moderate risk involved in having health hazards. None of them were having severe risk associated with occupational hazard among the staff adults.

(Table 2) confirm that about more than 90% within low level of evaluation regarding risk associated with occupational hazards among adults at the study sample n=200; 197 (98.5%), with mean and standard deviation (1.04 ± 0.88).

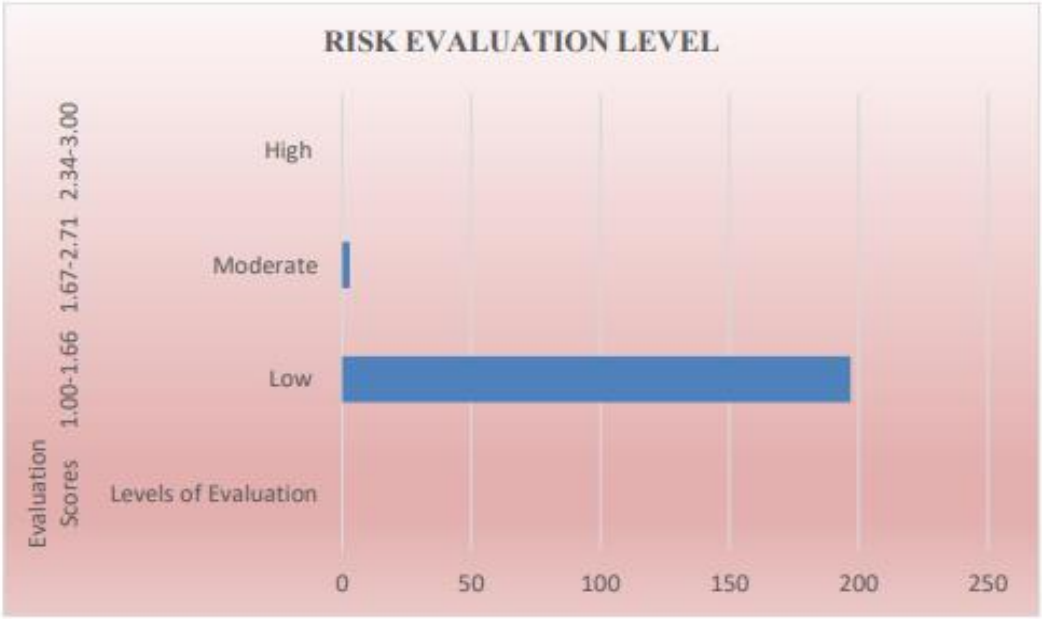

Figure 2

Figure 3

VII. CONCLUSION

Professionals in industrialized countries have reportedly used less personal hard hats (PPGs) than those in developing countries because of a lack of awareness of the risks associated with their jobs. Although extremely effective antibiotics are available today, 14 to 15 adults are admitted to hospitals each year due to a variety of health issues that affect 40 to 50 adults annually. However, about nine workers get severe asthma attacks and respiratory problems per year. After the first week of commencing a welding work, some adults suffer of sneezing and breathing issues, such as throat inflammation. The main objective of the study is to assess the risk factors of occupational hazards among adults. Quantitative descriptive

approach has been adopted in this research study. The analysis has been done using SPSS IBM 22.0 version. It has been found that the level of evaluation among staff adults regarding occupational health hazards was assessed about 197 (98.5%) adults who had mild risk of having health hazards, about 03 (1.5%) adults who had moderate risk involved in having health hazards. None of them were having severe risk associated with occupational hazard among the staff adults. It is also reveals that more than 90% within low level of evaluation regarding risk associated with occupational hazards among adults at the study sample n=200; 197 (98.5%), with mean and standard deviation (1.04 ± 0.88).

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