"Assessment of Risk Factors of occupational hazards among adults"

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Abstract

Nursing is associated with marvelous physical and biochemical threats. In malice of the danger complex, usage of Personal Protective Gears (PPGs) among welders in developed countries has been reported to be less, due to their incomplete consciousness of occupational hazards. Although present time have highly effective antibiotics but every year 40-50 adults suffer from many types of health issue fourteen -fifteen adult life admitted in hospital each year. Although approximately Nine workers every year grow breathing difficulty and asthma so seriously. Many adults' complaint of coughing and respiratory like throat irritation after first week of starting welding jobs frequently long-lasting properties. Beside the nature of adults working environment, duties and responsibilities, adults are facing numerous occupational hazards such as chemical, biological, environmental, physical and psychological risk. 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

Introduction

Adults are the largest group of healthcare workers in medical profession and experience a higher rate of workplace hazards exposure than other health care workers because adults assist and perform more bedside procedures. Healthcare organizations are characterized by multidimensional and complex environments that make adults prone to occupational hazards and injuries. Beside the nature of adults working environment, duties and responsibilities, adults are facing numerous occupational hazards such as chemical, biological, environmental, physical and psychological risk. Nursing is associated with marvelous physical and biochemical threats. In malice of the danger complex, usage of Personal Protective Gears (PPGs) among welders in developed countries has been reported to be less, due to their incomplete consciousness of occupational hazards. Although present time have highly effective antibiotics but every year 40-50 adults suffer from many types of health issue fourteen -fifteen adult life admitted in hospital each year. Although approximately Nine workers every year grow breathing difficulty and asthma so seriously. Many adults' complaint of coughing and respiratory like throat irritation after first week of starting welding jobs frequently long-lasting properties.

Review of Literature

Alsheikh GYM et al., (2021), conducted a cross- sectional study on occupational hazards among health workers in hospitals of Mukalla city, Yemen. The risk factors of biological hazards among the healthcare workers accounted for 298 (76%) whereas the non-biological hazards accounted for 306 (78%). The most prevalent biological hazards are needle prick injury (80%) followed by exposure to contact with contaminated material (75%), while the most frequent non-biological hazards are back pain (79%) followed by extra-time work (72%). In logistic regression age, gender and duration of work and professional category have significant association with exposure of health workers to biological hazards while only gender is the only variable associated with non-biological hazards.[3]

Amal Ahmed Elibilgapy et al., (2019), conducted a quasi-experimental research on occupational hazards and safety nursing guidelines for paediatric adults in the health care setting at Mansoura University, Egypt among 173 Paediatric adults. The findings of the study reported that physical hazards exposure more than 2/3 of the studied adults had complain from fatigue back pain and leg pain (77.9%, 69.5% and 56.8% respectively).[6] A cross-sectional study was conducted involving 172 health care personnel working in 22 urban primary health centres and four community health centres in the Bhubaneswar Block of the Khordha district in the state of Odisha, during the period from January to December 2017.Relevant data were collected using a semi-structured interview schedule. Results Overall, 143(83.1%) of the participants reported experiencing occupational health hazards, with 89 (51.7%) encountering biological hazards and 130 (75.6%) experiencing non-biological hazards. Stress (38.9%), assault (38.4%), needle-stick injury (34.3%), and direct contact with contaminated specimen's/body fluids (32.6%) were the most frequently experienced occupational hazards. Multivariate regression analysis revealed that female gender, health care personnel other than doctors, working overtime, dissatisfaction with workplace atmosphere, and not using the necessary personal protective equipment (PPE) were independent predictors for experiencing a biological hazard. Similarly, female gender, presence of family conflict, and not using the required PPE were found to be independent predictors for experiencing non-biological hazards.[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 centre 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, and the 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]

Rathish Rajan (2017) conducted a cross sectional study on assessment of risk factors and risk factors of occupational hazards among adults working in medical college and hospital Thiruvanthapuram among 323 staff adults working in different setting of the hospital. The finding shows that 72.9% had needle stick injuries, 78.6% had musculoskeletal disorder, 38.4% had allergy and 39.3% staff adults had some sort of infections.[8]

Aims of the study: The main aim of the study is to assess the risk factors of occupationalhazards among adults.

Research methodology

Research approach: - Quantitative descriptive approach will be used.

Research Design: - Descriptive Research design.

Setting of the study: - The study has conducted in Narayana Hospital, Gurugram

Population: - All the adults working in different wards of Narayana Hospital, Gurugram

Sample: - All the adults working in different wards of Narayana Hospital, Gurugram and who will be present at the time of data collection.

Sample Size: 150 adults working at hospital.

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

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

Criteria for selection of samples:

Inclusion criteria: All the adults who will be working in different wards (general wards, ICUs, Paediatric wards, pulmonary ward, OT, cancer ward, radiation therapy ward, chemo ward) of Narayana Hospital, Gurugram. All the adults who will be available and willing to participate at the time of data collection.

Exclusion criteria: Those adults who are not willing to participate in the study.

Brief process of Data collection: 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.

Validity of the tools: It will be determined by nursing and research expert.

Reliability of the tools: Split- half method

Characteristics of study: Administrations of Self structured questionnaire.

Pilot study: It will be conducted on $1/10^{th}$ sample size excluded from main study to find outfeasibility of the study for reliability of the tool.

Type of study: Single centered.

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.

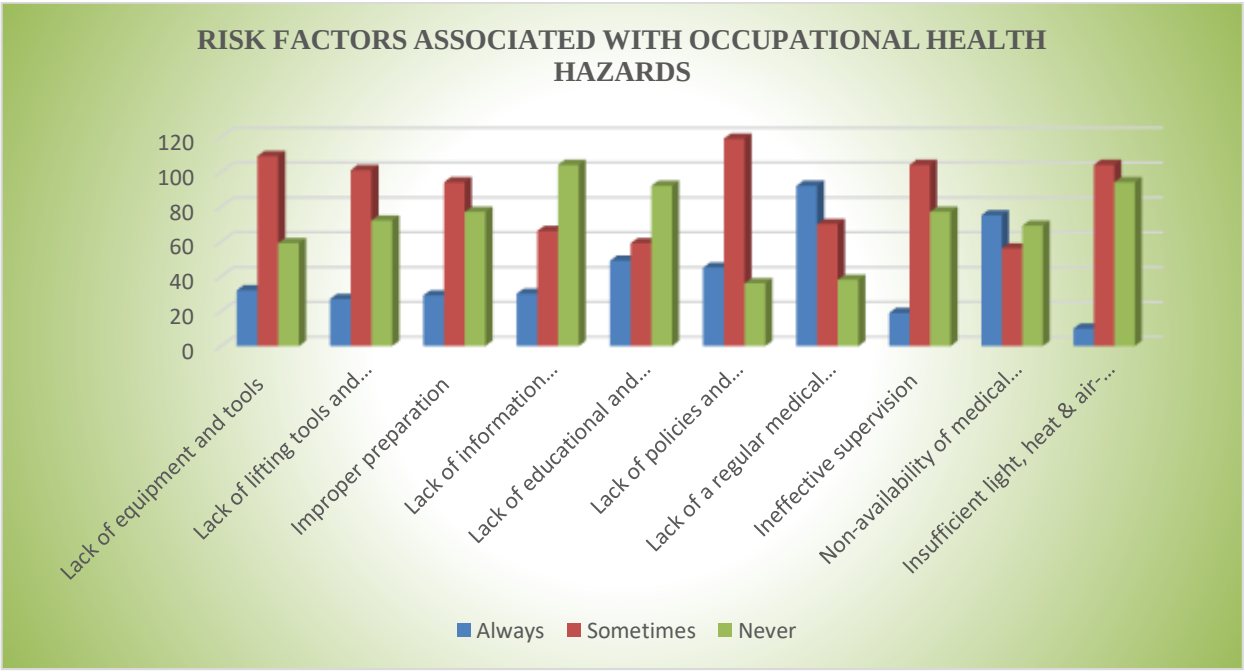

Figure 1

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
$\bar{X} \pm$ 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).

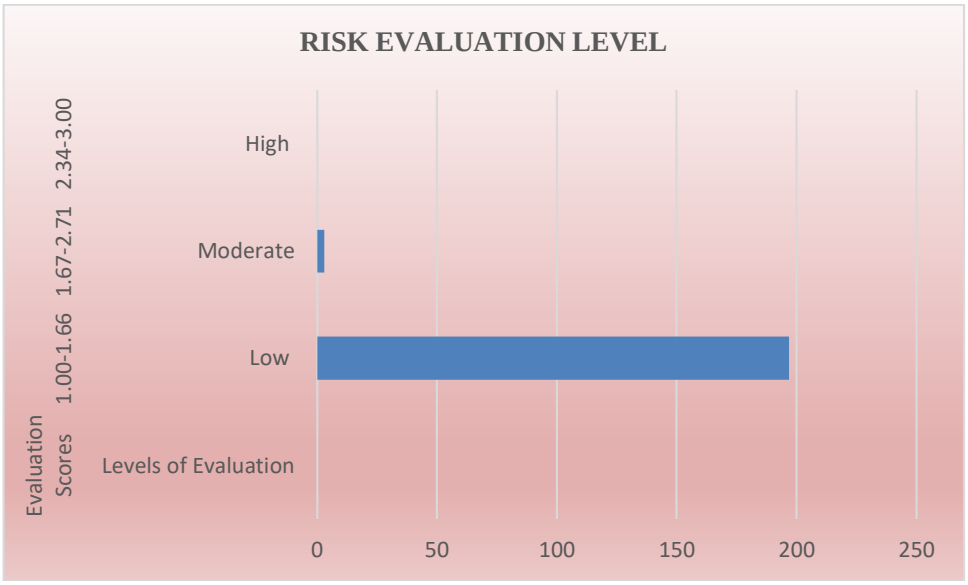

Figure 2

Figure 3

Conclusion

The main purpose is to assess the risk factors of occupational health hazard among the adults. The analysis has been done using SPSS IBM 22.0 version. It has been found 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. Adults are the largest group of healthcare workers in medical profession and experience a higher rate of workplace hazards exposure than other health care workers because adults assist and perform more bedside procedures. Healthcare organizations are characterized by multidimensional and complex environments that make adults prone to occupational hazards and injuries. Beside the nature of adults working environment, duties and responsibilities, adults are facing numerous occupational hazards such as chemical, biological, environmental, physical and psychological risk.

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