



Assessment of Occupational Hazards on Nurses Performance Who Working in the Operative Room at Kirkuk's Hospitals

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ABSTRACT

Design of the study: Quantitative design (convenience study) was conducted for nurses from 3rd of October, 2018, up to the 1st of May, 2019 to evaluation of factors that impact female .nurses job performance at Kirkuks hospitals

Setting of the study: The present study was conducted at Kirkuk General Hospital and Azadi .teaching hospital and Pediatric hospital

Sample of the Study: A non-probability (purposive) sample of (60) nurses who working in above mentioned hospitals

Tools of Data Collection: all through a wide-spread related literature's review, a questionnaire was articulated to conduct a research using a technique of interview. Generally, twenty two items were incorporated in this questionnaire. Thus, the questionnaire comprised of five portions; socio-demographic data, health hazards, physical hazards, chemical hazards and .biological hazards

Methods of data collection: The data were collected through the utilization of constructed questionnaire, interview technique with the nurses toward the factors that impact their performance in the hospitals. The data collection process was performed from the period of 1st November, 2018 up to the 15th of January, 2019. Consent informed was granted from nurse for participation in the present study was obtained and the interview was carried out individually





Statistical analysis: The analysis of data was carried out with the assistance of descriptive statistical data analysis methodology that consists of mean of score, percentages, grand score .mean and frequencies

Results: The result of the study showed that most of the sample were (20-30) years old., college graduate, (1-5) years of employment, married, working in the Operation room, working only in morning shift, working (21-25) days monthly, have (6) hours' working daily, have barely sufficient monthly income.

Keywords: Occupational Hazards, Nurses Performance, Operative Room.

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تقييم المخاطر المهنية على أداء الممرضات العاملات في غرفة العمليات في

مستشفيات كركوك

علي عدنان مردان 1 ،ياس خضر بايز 2 ,عفان علي احمد 1 دبلوم العالي صيدلة سريرية ,دائرة صحة كركوك , العراق 2 ماجستير تمريض بالغين ,دائرة صحة كركوك , العراق 3 دبلوم عالى الامراض الجلدية ,دائرة صحة كركوك , العراق

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الملخص

تصميم الدراسة: اجريت التصميم الكمي (دراسة ملائمة) للممرضات من 3 أكتوبر 2018 ، وحتى 1 مايو 2019 لتقبيم العوامل التي تؤثر على الأداء الوظيفي للممرضات في مستشفيات كركوك

مكان الدراسة: أجريت هذه الدراسة في مستشفى كركوك العام ومستشفى آزادي التعليمي ومستشفى الأطفال

عينات الدراسة: عينة (احتمالية) غير مرجحة لـ (60) ممرضة تعمل في المستشفيات المذكورة أعلاه.

أداة جمع البيانات: من خلال مراجعة مستفيضة للأدبيات ذات الصلة ، تم تصميم استبيان لغرض الدراسة مع تقنية المقابلة. عدد البنود المدرجة في الاستبيان كانت (22). يتكون الاستبيان من خمسة اجزاء: البيانات الديموغرافية الاجتماعية ، المخاطر الجسدية على أداء الممرضين، المخاطر الكيميائية على أداء الممرضين، و المخاطر الصحية على أداء الممرضين





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طرق جمع البيانات: تم جمع البيانات من خلال استخدام الاستبيان المركب (المبني) ، أسلوب المقابلة مع الممرضات تجاه العوامل التي تؤثر على أدائهم في المستشفيات. تم إجراء عملية جمع البيانات من الفترة من 1 نوفمبر 2018 حتى 15 يناير 2019. تم الحصول على الموافقة المسبقة من الممرضات للمشاركة في هذه الدراسة وتم إجراء المقابلة بشكل فردي. التحليل الإحصائي: تم تحليل البيانات من خلال تطبيق منهج تحليل البيانات الإحصائية الوصفي الذي يشمل التكرارات والنسب المئوية والمتوسط الحسابي والوسط الحسابي الكبير.

النتائج: أظهرت نتائج الدراسة أن معظم العينة كانوا (20-30) سنة ، خريج جامعي ، (1-5) سنوات من العمل ، متزوج ، يعملون في غرفة العمليات ، يعملون فقط في نوبة الصباح. ، العمل (21-25) يومًا شهريًا ، (6) ساعات عمل يوميًا ، بالكاد دخل شهري كافٍ.

الاستتاجات: استتجت الدراسة إلى أن الممرضات لم يتعرضوا لمخاطر الجسدية و المخاطر الكيميائية، في حين كانت نسبة تعرضهم للمخاطر البيولوجية والصحية عالية.

الكلمات الدالة: الأخطار المهنية ، أداء الممرضات ، غرفة العمليات.

1. Introduction

An occupational (work-related) menace is termed as an experience of hazard at workstation. There are several kinds of the occupational hazards containing psychosocial hazards, biohazards (biological), physical and chemical hazards. The occupational sickness is any sort of chronic illness that befalls as a consequence of the job-related actions. This represents as a feature of occupational health and safety. Therefore, an occupational ailment is normally acknowledged when it is revealed to be more widespread in the worker's body as compared to the overall population or in populations of other workers (DiBenedetto, 2015).

The occupational hazards indicates both short term & long term dangers related to the environment of work field. It is an area of study in the occupational health, security & public health as well. Long term risks might advance the development of heart and cancer diseases whereas, short term risks might contain physical harm (Fuortes, L et al., 214).





OSH (Occupational Safety & Health) concerns are a significant measure of management of quality, CSR (corporate social responsibility) and risk management. Thus, in this prospect, the features of OSH must be an assimilated element of entire procedures of managerial developments for instance, development of organizational, human resources and corporate strategy (Garrett, B, et al., 2012).

Operation Theater (OT) is a specified domain in which inexperience or insufficient security measures might be a basis of several threats which can upset both the operating team and patient. Thus, acknowledgement of such probable dangers by continuous caution and awareness can take control of the environment of OT while making it safe (Hellman, S and Gram, M, 2013).

The atmosphere of Operation Theater is at risk of numerous inherent dangers. Accordingly, the team of professionals & patient for surgical procedure might face innumerable exposures which can be categorized as fire hazards, accidental or physical hazards, biological & chemical hazards as well as other hazards i.e. atmospheric, psychological & organizational threats. Insufficient measures of safety consequently can cause several deleterious impacts (Hudson, P and Vogt, R, 2008).

Relentless attentiveness, preservation of a definite operative practice, mindfulness by means of timely intercession and culture of an accomplished team can create an innocuous environment of OT for team and patients as well. Thus, the purpose of this article is to recognize & classify the menaces occurring during the surgery in OT, associated safety precautions taken for the well-being of patients & operating team that have a right to be treated with reverence & dignity (Levy, B, et al., 2010).

Methodology

A quantitatively designed convenience research was steered for nurses from the October 3rd, 2018, up to the 1st of May, 2019 to assessment effect of occupational hazards on nurses' performance at operative room .

Setting of the study the present study was conducted at Kirkuk General Hospital and Azadi and Pediatric hospital teaching hospital .

The sample of the Study

A non-probability (purposive) sample of (60) nurses who

Working at operation room in Kirkuk General Hospital, Azadi teaching hospital and Pediatric hospital. According to following criteria

- -1 Male and female nurses only
- -2All level of education

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-3All surgical units

Tools of Data Collection

The broad review of the related literature indicated that current questionnaire was created in order to carry out the research with the technique of interview. Inclusively, all the 22 items were calculated with two scale ratings, yes (2), No (1) the questionnaire consists of two parts-:

Part I: -Socio-Demographic data

It is made up of ten items which epitomize the socio-demographic distinguishing data of nurses for example level of education, age, duration of experiences, Marital Status, place of work, number of night shift monthly, number of working days in hospital per month, number of working hours per day, shifting time, monthly income.

Part II: Physical Hazards

This part was concerned with the physical hazards that may happened to nurses in side to operation room and composed of (8) items .

Part III: Biological Hazards

This part was concerned with the biological hazards that may happened to nurses in side to operation room and composed of (4) items .

Part IV: Chemical Hazards

This part was concerned with the chemical hazards that may happened to nurses in side to operation room and composed of (5) items .

Part V: Health Hazards

This part was concerned with the Health hazards that may happened to nurses in side to operation room and composed of (6) items.

2. Results and Calculations

Table (1): Age of the samples

NO	Age	F	%
1	Less than 20 years	1	1.66
2	20-29	29	48.33
3	30-39	17	28.33
4	40-49	8	13.33
5	50-59	5	8.33
Total		60	100

Table 1 indicates the age of 48.33% of samples as 20- 29 years old whereas, 1.66% sample showed less than 20 years of age

Ratner and Sawatzky (2009) declared the nurses' average age a universal concern due to the rising shortage of nursing. The exceeding demand of nurses than that of supply all over





the world specifically influences the highly intricate spaces for instance OR (Operating .Room) that require particular expertise to take care of patients

Clark and Clark (2003) stated that frequently the dazzling interpretation of OR nursing causes the young nurses to select OR as their career. Therefore, the way to detour such an imprecise picture is to provide students with an opportunity to visit OR as a preceptor's shadow.

Rogers, et al., (2009) specified the nurses' shortage which is intensified through the workforce of aged nursing as the most of registered nurses (RNs) are of the age of more than 45 years. The RNs' revenue rate in US is estimated to extend to a 20% of per year mean in 2010. Additionally, the rate of nurses' retirement has hastened. Thus, it has been anticipated that there should be struggles made to prevent nurses from retiring.

Table (2): level of education of the samples

	Level of education	F	%
1	Preparatory school graduate	17	13.33
2	Institute graduate	21	35.0
3	College graduate	22	36.66
Total		60	100%

%36.66 of the college graduate's samples as well as preparatory school graduate as (13.33%) are also presented in table 2 .

O'boyle, et al., (2006) the areas of specialty like perioperative surgery aren't presently incorporated in the undergraduate studies, disparate to the programs of diploma which fully train the nurses in all specialties in a clinical setting as assessment indicates about 20% of the recently hired in the specialty area of perioperative would retire in subsequent five years. The study supported by Rogers, (2004) who mentioned that most of the contestants such as 71.9% had a degree of bachelors, 7% held a masters' degree, 8.1% comprised of a degree of graduate diploma while 13% had a degree of 3 years diploma. This outcome is unreliable to the literatures that concentrated on the significance of the nurses' educational level as it determined their duties to carry out several roles.

Table (3): Years of employment of the nurses





	Years of employment	F	%
1	Less than one years	4	6.66
2	1-5	27	45.0
3	6-10	15	25.0
4	11-15	7	11.66
5	16-20	7	11.66
6	More than 21	0	0.0
Tota	1	60	100%

In Table 3, 45% of samples signifies the (1-5) years of employment, while (6.66%) of them .have less than one years of employment in the operation room

Jackson, and Linda (2016) mentioned those means with which an individual registered due to the regularity of nurse as well as the country's registering authority. The training of professional nurses is carried out at the level of higher education along with a 3 to 4 years of period of training or more. Thus, professional nurses are acknowledged as registered nurses functioning in educational organizations, nursing & clinical services

Kanfer, et al., 2011, stated that there are a few studies which have addressed health workers motivation in Iran. Their studies aimed to find out the ranking importance of motivational factors based on demographic characteristics correlation between motivational factors, identifying the factors affecting motivation in the employees of social security hospitals in Mazandaran in northern Iran.

Table (4): Sample's marital status

	Marital status	F	%
1	Single	19	31.66
2	Married	38	63.33
3	Separated	2	3.33
4	Divorced	1	1.66
Total		60	100%





Table (4) shows that (63.33%) of the sample were married, while (1.66%) percentage of the samples were divorced

The study agree with Sullivan & Decker (2009) who confirm that an additional persuasive biographic variable which might compromise the job satisfaction is the employees' marital status. Though, there is an absence of abundant studies to draw conclusions regarding the impact of nurses' marital status on the job satisfaction. However, inadequate research steered in this expanse constantly designates the married employees are more content with their jobs in comparison to their unmarried associates. Which might be because of the reason that marriage inflicts enlarged responsibilities which can turn a stable job more essential and valuable as to have a steady job, one must have a job satisfaction.

Table (5): Place of work of the samples

	Place of work	F	0/0
1	Surgery operation	38	63.33
2	Premature operation	2	3.33
3	Eye operation	1	1.66
4	Gynaecological operation	8	13.33
5	Crash operation	3	5
6	Urinary tract operation	6	10
7	ENT Operation	2	3.33
Total		60	100%

The Table 5 expresses the 63.33% of sample working in the surgery operation room, while .(3.33%) of them were working in the ENT operation room

The "OR" or perioperative nurse is a distinct person who prep the patient for surgery, works for the interdisciplinary care team and family of the patients. The OR nurse supports to assess the patient, after that plan & implement several footsteps to, all through & after the surgery. Thus, nurses who relish the direct care of patients as well as the upright covenant of .(adjustment can appreciate the time being spent at OR (Aiken, et al., 2012)

The positions for perioperative nurse need an acclaimed license of RN from applicant. This can be accomplished upon the completion of a minimum of Associate's Degree in Nursing





(ADN) two years program. There is no need for a BSN for all of nurse positions at operating room, though, it is desired by the managers. Approximately, some proprietors might hire after that the candidate decides to complete his/her degree of bachelors in a given timeframe. Thus, the vacancies of the perioperative nursing are normally open to the novel RNs graduates upon a successful completion of an internship program and to the qualified nurses having least 1 year bedside experience as well (McGibbon et al., 2010)

Table (6): Work shift of the nurses

	Work shift	F	%
1	Morning shift only	52	86.66
2	Evening shift only	6	10
3	Night shift only	2	3.33
Total		60	100%

Table 6 specifies that (88.667%) of the sample have working only in morning shift, while .((3.33%) of the sample taken (night shift

Crofts, (2009) observed that being diurnal humans perform functions during day time while have a difficulty working with a night shift. Thus, night workers reported numerous health related issues and added grafts indicated that these negative impacts will have concerns not only the person but for the work station as well. Because diminished attentiveness and lessened performance in job can threaten the lives of humans and impact the care quality at unit of intensive care

Page (2004) indicated that night shift can disturb the performance of nurses and satisfaction of patients for instance, night shift nurses or shift rotators make more mistakes as compared to the other shift nurses which is because of the exhaustion. Further, the risks of making errors can upsurge 2 to 3 times when nurses work successively for 12.5 hours or more.

Table (7): Number of night shift of the samples per month

	Number of Night shift	F	%
1	Have not taken night shift	34	56.66
2	1-2	8	13.33
3	3-4	4	6.66
4	5 – 6	1	1.66





5	7 – 8	13	21.66
Total		60	100%

of the sample have not taken night shift, while 1.66% of the sample taken (3-4) night %56.66 .shift per month as indicated in table 7

Ohida, et.al. (2001) inspected the effect of night, afternoon, day & rotating shifts on the stress & performance of nurses. The conclusions designated that satisfaction and performance of job was found to be smaller for rotating roaster as compared to the fixed roster. Though, nursing studies have been changing but still there is an overall lack of research which tries to link the insights of night time responsibilities to the satisfaction of work & then to the turnover of staff eventually.

Table (8): Number of working days per month.

	Number of working days	F	%
1	10 – 20	23	38.33
2	21 – 25	29	48.33
3	26 - 31	8	13.33
Total		60	100%

In table 8, it has been specified that (48.33%) of the sample working (21-25) days monthly, while (13.33%) of the sample working (26-31) days monthly

Hong Lu, et al, (2004) mentioned that the nursing performance level might be impacted through following yet without limiting to; support of manager, training and education development, resources' availability, work of night shift and work load of organizational factors finally disturb the organizational mission, vision, satisfaction of patients and situations of health care in Palestine. Almost, some factors are recognized & designated for evaluating their outcomes on the actions of nurses. Thus, such factors were chosen centered on the former researches. Further, their literature reviews were observed to be more concentrated on these factors, additionally, to the Palestine's political conditions which play a great role in such factors like dependence on the international support and health insurance demand as well.

Table (9): Number of working hours per day of the samples





	Work hours	F	%
1	4 hr	2	3.33
2	5 hr	1	1.66
3	6 hr	27	45
4	7 hr	15	25
5	8 hr	14	23.33
6	12 hr	1	1.66
Total		60	100%

of the sample have (6) hours' working daily, while (2.2%) of the sample have (18) (%45.0) .hours' working daily as designated in table 9

Institute of Medicine, (2004) stated that investigators continuously determine a relation amongst nurse fatigue, working hours & errors along with doubling of the rate of errors at the ten working hours while tripling at sixteen hours (Rogers, et.al 2004). Sometimes, fatigue is categorized by reduced capacity of work completion and individual's complaint about feeling exhausted. Insufficient break, loss of sleep and schedules of working shift sometimes add to the weariness.

Table (10): Monthly income of the samples.

	Monthly income	F	%
1	Sufficient	7	11.66
2	Barely sufficient	30	50
3	Non sufficient	23	38.33
Total		60	100%

Table (10) shows that half (50.0%) of the sample have barely sufficient monthly income, while (11.66%) of the sample have sufficient monthly income

Ofili, et al., (2004) indicated that rendering to the Bureau of Labor Statistics, the roles of the perioperative nursing are anticipated to escalate up to the 19% following decade in even though due to the emphasized preventive care. Although, the rates of employment growth diverge all over the country. When located near to the teaching facilities and busy hospitals, it means greater rates for the opportunities of perioperative field as well as room availability for progression for the contrasting the regions which are less urban





Gropelli & Corle (2011) declared the operating room nurse's median salary as \$66,713 having a range of \$49,419 to \$ 93, 569. Moreover, salary is affected by the certificates, experience, .location and education

Luksami, et al., (2001) stated that your location such as the regions which are most heavily occupied inclined to produce more income, type of industry you're like profit, non-profit or government, experience level such as experienced nurses earn more money are all the factors that affect one's salary. Moreover, the registered nurses might face substantial competition when considering for jobs in outpatient care centers or in offices of physicians. This is due to the fact that all these places normally offer more relaxed environment or workstation, week day hours or regular working hours.

Table 11: Physical Hazards

	Items	Yes	Yes		No		S
		F	%	F	%	Ms.	S
1	Cuts	16	26.6	44	73.3	1.26	MS
2	Pricks	18	30	42	70	1.30	MS
3	Electrical shocks	14	23.3	46	76.6	1.23	MS
4	Burns	26	43.3	34	56.6	1.43	MS
5	Scalpel	16	26.6	44	73.3	1.26	MS
6	Laser	6	10	54	90	1.10	MS
7	Head injuries	10	16.6	50	83.3	1.16	MS
8	Slips and falls	25	41.6	35	58.3	1.41	MS
	Grand mean of scores		1	•	,	1.26	MS

Table (11) shows that samples has moderate mean of score in all items. Furthermore, the study exposed that the score's grand mean was moderately substantial. Such occupational dangers accompanied with several other difficulties for instance, sleep deprivation & night shifts have turned this occupation into a hazardous one which might elucidate the higher rates .(of preventing the nursing work (Wong, et al., ,2010

Commonly, nurses face multiple physical threats while performing their responsibilities. Thus, the protection of nurses their selves and successively of their patients relies straightly on the grade at which they have awareness of the workplace risks precise to their jobs and .(administrative mechanisms to cope up with those dangers (Memish, et al., 2013)





The proportion of the occupational damage & ailment in healthcare settings for nurses was observed to be of 8.6%/100 full time employees in which 18.2% were accountable for wounds. Thus, this rate was greater as compared to the lethal professions for example mining having a rate of total 7.5% per 100 full time labors and heavy construction sites in which risk rate for occupational injury observed is 13.8%/100 full time workforces (Nolan, C., & Rosenberg, 2014).

Table 12: Biological Hazards.

	Items	Yes		No		Ms.	S
		F	%	F	%		
1	Blood	44	73.3	16	26.6	1.73	HS
2	Sputum	25	41.6	35	58.3	1.41	MS
3	Vomits	18	30	42	70	1.30	MS
4	Other body fluids	36	60	24	40	1.60	HS
	Grand mean of scores			I	1	1.51	HS

d in t Table (11) shows that samples has high mean of score in items blood and item other .body fluids, Moreover, the study revealed a significantly higher score's grand mean

Peterson, et al., (2015) identified the presence of the infections' possibility not only in hospitals rather in other settings of nurse's employment like outpatient facilities (dialysis centers), nursing homes, workplace health centers, prisons, community health clinics and institutions for retarded. Moreover, the higher risk zones in hospitals comprise of infectious disease ward, ambulatory care facilities, emergency rooms and pediatric areas McVicar, A., (2003) declared that transmissible & infectious sicknesses as well as the contact to the blood borne pathogens (HBV, HIV and HCV) because of the needle stick wounds are also menace for the nurses' health. An estimation shows that about 60,000-80,000 of the needle stick injuries happen every year in healthcare settings altogether. Thus, the suturing .(17%), drawing blood (16%), and injections (21%) are the major exposure reasons Health care personnel are most probable to go through occupational injuries in comparison to the other professions. The nurses in emergency ward recurrently come across work linked dangers in their day to day routines. Possible aspects for the nonviolent work station wounds





in nurses consists of aging of nursing workforce, heavy work load and other environmental factors of the place of work like nonstandard schedules of work and obesity. Thus, all this factors affect the decision making powers of the nurses concerning either to return or not to their occupation or to stay at their desired practice field. Therefore, these intensify the deficiencies of workforce while obstructing the efforts of retention and recruitment (Kilpatrick A, et al., 2003).

Table 13: Chemical Hazards.

	Items		Yes		No		S
			%	F	%	Ms.	
1	Anesthetic gases	31	51.6	29	48.3	1.51	HS
2	Disinfectants	32	53.3	28	46.6	1.53	HS
3	Drugs that are used during chemotherapy	13	21.6	47	78.3	1.21	MS
4	There are elements	12	20	48	80	1.2	MS
5	Other cleaning and sanitizing agents	42	70	18	30	1.7	HS
	Grand mean of scores			1		1.43	MS

Table (11) shows that samples has high mean of score in items Anesthetic agents, disinfectant, and other cleaning and sanitation agents. Moreover, the study revealed moderate grand mean of score

Other precarious sources for nurses are the chemical materials. Thus, sterility products & disinfectants including ethylene oxide & glutaraldehyde, several dangerous drugs utilized in chemotherapy as well as latex exposure are the workplace risks for the nurses (12). Thus, the five nurses who specifically work in emergency department continually experience greater job violence rates. Rendering to a research through ENA (emergency nurses association) in 2011, about 53.4% nurses reported the cases of facing verbal abuse while 12.9% which are greater (than 1 in ten nurses suffered from the physical ferocity (Schaufeli W& Greenglass, 2001 In the clinical settings, various antineoplastic agents might be organized & directed. Thus, a great amount og research have acknowledged the dangers of the cytotoxic medications to the .(working nurses who deal those medicines (Karasek and Theorell, T, 2009 Moreover, the ethylene oxide is normally utilized in hospitals for the sterilization of heat sensitive substances and medical equipment. This might come across the central supply,





patient care regions and surgical services. This is renowned that such agent owns teratogenic, mutagenic and carcinogenic properties. Thus, it is also related to the effects of chemical .(burns, central nervous system and respiratory tract irritation (Barker & Nussbaum, 2011 Nurses are potentially exposed to the formaldehyde while working in the units of renal dialysis as well as for the period of tissue transfer to formalin for preparing or as a remainder when it is utilized to disinfect the ORs. Thus formaldehyde is correlated to the occupational asthma, eye irritation, allergic dermatitis and irritant because it is thought to be a potential .(human carcinogen (Lee, W, et al., 2011)

Purpora, C., et al., (2012) stated that nurses who perform cold sterilization. Exposures are associated to the exercising the soaking of apparatuses in exposed containers devoid of the local exhaust ventilation advantage throughout the instrument's manual cleaning. Hence, being irritant to the mucous membrane and skin, this may be a source of the skin sensitivity Schoenfisch, et al., (2013) declared that healthcare surroundings involve the usage of several instruments having elemental mercury. The utmost chance of the exposure happens due to the thermometer's glass part breakage of sphygmomanometer while leaking the mercury on countertops or floor. Moreover, the higher levels of exposures can lead to the acute poisoning or even to death. Whereas, the short term higher exposures can be a reason of the damage of central nervous system and pulmonary impairment. Employees can carry mercury to their home with their clothes or shoes while exposing other family members.

Table 13: Health Hazards.

	Items	Yes	Yes		No		S
		F	%	F	%	Ms.	S
1	Musculoskeletal pain	44	73.3	16	26.6	1.73	HS
2	Fatigue	44	73.3	16	26.6	1.73	HS
3	Spinal misalignment	33	55	27	45	1.55	HS
4	Disc degeneration	18	30	42	70	1.3	MS
5	Stress	38	63.3	22	36.6	1.63	HS
6	Communicable diseases	29	48.3	31	51.6	1.48	MS
	Grand mean of scores					1.57	HS





f WBP interac Table (11) shows that all the samples has high mean of score excepts the item (Disc degeneration and communicable disease). Furthermore, the study revealed a high mean of score as a grand mean of score

Nurses are threatened by a latent disclosure of radiations, infectious diseases, back injuries and toxic substances. Thus, they are also prone to the damages like workplace violence, shift work and stress. Thus, these usually come under the classification of psychological, physical, .(biological and chemical threats (Holman, et al., 2010

Smith, et al., (2004) listed that nurses might caught infectious sicknesses like rubella, mumps, influenza and measles. Thus, the determination of immune status must be practical for workers who have the responsibilities of patient care and suitable immunizations ought to be presented.

The injury of back occupies a 2nd rank amongst the entire reasons of occupational injuries for all kinds of professions. Reports indicated that about annually 40,000 of the nurses get back associated injuries. The most common bases of the back pain comprised of the activities like transferring patient from bed, helping them out of bed, lifting patient on bed & carrying .(30 pounds or greater weight instruments (Josephson, et al., 2007

The nursing work forces of the hospitals interpret back injuries more than half of the total recompense payments for back damage. Further, an estimation specified about larger than 764,000 absent work days are sustained every year. The actions achieved by nurse recruits at the protracted care services put them at huge risks of back problems. Repeated lifts & supports to weak, elderly & incapacitated patients escalates the chances of back issues for the care takers. Most recurrently influenced by such kind of injury are the licensed practical .(nurses and registered nurses (Mehrdad, et al., 2010

The research study related to the reimbursement data of the employees designated the ranks of nurse supporters as 5th while LPN to 9th between all professions in workstation back problems in filing. The lower back injury occurrence were observed to be higher as compared to those of nurse. The researches have highlighted that freshly qualified trainees & nurses are at higher back injury risk as compared to the experienced ones. Further, possible risk aspects of the back injury involve shift (highest risks for evening shifts), nurses' weight (raised pressures of intra-vertebral discs, lumbar lordosis' development is affected by additional





weight & poor tone of muscle) and gender as female have greater incidence rates (Fujishiro, .(2005

Conferring to the national survey in US related to the occupational hazards, the occurrence rate of the ailment & occupational injury for healthcare and medical industry was observed to be higher as 6.6% while being ranked as 4th of the fifty sixth of the service industries. Further, when related to the workers of other industries, the healthcare staff testified more occurrences of the eye diseases, toxic hepatitis, infectious disease, flu, psychological .(disorders, dermatitis, back strain and infectious hepatitis (Malone, R, 2015

The nurses working with incurably & recurrently sick patients as well as nurses who work in emergency rooms, operating rooms, burnt units and intensive care units are at a precise risk of anxiety connected indications. The primary symptoms of the stress comprise of ulcers, sleep deprivation, emotional instability, irritability, appetite loss and migraine headaches (Pinkerton, et al., 2004).

3. Conclusion

- . (48.33 %) of the samples age were (20-30) years old of them were college graduate (%33.6) of them have (1-5) years of employment (%45.0) of the sample were married (%63.33) of them sample working in the Operation room (%63.33) of the sample have working only in morning shift (%88.6) of the sample Have not taken night shift (%55.66) of the sample working (21-25) days monthly (%48.33) of the sample have (6) hours' working daily (%45.0) of the sample have barely sufficient monthly income (%50) -
- The study concluded that the nurse have low risk factors at physical and chemical hazards, while their risk is high regarding biological and health hazards.

References

[1].DiBenedetto, D., Occupational Hazards of the Health Care Industry: Protecting Health Care Workers. AAOHN Journal, 2015, 43:3, pp131–137.





- [2]. Fuortes, L.J., Shi, Y., Zhang, M., et al., Epidemiology of back injury in university hospital nurses from review of workers' compensation records and a case-control survey. Journal of Occupational Medicine, 2014, 36:9, pp1022–1031.
- [3]. Garrett, B., Singiser, D., Banks, S., Back injuries among nursing personnel: the relationship of personal characteristics, risk factors, and nursing practices. AAOHN Journal, 2012, 40:11, pp510–516.
- [4]. Hellman, S.L., Gram, M.C., The resurgence of tuberculosis: risk in health care settings. AAOHN Journal, 2013, 4:12, pp66–72.
- [5]. Hudson, P., Vogt, R., et al. Elemental mercury exposure among children of thermometer plant workers. Pediatrics, 2008, 79:6, pp 935–938.
- [6]. Levy, B.S., editor; , Wegman, D.H., editor. , eds., *Occupational Health: Recognizing and Preventing Work-Related Disease*. Third Edition, 2010, Little, Brown and Company, pp355–379.
- [7]. Ratner, P.A. and Sawatzky, R. (2009): Health status, preventive behavior and risk factors among Canadian nurses. Statistics Canada Health Reports 20:3.
- [8]. Clark, P. F., & Clark, D. A. (2003). Challenges facing nurses' associations and unions: A global perspective. International Labour Review, 142(1), 29-47.
- [9]. Rogers, R., Cowell, R., & Salvage, J. (2009). Nurses at risk: A guide to Health and Safety at Work. Macmillan
- [10]. O'boyle, C., Robertson, C., & Secor-Turner, M. (2006). Public health emergencies: nurses' recommendations for effective actions. Aaohn Journal, 54(8), 347-353.
- [11]. Rogers, A.E., Hwang, W.T., Scott, L.D, Aiken, L.H., and Dinges, D.F. (2004) the working hours of hospital staff nurses and patient safety. Health Affairs, 23, 202-212.
- [12]. Kanfer R, Ackermann P. Individual differences in work motivation: further exploration of a trait framework. Appl Psychol. 2010;49:470–82
- [13]. Sullivan, E.J & Decker, P. J. (2009). Effective Leadership and Management in Nursing. 7th ed. New Jersey: Pearson Prentice Hall.
- [14]. Aiken L, P Sean, P Clarke, M Douglas, M Sloane, J Sochalski et al. 2002. Hospital nurses staffing and patient mortality, nurse burnout, and job dissatis-faction. Journal of American Medical Association 288: 1987–99.
- [15]. McGibbon, E., Peter, E., & Gallop, R. (2010). An institutional ethnography of nurses' stress. Qualitative Health Research, 20(10), 1353-1378.
- [16]. Crofts L ,(2009). Challenging Shift work: A review of common restoring practices.
- [17]. Page, A. (Ed). (2004). Keeping patients safe: transforming the work environment of Nurses. Washington, DC: National Academies Press.



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- [18]. Ohida, T. kammal, A. Ishii, T., uchimyama, M., Minowa, M, Nozaki, S. (2001) Night Shift work Problem in young Female Nurses in Japan. Journal of occupational Health 43, 150-156.
- [19]. Institute of Medicine. (2004). Keeping patients safe: Transforming the work environment for nurses. Washington, DC: The National Academic Press.
- [20]. Ofili, A. N., Asuzu, M. C., & Okojie, O. H. (2004). Incidence of blood-related work accidents among health workers in a government hospital in Benin City, Nigeria.
- [21]. Gropelli, T., & Corle, K. (2011). Assessment of nurses' and therapists' occupational musculoskeletal injuries. Medical Surgical Nursing, 20(6), 297
- [22]. Luksamijarulkul, P., Watagulsin, P., & Sujirarat, D. (2001). Hepatitis B virus seroprevalence and risk assessment among personnel of a governmental hospital in bangkok. Southeast Asian Journal of Tropical Medicine & Public Health, 32(3), 459-465
- [23]. Wong, E. L., Wong, S. Y., Kung, K., Cheung, A. W., Gao, T. T., & Griffiths, S. (2010). Will the community nurse continue to function during H1N1 influenza pandemic: a cross-sectional study of Hong Kong community nurses? BMC Health Services Research, 10(1), 107.
- [24]. Memish, Z. A., Zumla, A. I., & Assiri, A. (2013). Middle East respiratory syndrome coronavirus infections in health care workers. New England Journal of Medicine, 369(9), 884-886.
- [25]. Nolan, C., & Rosenberg, E. (2014, October 13). —Breach in protocol blamed for Dallas health care worker who contracted Ebola. New York Daily News. Retrieved from http://www.nydailynews.com/life-style/health/ebola-caseconfirmed-dalla-health-care-worker-tests-positive-article-1.1971542.
- [26]. Peterson, K., Novak, D., Stradtman, L., Wilson, D., & Couzens, L. (2015). Hospital respiratory protection practices in 6 US states: A public health evaluation study. American Journal of Infection Control, 43(1), 63-71.
- [27]. McVicar, A. (2003). Workplace stress in nursing: a literature review. Journal of Advanced Nursing, 44(6), 633-642.
- [28]. Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S., & Best, C. L.(2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity. Journal of Consulting and Clinical Psy-chology, 71(4), 692-700
- [29]. Schaufeli, W. B., & Greenglass, E. R. (2001). Introduction to special issue on burnout and health. Psychology & Health, 16(5), 501-510.
- [30]. Karasek, R. A., & Theorell, T. (2009). Health work. Basic Book, New York
- [31]. Barker, L. M., & Nussbaum, M. A. (2011). Fatigue, performance and the work environment: a survey of registered nurses. Journal of Advanced Nurs-ing, 67(6), 1370-1382.
 - [32]. Lee, W. L., Tsai, S. H., Tsai, C. W., & Lee, C. Y. (2011). A study on work