Safety Measures and First Aid Practices among Oil and Soap Workers

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Abstract

Back ground: Occupational health deals with all aspects of health and safety in the workplace. Safety measures are used to protect the face, eyes, ears, head, the respiratory system, the legs and other parts of the body. **Aim of study:** Was to evaluate the effect of safety measures and first aid practices among the oil and soap workers. **Design**: A quasi-experimental design was used in carrying out this study. **Setting**: The study was conducted at the Oil and Soap Company at Kafr El Zayat District in Al- Gharbia Governorate. **Sample**: 250 workers were chosen randomly. **Tools of data collection**: Two tools were used: I) An Structured questionnaire comprised three parts. 1) Socio demographic characteristics of oil and soap workers. 2) Medical history of workers. 3). Knowledge about occupational health hazards pre and post program and II) An observational checklist comprised three parts. 1) Using of personal protective equipment. 2) First aid procedures pre and post program. 3) The environmental condition pre and post program. **Results**: There were significant relations between the studied workers' total knowledge score and their age 25<years, education, (p= < 0.05) pre program. While there were no significant relations between the studied workers' total practice score and sex, and residence, sex, social status, monthly income, daily working, and years of experience post program. **Conclusion**: The program succeeded to improve workers knowledge and their practices. **Recommendation**: Develop intervention programs for workers at oil and soap companies and provide Health education program to enhance first aid and safety measures among the workers companies.

Key words: Occupation health hazards, Safety measure, Workers.

Introduction

Occupational health deals with all aspects of health and safety in the workplace and strongly focused on primary prevention of hazards, it has a multidisciplinary sector to allow the health care persons to accept their occupation and reduce the occurrence of the harm, while health hazards is a source, situation, or act with a probability of causing a harm, injury, or ill of the human health, or a mixture of hazards , furthermore the hazard can be anything present in the workplace that can cause an injury at the work place (World Health Organization (**Mathias et al., 2020).**

Occupational safety and health involve the social, mental and physical well-being of workers, meaning "the whole individual". Effective occupational safety and health practices require the contribution and association of both workers and staffs in health and safety programs and considering the objects related to occupational medicine, industrial health, education, toxicology, psychology, ergonomics and engineering safety (**Occupational Health and Safety Regulations (ILO), 2017**).

Safety measures are used to protect the face, eyes, ears, head, the respiratory system, the legs and other parts of the body. In fact,

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industrial accident statistics reveal that failure to use proper personal protective equipment lead to possible accidents and every employee must use Personal Protective Equipment's (PPE) as a safety measures (**Pramod, 2015).**

First aid is the emergency care given immediately to an injured person and purposes to minimize the injury and future disability and in serious cases, the first aid may be necessary to keep the victim alive the program of first aid to the workers increase the knowledge about what's the type of risk, what's in their first aid kits, how to use the contents, and the various ways to react in an emergency (**Canadian Center for Occupational Health and Safety (CCOHS), 2019**).

Personal protective equipment is equipment that is worn to reduce exposure to hazards that cause serious injury and illness in the workplace. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical or other hazards in the workplace. PPE may include items such as gloves, goggles and protective shoes, earplugs or head coverings, hard hats, respirators, or coats, jackets, and full body suits. They must be designed and built safely, and they must be maintained in a clean and reliable manner. Employers are also required to train each worker who is required to use personal protective equipment to know: When it is necessary, what kind is necessary, how to properly wear, adjust, put on and take them off, equipment Limits, proper care, maintenance, useful life, and disposal of equipment (**OSHA, 2018).**

Community Health Nurse can help to prevent and control hazards that facing the workers in oil and soap industry by educating the catering personnel who are responsible, moreover provides employers, managers, supervisors, and workers with information and expertise needed to their work safely and avoid creating hazards which place the workers or others at risk and help to increase consciousness and understanding of workplace hazards and how to identify, report, and control hazards , also community health nurse have specialized education to deal with occupational hazards (**Daniel et al., 2015**).

Significance of the study:

Occupational health hazards in factories occurs in Egypt as a large proportion it estimated about 64.9% of injured workers as job strain (**Abou El-Wafa, 2017**). About 83.5 % of all injuries was industrial injuries and 13,3 % , occur at the workplace, from the total number of workplace injuries reported in 2015 and nearly 88.4 % of these occurred among male workers (**Central Agency for Public Mobilization and Statistics (CAPMAS), (2016).** So the study will be conduct at oils and soap company.

Aim of the study:

This study aimed to evaluate the effect of safety measures and first aid practices among the oil and soap workers.

Research Hypothesis:

1. Knowledge and Practices among the workers would be improved after the implementing safety measure
2. Knowledge and Practices among the workers would be improved after the implementing first aid program.

Subjects and method:

Research design:

Quasi experimental design was used in carrying out this study.

Setting:

This study was conducted at Oil and Soap Company at Kafr El Zayat District in Al- Gharbia Governorate

Sampling:

Simple random sample was selected as 250 workers from 500 workers.

Tools for Data Collection: Two tools were used for data collection.

Tool I: A structured interviewing questionnaire included three parts: It was developed by the researcher based on literature review of the current and past available national and international references related literature about occupational hazards, safety measures and first aid workers in oil and soap company by using a journal, textbooks and internet search, approved by supervisors and it was written in simple clear Arabic language: It composed of the following four parts:

The first part: It was designed to assess socio-demographic characteristics of workers involved in the study and included 8 items.

The second part: It was designed to assess medical history of workers at oil and soap company: Past medical history which included 3 items.

The third part: It was concerned with workers' knowledge related to three main areas:

A- Knowledge of workers regarding occupational health hazards which included 20 items divided as the following:-

-Chemical hazards which consisted of 4 items related to workers' knowledge about chemical hazards,

-Physical hazards which consisted of 4 items related to workers' knowledge about physical hazards, mechanical hazards which consisted of 4 items related to workers' knowledge about physical hazards.

-Biological hazards which consisted of 4 items related to workers' knowledge about biological hazards.

-Psychological hazards which consisted of 4 items related to workers' knowledge about psychological hazards.

B-Knowledge of workers about safety measures which included 8 questions about safety of occupational health.

C- Knowledge of workers about first aid which consisted of 13 questions.

Scoring system:

The scoring system for worker's knowledge was calculated as follows (2) score for complete correct answer, while (1) score for incomplete correct answer, and (0) for don't know answer. For each section of knowledge, the score of the items was summed up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into a percent score. The total knowledge score was considered good if the score of the total knowledge ≥ 75 % equal and more (25) point, while considered average if it equals 50-<75% (17-25) point, and considered poor if it is < 50% less (17) point.

Tool (II): Observational checklist was adopted by the researcher from **Garf, (2013)** based on the review of related literature and composed of three parts:

The first part: It was designed for the workers to report practices related the using of personal protective equipment's which included 8 items.

The second part: It was designed for the workers to report practices related cardio pulmonary resuscitation and included (8) items, first aid of shock which included (7) items, first aid for burn which included (9) items, first aid for fraction which included (7) items, first aid for bleeding which included (8) items, first aid for Head injury which included (4) items.

The third part: Observational checklist was designed to: 1- Observe wearing safety measure.

2- Observe practices for first aid. 3- Observe the safety environmental condition of the oil

and soap to assess the environmental safety and sanitation condition of the studied.

Scoring system:

The scoring system for workers' practices was calculated as follows (1) score for done and (0) for not done practicing. The score of the items was summed- up and the total divided by the number of the items, giving a mean score. These scores were converted into a percent score. The total practices score was considered satisfactory if the score of the total practices ≥60% (≥26point), while considered unsatisfactory if it is < 60% (< 26point).

Reliability and content validity of the tools:

Tools validity test was done through five expertises of faculty members of the Community health Nursing Department- Faculty of Nursing Benha University who reviewed the tools for clarity, relevance, comprehensiveness, and applicability and give their opinion. Reliability of the tool was measured for testing the internal consistency by using test-retest reliability for a group of 10 participants who were asked to fill the questions and were asked again to refill the same questions under similar condition on one or more occasion. The answers in the two testing were analyzed and computed for reliability. The reliability was done by Cronbachs Alpha coefficient test which revealed that each of the two tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool. The internal consistency of the knowledge was 0.88, while practices were 0.91

Ethical consideration:

The researcher followed all the ethical issues in conducting the research. The verbal consent agreements of workers were taken after the purpose of the study was explained. Before data collection, subjects were given an opportunity to refuse the participation after explanation of the purpose of the study. Also they were reassured that the information would remain confidential and used for the research purpose only. The study maneuvers will not cause any harmful effects the participants.

Pilot study:

Before starting data collection, a pilot study was conducted using the tools on 25 participants (10% of the study sample). The pilot study was carried out to test the applicability and clarity of the constructed questionnaire and detect any obstacles or problems that might arise during the actual collection of data. Also, to estimate the time needed to fill the sheet with the total sample of the study the necessary modification and clarification was done.

Field work:

The actual field work was carried out for data collection over a period of six months at the beginning of October 2019 to the end of March 2020.the researcher was available three days/week (Saturday, Tuesday, and Thursday from 9 Am- 12 Pm. The total studied workers with inclusion criteria having a simple and full explanation of the aim and process of the study to obtain their verbal informed consent. The time of interviewing each worker ranged between 15-30 mints.

Post-test was done after the educational intervention to evaluate the effectiveness of the educational intervention on safety measures and first aid program among the oil and soap workers company regarding occupational health hazards and improving knowledge of the workers safety measures and first aid program. Workers who were included in the intervention were divided into groups; each group consisted of 20-30 workers. The data collection procedure continued for 6 months. Each group attended 11sessions and the duration of each session was 45-60 minutes.

The researcher implemented the program through 3 phases as the following:

Phase (I): Preparation of the nursing intervention construction:-

Preparation of the study design and data collection tool was based on reviewing current and past available national and international related literatures, and the theoretical knowledge of various aspects of the study using text books, articles, magazines and internet search. This was necessary for the researcher to be acquainted with and oriented about aspects of the research problem as well as assist in the development of data collection tools. Based on results obtained from the interviewing questionnaire, as well as literature review, nursing intervention construction was developed by the researcher. It was implemented immediately after pre-test. Data were collected over 4 months from the start of October 2019 to end of January 2020.

Contents of nursing intervention: The content of nursing intervention was designed to meet oil and soap worker's company needs. The content was: Meaning, causes, types, avoidance of occupational health hazards. Meaning, types and causes of chemical hazards. Meaning, types and causes of physical hazards. Meaning, types and causes of mechanical hazards. Meaning, types and causes of biological hazards. Meaning, types and causes of psychological hazards. Meaning, causes, types, avoidance of occupational health hazards, aims, safety measures, roles and standards of occupational health and safety. Meaning, fundamentals, and types of first aid and practices of workers related safety measures and first aid program regarding occupational health hazards.

Teaching methods: All workers received the same intervention instructions content using the same teaching methods, which were (lecture & discussion).

Teaching aids: Suitable teaching aids were specially selected for nursing intervention construction as follow: booklets & pictures.

Phase (II): Implementation of the nursing intervention construction:

Data were collected over 4 months from the start of October 2019 to the end of March 2020, the study was conducted by the researcher for the studied sample in the three selected settings in Oil and Soap Company at Kafr El-Zayat District in Al-Gharbia Governorate.

The researcher visited the company 36 times from 9:00 am to 2:00 pm at interval. The researcher explained the importance and purpose of the study to the workers and obtained their consent. The number of sessions was 11 sessions. The duration of each session was 45 to 60 minutes, including periods of discussions. The researcher collected data from the workers through filling the sheet. The average number of interviewing the workers was between 20-30 workers per group depending on their presence in the setting.

The nursing intervention construction was implemented for the workers at the suitable time for them. They received the same number of sessions to ensure that they were exposed to the same learning experience. The first session included an orientation to the nursing intervention program, and each session started with a summary about what had been given through the previous session, then the objectives of the new topics using simple language.

Motivation, open discussion and reinforcement were used during the lecture to enhance learning. A copy of nursing intervention program was given as a gift to each worker to use it as a future reference. All participants were cooperative with the researcher. At the end of each session open discussion was done to relieve any

misunderstanding for the workers, and they were informed about the time of the next session.

Phase (III): Evaluation of the nursing intervention construction: Evaluation of nursing intervention construction was done by using the post-test questionnaire which was the same format of pre-test questionnaire to compare the change of worker's knowledge and practices pre and post program after implementation of nursing intervention construction.

Statistical analysis:

Statistical presentation and analysis of the present study data were carried out, using mean and standard deviation, Chi-square, paired t- test, Z- test and linear correlation Coefficient by using the Statistical Package for Social Sciences (SPSS) version 22. Significant levels were considered as follows:

P > 0.05   Not significant

P < 0.05*   Significant

P < 0.001 **   Highly significant

Results:

Table (1): Shows that; 48.8% of the studied workers aged 45 or more years with mean age 47.42±3.24 years, 48.8% of them were males, and 88.4% of them were married. Regarding to their residence; 64.4% of them were lived in rural area regarding to their educational level; 63.2% of studied worker had intermediate education, 63.2% of them have experience more than 10 years while 54.4% of them had work 8 hours per day and 68.8% had intermediate monthly income.

Table (2): Shows that there were highly statistically significant differences between all items of studied workers regarding their knowledge about occupational health hazards pre and post program (P =0.001). 17.2% of the studied workers had

complete correct answer pre implementation of program compared to 79.2% post implementation of program. Regarding total knowledge about safety measures 17.2% of the studied workers had complete correct answer preprogram this percentage increased to 77.6% post implementation of program. Regarding total knowledge about first aid 16.8% of the studied workers had complete correct answer preprogram this percentage increased to 84.0% post implementation of program.

Figure(1): Illustrates that; 16.0% of studied workers have good knowledge score regarding preprogram while 73.6% of studied workers have good knowledge post program.30.8% of studied worker have average knowledge score regarding preprogram while19.6% have average knowledge post program.53.2% of studied worker have poor knowledge score regarding preprogram while 6.8. % have poor knowledge post program.

Figure (2): Illustrates that; 68.8%, 63.2% of the studied patients acquired their information about occupational health hazards, safety measures and first aid from friends at workplace and mass media respectively.

Figure (3): Clarifies that; 28.0% of the studied workers total practices had satisfaction level which increased to 66.0% post program. 72.0% of them un satisfaction, and then this percentage decreased to 34.0% post program.

Table (3): Shows that; there were positive statistically significant relation between the studied workers' total practices and total knowledge pre and post program. P <0.001%.

**Table (1): Frequency distribution of studied workers regarding their socio-demographic characteristics (n=250).**

| Demographic characteristics	No	%
Age		
<25years	45	18.0
25-<35 years	28	11.2
35-<45 years	55	22.0
45 years+	122	48.8
Mean ±SD	47.42±3.24	
Sex		
Male	221	88.4
Female	29	11.6
Social. status		
Single	25	10.0
Married	217	86.8
Widowed	6	2.4
Divorced	2	.8
Residence		
City	89	35.6
Rural	161	64.4
The level of education attained		
Cannot read and write	11	4.4
Basic education	37	14.8
Intermediate education	158	63.2
University education	44	17.6
Years of experience		
less than 5 years	30	12.0
5-10 years	62	24.8
More than 10 years	158	63.2
Daily working hours		
less than 8 hours	69	27.6
8 hours	136	54.4
More than 8 hours	45	18.0
Monthly income		
1000<	57	22.8
2000-3500	172	68.8
4000<	20	8.0

Table (2): Frequency distribution of studied workers regarding their total knowledge items pre and post program (n=250).

Items	Pre program		Post program		X^2	p-value
	no	%	no	%		
Total knowledge about 6 occupational health hazards						
Good	43	17.2	198	79.2		
Average	119	47.6	33	13.2	192.8	0.000**
Poor	88	35.2	19	7.6		
Total knowledge about safety measures						
Good	43	17.2	194	77.6		
Average	119	47.6	41	16.4	182.9	0.000**
Poor	88	35.2	15	6.0		
Total knowledge about first aid						
Good	42	16.8	210	84.0		
Average	112	44.8	30	12.0	229.1	0.000**
Poor	96	38.4	10	4.0		

** Highly statistically significant difference (P < 0.001)   * Statistically significant difference (P < 0 .05)
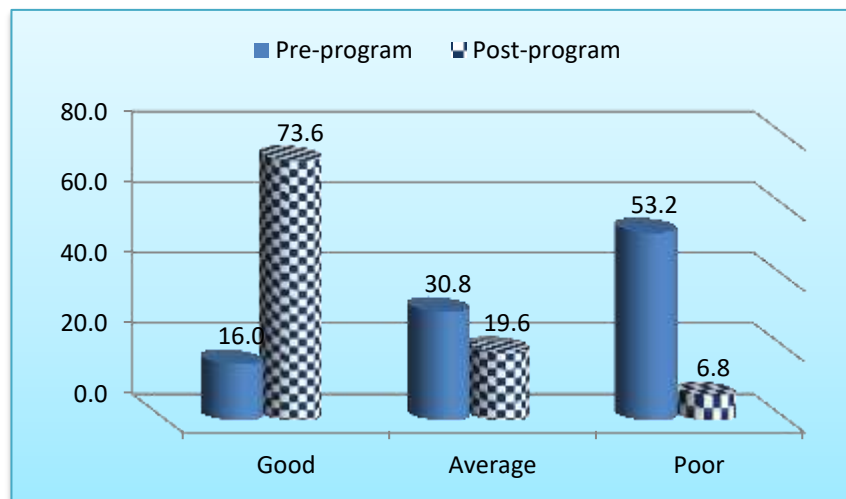
Figure (1): Percentage distribution of studied workers regarding their total knowledge score level pre and post program (n=250).
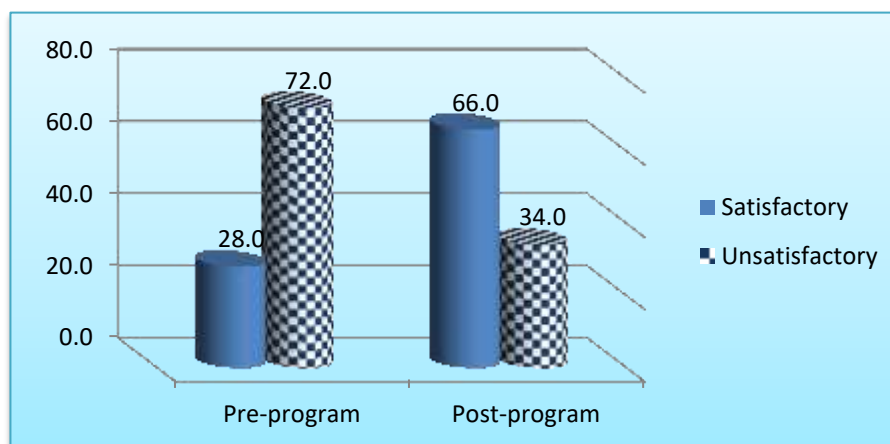
Figure (2): Percentage distribution of the studied workers' regarding total practices level pre and post program (n=250).

Table (3): Correlation between total knowledge score and total practices score pre and post program (n=250).

Total practices	Knowledge			
	Pre		Post	
	r	p-value	r	p-value
	0.49	0.046*	0.74	0.001**

Discussion:

Occupational safety and health hazards in industrial field play a significant role in the lives of workers' life and also contribute toward their quality of life, oil and soap workforce gets exposed to physical, chemical, biological, and psychological hazards while discharging their duties, International (**Aluko et al. 2016**). Injuries, diseases and major industrial disasters have long been force on concern at all levels from the individual workplace to the national and international measures and strategies designed to prevent, control, reduce or eliminate occupational and health hazards. Workers may also need to provide hygiene facilities, decontaminate them from hazardous substances. Occupational Safety and Health (OSH) aimed at procedures and processes that enhance positive workplace, protecting, preserving and promoting the health, safety, and well-being of the workers in their worksites **El-Feky et al. (2020).**

As regard to socio- demographic characteristics the present study revealed that; the mean age of the workers was age 47.42±3.24 years near to half of the sample was more forty-five years, this may expose them to more occupational health and safety risk due to increase the age of the studied group. This finding agree with **Smith& Gisolf (2014)**, Who studied the "Age, Occupational Demands and The Risk Of Serious Work Injury, in the State of Victoria, Australia", and found that ; (50%) older age was associated with a higher risk of work injury claims for both musculoskeletal and non-musculoskeletal conditions.

Regarding to sex, the present study show that more than three quarter of the studied sample was male. This finding was disagreed with **Douglas &Peterside (2016)**, who studied the "Assessment of Workplace Hazards in Mortuaries in Port", and founded that (95%) of their study was male.

Regards the marital status, the result of current study showed that most of (86.8%) studied workers were married (table1). These findings agree with **Vikas et al., (2019)**, who studied "The Safety Analysis in Soap and Detergent Industries, India" and found that; less than three quarters (70%) of their worker were married.

Also regarding the studied worker's education, the present study showed that, more than half of them had intermediate education. This finding agrees with **Jeffree et al., (2016)**, who studied "Assessment of Knowledge and Self-reported Practices of Iron Mines' Workers about Pneumoconiosis in Baharia Oasis", and found that around half of their studied population had secondary technical education. This may be explained by the nature of the work that employers from the students graduated of secondary technical schools.

Regards the working hours, the present study revealed that, more than half of the studied workers worked 8 hrs/ day. This finding in agreed with **Garf (2013)**, who studied "Occupational health hazards among El-Araby electronic industry workers at Benha City", and found that, more than three

quarter of the studied sample worked from 6-8 hrs/day. This could be an attributed cause of fatigue and disability.

Regarding years of experience the present study showed that two thirds (63.2%) had experience more than 10 years. This finding disagree with in same line with studied by **Abdelwahab et al. (2017)**, who studied the "Effect Of Health Education Program On Knowledge And Practice Of Workers Regarding Occupational Health Hazards At Sugar Factory, Qena", and found that more than one third 36.9%were ranged from 20-24years, while only 1.5%was less than 5years.

Regarding monthly income, the present studied workers revealed that more than two third of the studied worker's was sufficient to their living. This finding was in contrast with **Ibrahim et al., (2017)**,who studied workers' Occupational Hazards at Textile Factory in Damietta city", and found that more than two-thirds 66.7% of their study group reported that, each hadn't enough income. This is may be an indicator for low opportunity to gain better health services.

Regarding total studied workers' knowledge items pre and post program the present study revealed that There were highly statistically significant differences between all items of studied workers regarding their knowledge about occupational health hazards pre and post program, and. The present study in the same line with **Shrestha et al. (2020)**. Who studied "Knowledge of Occupational Health Hazards and Practice of Personal Protective Equipment among Fabrication Workers in Kathmandu District, Nepal" and found, at all the respondents was aware of occupational hazards in fabrication work.

The present study revealed that, less than quarter of the studied workers had satisfactory practice while post program implantation had satisfactory practice. The

present result in the same line with **Abd El-Raham (2018)**, who studied "First Aid Training Program for Drivers regarding Road Traffic Injuries, in Benha", and found that, there was improvement in the performance of post implementation program than before.

Regarding the present studied workers' total knowledge score and total practices score pre and post program revealed that; there was a positive statistically significant correlation between the studied workers' total practices and total knowledge pre and post program. This result supported by **Silva et al. (2017),** who studied "Health Education Intervention on First Aid Measures for Lay People in Brazil: Integrative Review", reported that there was an association between knowledge and practice. Also this finding was congruent with **Foaud et al. (2014)**, who studied "Assessment of knowledge and self-reported practices of iron mines' workers about pneumoconiosis in Baharia Oasisand", and reported that, there was highly statistical significant positive relation between the worker's educational level and total self-reported practices scores also reported that there was a statistically significant positive relation between the worker's job and work experience with total self-reported practices scores. It means that the higher the educational level, working hours and years of experience the higher the practice.

Conclusion

The program succeeded to improve workers knowledge and their practices. Safety Measures and First Aid Program had significantly increased the knowledge, improved health practices of oil and soap worker's company regarding occupational health hazards. Less than one fifths of studied workers have good knowledge score regarding occupational health hazards preprogram while less than three quarters of

studied workers have good knowledge at post program. More than one quarter of the studied worker's total practices had satisfaction level which increased to less than three quarters. There were significant relations between the studied workers' total practice score and their daily work education, while there were no significant relations between the studied worker's` total practice score, their monthly income, their residence, sex and social status.

Recommendations:

-Develop intervention programs for workers at oil and soap companies.

-Future research: health education program to enhance first aid and safety measures among the workers companies.

-Disturbed illustrated booklet for worker about safety measures and first aid.

References

Abd El- Raham, B. (2018). First Aid Training Program for Drivers regarding Road Traffic Injuries, PhD Thesis Benha University, Faculty of Nursing.

Abdelwahab, A., Bader EL-Din,S., and Mohammed, A. (2019). Effect of health education program on knowledge and practice of workers regarding occupational health hazards at sugar factory, Minia Scientific Nursing Journal (Print) (ISSN 2537-012X) Vol. (4) No. (1).

Abdel El-Ghany, F., & Mahmoud. (2017). Effect of educational intervention about first aid and ergonomics on improving bakery workers' performance related to occupational hazards at Zagazig City Egyptian Nursing Journal, Vol (16): P 10–24.

Abou El-Wafa, H., Kamel, N., and Al-Wehedy, A. (2017). Occupational Injuries among workers in a nitrogenous fertilizer company , EGYPT.

Aluko, A., Adebayo, A., Adebisi ,T, Ewegbemi, K., Abidoye, **A., and Popoola , B.(2016).** Knowledge, attitudes and perceptions of occupational hazards and safety practices in Nigerian healthcare workers, vol; 9: 71. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4744628/ Accessed on 20/11/2020.

Central Agency for Public Mobilization and Statistics (CAPMAS), (2016). claims workplace injuries in Egypt available at at https:/ /madamasr.com ./ 2016/.../capmas-claims-workplace-injuries Retrieved at 6 February 2019 at 3pm.

Canadian Centre for Occupational Health and Safety (CCOHS), **(2019)**. Heat stress available at https: //www. ccohs. accessed Accessed on 5 August 2021.

Canadian Centre for Occupational Health and Safety (CCOHS), (2019). Heat stress available at https://www. ccohs. Accessed on 5 August 2021.

Daniel, T., Quynh, L., Uyen, Nguyen, E., and Ha Hoang, D. (2015). Workplace health and safety issues among community nurses: a study regarding the impact on providing care to rural consumers BMJ Open. 2015; 5(8): e008306.

Douglas, K. E., & Peterside, S. S. (2016). Assessment of workplace hazards in mortuaries in Port Harcourt, Nigeria. Port Harcourt Medical Journal, 10(3), 102.

El-Feky, A., Kabbash, I., Zayet, H., and El-Sallamy, R. (2020). Health disorders and safety measures among workers in Tanta Flaxand Oil Company, Egypt Environmental Science and Pollution Research. https://doi.org/10.1007/s1356-020-1588-0.

Fouad, M., Mousa, K., and Badr El-Dein, S. (2014). Assessment of knowledge and self-reported practices of iron mines' workers about pneumoconiosis in Baharia Oasis, Medical Journal of Cairo University, No 82 Vol (2) : P.25.

Garf, F. (2013). Occupational health hazards among El-Araby electronic industry workers

at Benha City, Unpublished Master thesis, Community Health Nursing Department, Faculty of Nursing, Benha University, Egypt, :P44 -67.

Ibrahim , A., El-Karmalawy, E., Hassan, M., and Hafez, F.(2017). Workers' Occupational Hazards at Textile Factory in Damietta City, Port Said Scientific Journal of Nursing, Vol.4, No. 2, PP 2-27.

Jeffree, S., Ismail, N., Awang, K. , and Lukman (2016). Hearing impairment and contributing factors among fertilizer f**actory** workers. J Occupational Health Vol (58) P 434–443.

Mathias, A., Fidelis, O., Oyakhire1, Jenissi, K. (2020). Awareness of Health Hazards and Use of Personal Protective Equipment among Fuel Pump Attendants in Benin City, Nigeria Nigerian Journal of Experimental and Clinical Biosciences.

Malik, N., Maan, A., Sultan Pasha, T., Akhtar, S. and Ali, T. (2010). Role of hazard control measures in occupational health and safety of the textile industry of Pakistan, Pakistan Journal of Agriculture Science; 47(1): PP.72, 74.

Occupational health and safety regulations (ILO), (2017). Hazard Analysis and Risk-Based Preventive Controls https://www.fda.gov . https:// www. fda.go v/Food/ Guidance Regulation /FSMA/ ucm45 97 19. htm**.**

Occupational Safety and Health (OSHA) .(2018). Personal Protective Equipment - Overview Available at: https://www.osha.gov Accessed at 3l2l2021.

Pramod, K. (2015). Occupational safety and health, Available at: http:// www.epainassist.com/personalinjury. Accessed on May 2020.

Smith, P., and Gisolf, B. (2014). Age, occupational demands and the risk of serious work injury Occupational Medicine, in the State of Victoria, Vol (64): P 571–576.

Shrestha, B, Manandhar, N., Joshi, S. (2020). Knowledge of occupational health hazards and practice of personal protective equipment among fabrication workers in Kathmandu district, Nepal, International Journal of Occupational Safety and Health, Vol. 10(2): P 115 – 123.

Silva, T., Galindo, N., Santos, Vasconcelos, E., and Misquita, K. (2017). Health education Intervention on First Aid Measures for lay People in Brazil: Integrative Review, Cienc Cuid Saude ; No 16 Vol (4): P 50.

Vikas, K. Sahu., T. Ramarao, M. Tech. (2019). Safety analysis in soap and detergent industries ,International Journal of Research in Engineering, Science and Management, . India, Volume-2, Issue-6, June | ISSN: 2581-5792.

World Health Organization (WHO), (2016). Radiation: Ultraviolet (UV) radiation Available at: https: //www . who.int Accessed on Jan 2021.

تأثير تطبيق تدابير السلامة وبرنامج الإسعافات الأولية بين شركة عمال الزيت والصابون فيما يتعلق بمخاطر الصحة المهنية

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يتعرض عمال شركة الزيت والصابون الي مخاطر في العمل ناتجه عن التعرض للشحوم والزيوت والمذيبات والتي بدورها تؤثر على صحتهم. لذلك هدفت هذه الدراسة الي تقييم تأثير تطبيق تدابير السلامة وبرنامج الإسعافات الأولية بين شركة عمال الزيت والصابون فيما يتعلق بمخاطر الصحة المهنية وقد أجريت الدراسة في بشركة الزيت والصابون بمدينة كفر الزيات بمحافظة الغربية على ٢٥٠ عاملا وفقا لمعايير معينة ومقدمي الرعاية لهم. وأظهرت نتائج الدراسة بوجود علاقة ذات دلالة إحصائية بين معلومات وممارسات العمال حول إجراءات السلامة والصحة المهنية والاسعافات الاولية. كما اوصت الدراسة بتوفير برامج تدريبية مستمرة لعمال شركة الزيت والصابون لتحسين معلوماتهم وممارساتهم حول إجراءات السلامة المهنية والاسعافات الاولية.