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Assessment of Workers Knowledge and practices toward Occupational Health Hazards and Safety Measures at Kima Factory at Aswan City

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Abstract
Background: Occupational health for employees in any organization is crucial as it is a branch of public healthcare concerned with all aspects of safety and health in the workplace, with a strong focus on the prevention of risks. **Aim:** Evaluate the occupational health hazards and safety measures among workers at Kima Factory at Aswan City. **Design**: A descriptive research design was employedin this study. **Setting:** The study was performed at Kima Fertilizers and Chemicals Factory in Aswan City. **Sample:** A systematic random sample of 332 workers was employed. **Tools**: Data collection was carried out using two tools. **Tool (I):** An interviewing questionnaire sheet comprised three parts: **Part one:** Socio-demographic characteristics and work data of participants. **Part two:** History of occupational injury or problem. **Part three:** Worker's knowledge about occupational health hazards. **Tool II**: Observational checklist to evaluate worker's practice. **Results:** The study revealed that 46.1% of the workers possess (an adequate level of) not poor knowledge about occupational hazards at Kima Fertilizers and Chemicals Factory in Aswan City. Additionally, 76.2% of the workers demonstrated a satisfactory level of practice concerning the use of personal protective equipment. **Conclusion:** There was a statistically significant correlation (P = 0.043) among the overall level of knowledge and the overall level of practice within the studied workers. **Recommendations:** Implement and advance training programs for workers to enhance their practices and knowledge related to occupational health risks.

Keywords: Health Hazards, Occupational, Practice, Safety Measures & Workers knowledge.

Introduction
Occupational health Providing complete health care to employees via a variety of primary, preventative, healthful, and rehabilitative interferences in order to improve their quality of life. It is similarly described as the relationship between the workplace and employees' health, as well as the influence of the health of workers on productivity **(Wilcock, 2020).**

The purpose of occupational health and safety (OHS) is to safeguard employees from injury and health problems while also providing a safe and healthy work environment. However, businesses that view occupational health and safety as an investment with a positive return experience a variety of advantages, including decreased absenteeism, increased employee motivation, safer and healthier workplaces, higher productivityand lower labor accident costs **(Hughes &Ferrett, 2021).**

Employers and employees must cooperate and participate in health and safety initiatives in order for occupational safety and health to be practiced.

Consideration of these topics involves occupational health, industrial hygiene, related toxicology, education, engineering safety, and psychology **(Maier et al., 2020)**.

Occupational health hazards are threats to a worker's health and refer to processes or circumstances that lead to illnesses or accidents at work. Dangerous working conditions and dangerous work practices result in occupational health hazards. The utilization of suitable work-related safety and health facilities can help prevent workplace dangers and injuries **(Degavi et al., 2021).**

Safety measures are activities done to reduce the incidence of possibly hazardous materials in the workplace, first at the point of manufacture, throughout transmission, lastly, by protecting the worker. To maintain the long-term efficiency of preventative procedures, adjustments should contain appropriate process and equipment maintenance, personal protective tools, and inclusion of closed systems. Employee and employer information, exercise, and education on hazards as well as risk prevention **(WHO, 2019)**.

The fertilizers sector involves numerous chemical processes in addition to physical operations. It is one of Egypt's most significant and significant businesses. There are two types of fertilizers: nitrogenous fertilizers and phosphate fertilizers are produced by a number of Egyptian businesses **(Egyptian Environmental Affairs Agency, 2019).**

Occupational Health Nurses (OHNs) focus on issues connected to employee health, (OHNs) may significantly contribute to the sustainable growth, greater competitiveness, job security, and higher profitability in businesses and communities. Occupational health nurses can contribute to improved profitability and performance of businesses as well as lower health care expenses by assisting in the reduction of illness. Improving access to rehabilitation services in the workplace can help reduce disability and social exclusion **(Sadhra et al., 2022**).

Significance of the Study

Occupational risks have been known for a long time and have a variety of effects on employees, including work-related illnesses, accidents, and even fatalities. Around 160 million persons suffer from work-associated illness, there are 374 million occupational accidents each year, and there are over 2.78 million fatalities worldwide. The majority of worker fatalities are caused by occupational diseases. There are around 15716 cases of non-fatal occupational hazards in Egypt, and 46 of these cases result in fatal injuries to the employees. According to the same estimate, there were 13.8% injuries per 100000 workers overall, male and female **(International Labour Organization, 2021).**

Aim of the study

This study aims to evaluate the safety measures and occupational health risks faced by workers at the Kima factory.

This study aimed to evaluate works knowledge and practices about occupational health hazard and the safety measures at the Kima factory

The following objectives will help accomplish this goal:

1. Assessment of worker's knowledge about occupational health hazards at work place.
2. Assessment of workers' practicesa bout occupational health hazards at the Kima factory.
3. Assessment of safety measures practices among workers.

Research questions

1. What are the level of worker's knowledge about occupational health hazards at the Kima factory?
2. What are the levels of workers' practices towards occupational health hazards at the Kima factory?

Subject and Methods

Research design

The study used a descriptive research design.

Setting:

The study was performed at Kima Chemicals and Fertilizers Factory in Aswan city.

Sampling:

Systematic random sample was used in this study. . The population consisted of 1,953 workers across various departments at the Kima fertilizer factory, with a final sample size of 332 workers and calculated according to the following equation**: (Yamane, 1967)**.

$$n=\frac{N}{1+N(e)^2}=\frac{1953}{1+1953(0.05)^2}=332$$

Worker.

n= the sample size

N= total population

e= Margin of error (0.05)

Inclusion criteria:

1. Workers aged over18 years.
2. Both sexes (male &female).
3. Workers who consented to engage in the study.

Tools for Data Collection: Data collection was conducted using two tools. It was designed by the researcher following a review of related literature (**Mohamedet al., 2017)**.

Tool I: The interviewing questionnaire sheet comprised three parts:

Part (1):

- Socio-demographic characteristics of the workers, like age, number of family members, marital status, educational level, safety measures and health training courses, and number of courses**.**
- Work-related data of participants, including work department, type of work, working hours, years of experience, and health services likenursing services, periodic medical examinations, andpre-employment examinations**.**

Part (2): History of occupational injury or issues, that comprised two questions about previous work-related and injuries experiencing any diseases.

Part (3): Workers' knowledge about occupational health hazards.it was included questions about the definition of occupational health hazards, types of occupational hazards, health problems facing the workers related to occupational hazards as musculoskeletal, respiratory, vision, skin problems .

The scoring system of knowledge: The total grades of knowledge were (30); one point was awarded for every correct response, and zero was awarded for every incorrect response or for responses indicating "don't know". The total score was determined by adding the points together and then translated to a percentage score as detailed below:

- Less than 50%: insufficient knowledge.
- 50% to 70%: Average knowledge.
- More than70%: Not poor knowledge **(Mobed et al., 2019).**

Tool II: Observational checklist: Evaluate the workers' practices, it Involved the use of personal protective equipment(PPE), including (9 items) overall uniform, ear muffs, respiratory mask, safety boots, protective apron, asbestos gloves, eye goggles, safety face shield, and head cover (cap).

Scoring system:

Done= 1

Not done= 0

A total score of ≥ 60% (≥ 29 points) is considered satisfactory.

A total score of less than 60% (< 29 points) is deemed unsatisfactory.

Validity of the study tool: The validity of the instruments was carried out by five academic specialists from the community health nursing department. They examined the tools to make sure they were understandable, applicable, comprehensive, and clear.

Reliability of the study tool: Reliability was applied by the researchers for testing the internal consistency of the tools and the value of Cronbach's Alpha reliability was 0.87 for knowledge and 0.79 for practices.

Ethical consideration:

Approval to perform the study was acquired from the authorized persons involved. The title, purposes, and tools were reviewed, and the study procedure was demonstrated to acquire their participation. This participation is necessary for the researcher to engage with the study sample at the specified location. The agreement was obtained orally pre-starting the interview, and a brief orientation on the study's objectives was provided.The participants were also assured that all information collected would remain private and be employed solely for the study's objective.To maintain confidentiality and anonymity, no names are needed on the forms.They were also notified that they had the right to withdraw from the study at any time without justification.

Pilot study:

A study was performed that included approximately 32 workers (10%) who were included in the sample. The objective of the pilot study was to assess the simplicity of the tool and the time required to fill out the questionnaire. No modification were done so the pilot study were included in the total number of the study sample.

Field work phase:

Characteristics for the current study were collected during the period from the beginning of March 2023 to the end of August 2023, two days per week. Before beginning the process of gathering characteristics, a brief explanation of the study's goal was given to the workers. Following their clarification of the instructions, the workers completed a self-administered knowledge questionnaire. The average time required to finish each self-administered questionnaire was approximately 20 minutes, with 6-7 workers per day.

Administrative design:

An authorized written approval letter illustrating the purpose of the study was obtained from the Dean of Nursing faculty to the general manager of the Kima factory asking for collaboration and agreement to perform the study.

Statisticaldesign:

Data wereclassified, coded and analyzed according to suitable statistical approaches and tests then results were presented in suitable tables, figures, and graphics. Data were then introduced into Statistical Package for the Social Sciences (SPSS version 23.0) software for analysis. Quantitative data were provided as mean and standard deviation (SD) while qualitative data were expressed as frequency and percentage. The observed differences and associations were deemed statistically significant when $P \leq 0.05$.

Results

Table (1): Distribution of the studied workers based on their socio-demographic characteristics at the Kema factory in Aswan City 2023(n=332).

Items	N	%
Age(in years)		
<20	26	7.8
20-35	77	23.2
>35-50	191	57.5
>50	38	11.5
Mean ± SD	**38.95±9.36**	
Educational level		
Basic education	42	12.7
Preparatory	55	16.6
Secondary	157	47.3
University and high	78	23.4
Marital status		
Single	55	16.6
Married	257	77.4
Divorced	9	2.7
Widow	11	3.3
Number of family members		
3members	22	6.7
4-5	241	72.5
>5	69	20.8
Training courses on safety and occupational health		
Yes	103	31.0
No	229	69.0
If yes, number of courses (n=103)		
1-2	62	60.1
3-4	28	27.2
5-6	13	12.7
Training course topics (n=103)#		
Types of fertilizers	72	69.9
The correct way to make fertilizers	98	95.1
Health risks of fertilizers	67	65.0
Methods of action when any damage occurs from fertilizers	74	71.8
Methods of storing fertilizers	91	88.3
First aid	103	100.0

 # Some participant shad more than one response

Table 2: Distribution of the studied workers based on their knowledge regarding occupational risks at the Kema Factory in Aswan City 2023 (n= 332).

Knowledge about occupational hazards of chemical fertilizers	Correct answer		Incorrect answer	
	N	%	N	%
Types of fertilizers	93	28.0	239	72.0
Meaning of occupation alhazards?	94	28.3	238	71.7
Types of occupational hazards	104	31.3	228	68.7
Types of chemical hazards	104	31.3	228	68.7
Types of biological hazards	80	24.0	252	76.0
Types of mechanical hazards	93	28.0	239	72.0
Types of electrical hazards	132	39.8	200	60.2
Types of physical hazards	106	31.9	226	68.1
Health hazards when exposed to chemical fertilizers	213	64.2	119	35.8
Factors that lead to increased health hazards when exposed to chemical Fertilizers	210	63.2	122	36.7

Table (3): Distribution of the studied workers according to their knowledge about diseases of working at fertilizers and chemical departments at kema factory at Aswan City 2023 (n= 332).

Knowledge aboutd is eases at fertilizers and chemical factory	Correct answer		Incorrect answer	
	N	%	N	%
Respiratory disease	194	58.4	138	41.6
Gastrointestinal disease	178	53.6	154	46.4
Dermatological disease	191	57.5	141	42.5
Musculoskeletal disease	195	58.7	137	41.2
Ear disease	197	59.3	135	40.7
Eye disease	202	61.8	130	39.2
Psychological disease	170	51.2	162	48.8

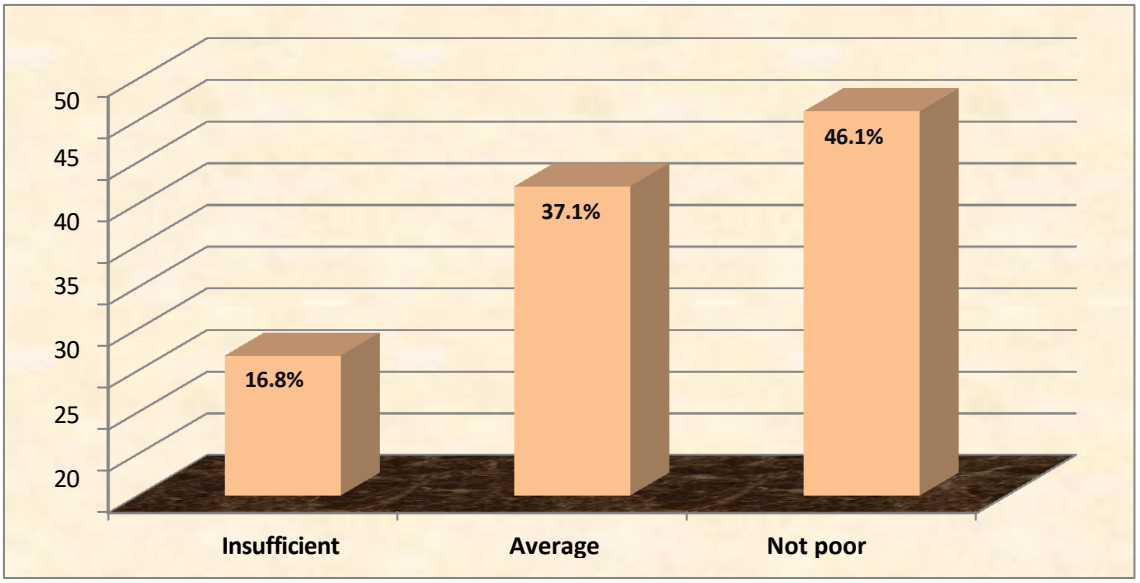

Figure (1): Total knowledge score among the studied workers at Kema Factory in Aswan City, 2023(n= 332)

Table (4): Distribution of the studied workers based on their practices concerning utilizing personal protective equipment at Kema Factory in Aswan City, 2023(n= 332)

Protective Equipment	Done		Not done	
	N	%	N	%
Overall uniform	247	74.4	85	25.6
Head cover (cap)	236	71.1	96	28.9
Safety face glass shield	276	83.1	56	16.9
Eyegoggles	260	78.3	72	21.7
Asbestos gloves	196	59.1	136	40.9
Protective apron	224	67.5	108	32.5
Safety boots	295	88.9	37	11.1
Respiratory mask	309	93.1	23	6.9
Earmuff	198	59.6	134	40.4

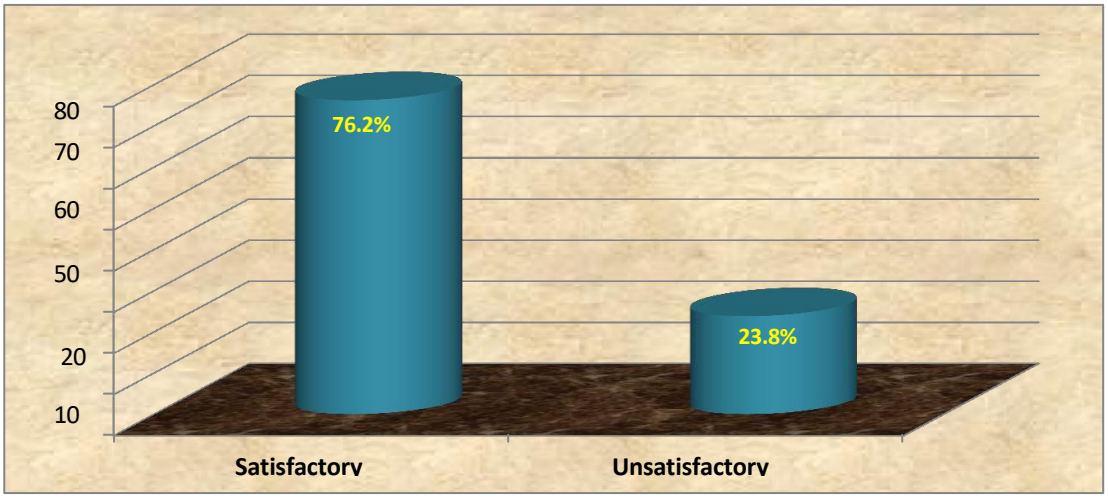

Figure (2): Total score of reported practices regarding the use of PPE among workers studied at Kima Factory in Aswan City, 2023(n= 332).

Table (5): Relation between socio-demographic characteristics of the studied workers and their total level of practice at Kima Factory in Aswan City 2023 (n=332).

Socio-demographic characteristics		Total level of practice				X^2	P-value
		Satisfactory (n=253)		Unsatisfactory (n=79)			
		N	%	N	%		
Age (in years)	<20	21	6.3	5	1.5	2.570	0.043*(S)
	20-35	54	16.3	23	6.9		
	>35-50	150	45.2	41	12.3		
	>50	28	8.4	10	3.0		
Educational level	Elementary	29	8.7	13	3.9	2.091	0.352 (NS)
	Preparatory	20	6.7	35	10.5		
	Secondary	161	48.5	51	15.4		
	University	63	19.0	15	4.5		
Marital status	Single	49	14.8	6	1.8	2.815	0.487 (NS)
	Married	189	56.9	68	20.5		
	Divorced	8	2.4	1	0.3		
	Widow	7	2.1	4	1.2		
Training courses on safety and occupational health	Yes	81	42.4	22	6.6	3.489	0.685 (NS)
	No	172	51.8	57	17.2		
Department of work	Electricity	68	20.5	29	8.7	6.605	0.739 (NS)
	Laboratory	58	17.5	9	2.7		
	Nitrogen production station	55	16.6	28	8.4		
	Packaging	72	21.7	13	3.9		
Type of work	Auxiliary.	30	9.0	12	3.6	4.869	0.003*(S)
	Technician	163	49.1	49	14.8		
	Specialist	60	18.1	18	5.4		
Years of experience	<5	33	9.9	22	6.6	8.898	0.035 * (S)
	5-10	172	51.8	34	10.2		
	>10	48	14.5	23	6.9		

X^2test=Chi-Square test *P-value>0.05=Non-significant (NS)* **P-value≤0.05=Significant (S)*

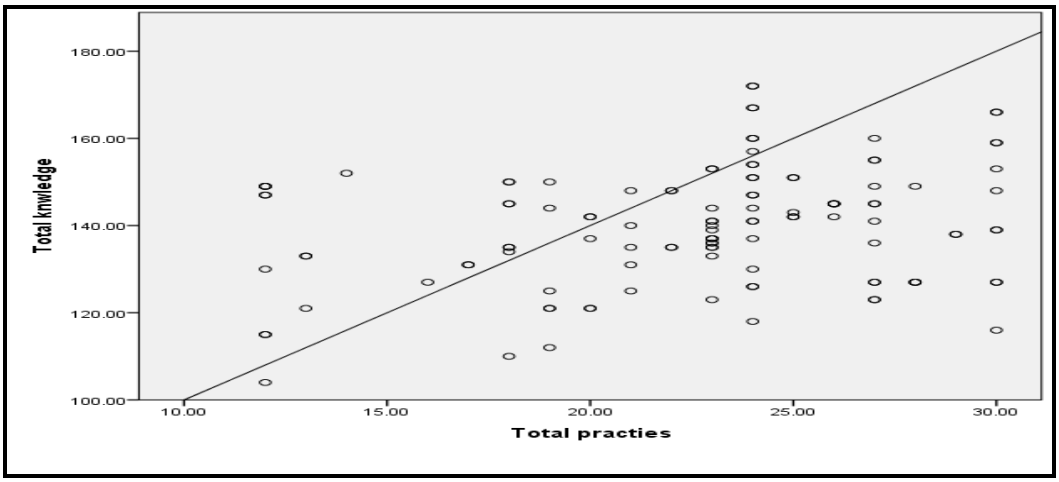

Figure (3): Correlation between total knowledge scores and total level of practice among the studied workers at Kima factory at Aswan City, 2023 (n=332)

Table (1): Shows the socio-demographic distribution of workers at Kema Factory (n=332).It was observed that more than half (57.5%) of the studied workers were in the age group >35-50, with a mean age of 38.95±9.36, and 43.3% had secondary education. Also, 77.5% of them were married and 72.5% of them had 4-5 family members**.** Additionally, 69.0% of them hadn't attended training courses on safety and occupational health.

Table (2): Shows that more than half (64.2% and 63.3%) of the studied workers provided correct answers concerning 'health risks when exposed to chemical fertilizers' and 'factors that lead to increased health hazards when exposed to chemical fertilizers,' respectively. While, 68.7% and 72.0% of the studied workers had incorrect answers regarding type of chemical hazards, and mechanical hazards, 76.0% of them had incorrect answers regarding "types of biological hazards.

Table (3): Illustrates that more than half, 61.8% and 59.3% of the studied workers had correct answers concerning "eye disease" and "ear disease". While, 48.8% and 46.4% respectively of the studied workers had incorrect answers concerning "psychological disease" and "gastrointestinal disease".

Figure (1): Shows that**,** 46.1% of the studied workers had not poor knowledge. Whereas 37.1% of them had average knowledge and 16.8% of them had insufficient knowledge.

Table (4): Reveals the distribution of the studied workers according to their practice regarding the utilization of personal protective equipment (n= 332). It was observed that the larger portion93.1% of the studied workers reported the availability and use of respiratory masks. Also, 88.9% and 86.1% of them reported availability and use of safety boots, respectively. Additionally, 83.1% of them reported availability and use of safety face glass shields. On the other hand, 40.9% and 40.4% of the studied workers reported availability but not use of asbestos gloves and ear muffs, respectively.

Figure (2): Displays that 76.2% of the studied workers had a satisfactory level of practice, while 23.8% had an unsatisfactory level of practice concerning the use of personal protective equipment.

Table (5): Displays that there were statistically significant differences among the total levels of practice of the studied workers and their age, type of work, and years of experience, with P-values of 0.043, 0.003 and 0.035, respectively. However, there was no statistically significant relationship among the total levels of practice of the studied workers and their marital status, educational level, training courses, and department of work, with P-values of 0.487, 0.352, 0.685, and 0.739, respectively.

Figure (3): Demonstrates a significant positive relationship among the overall level of knowledge and the overall level of practice among the studied workers, with a p-value of 0.043.

Discussion

Occupational health hazards in factories are categorized into psychological, physical, chemical, biological, and ergonomic properties, and they are the primary cause of mortality and morbidity among factory workers. Controlling occupational exposures through safety practices can help prevent or mitigate these hazards (**Asanga, 2023**).

This study aimed to evaluate works knowledge and practices about occupational health hazard and the safety measures at the Kima factory. Based on the socio-demographic distribution of the workers in the study, it was found that less than half had completed secondary education, and more than half were aged between 35 and 50. The reason for this could be the

educational requirements that factories have for hiring new employees.

These findings were consistent with **AlMousa et al., (2022),** who studied "Occupational safety climate and hazards in the industrial sector: gender differences perspective, Saudi Arabia" and documented that less than half of workers studied had completed high school. Also, this result was compatible with **Lu et al., (2020),** who studied "Impacts of occupational hazards on job stress and mental health of factory workers and miners and observed that less than half of studied workers aged 45 years old. Moreover, this finding was consistent with **Pandeya et al., (2021),**who studied "Occupational health risk among selected cement factory workers in Dang District of Nepal" and found that about three-quarters of the studied workers were aged <=40 years, and fewer than half possessed secondary education.

Also, more than three-quarters of them were married, and fewer than three-quarters had 3-5 family members. Additionally, more than two-thirds of them had not participated in training courses on safety and occupational health. This may be due to lack of conducted occupational safety programs that may attributed to work overload and researchers fear of exposure to fertilizers health hazards.

This result agreed with the study performed by **Zayed et al., (2020),** which illustrated that the most of the studied workers were married and less than one-third had participated in training courses after being employed. Also, this result was in agreement with **El-Ghany& Mahmoud, (2019)**, they studied "Impacts of educational intervention about first aid and ergonomics on improving bakery workers' performance related to occupational risks at Zagazig City" and observed that most of the workers studied had a moderate family size of 3 to 5 members.

According to the distribution of the studied workers' knowledge about occupational hazards, this study displayed that less than two-thirds of the workers had correct answers regarding 'health hazards when exposed to chemical fertilizers' and 'factors that lead to increased health hazards when exposed to chemical fertilizers. Two third of the studied workers provided incorrect answers regarding types of chemical hazards, and more than three quarter of them gave incorrect answers regarding types of biological risks, types of fertilizers, and less than three quarter give incorrect answer about types of mechanical hazardous.

This outcome was in harmony with the study performed by **Mousa et al., (2024),** which titled "Occupational health hazards and protective measures among workers in pesticide factory" and demonstrated that farmers' knowledge of pesticide hazards was high. Also, this findings was compatible with the study performed by **Nicholas et al., (2019),** which entitled "Knowledge, attitude and practices regarding occupational hazards and safety measures among oil and gas workers in South-South Nigeria" and shown that the majority of workers were aware of the types of hazards that may be exposed to while working.

Regarding the distribution of the studied workers based on their knowledge about diseases related to working in fertilizers and chemical departments, the current study found that more than three fourth of the surveyed workers had correct answers regarding 'eye disease' and 'ear disease.' However, more than half of the studied workers had correct answers concerning 'psychological disease' and 'gastrointestinal disease. This may be due to fertilizers dust that may cause eye disease and noise from machines sound that may causes difficult hearing and ear problems.

This finding was incompatible with **Mohammed et al., (2022),** who noted that over than half of the studied workers had poor knowledge about the occupational risks of chemical fertilizers and illnesses resulting from working with them. Also, this outcome contradicted the findings of **Agbo et al., (2019),** who found that the most of workers identified psychological disorders as a form of work-related stress.

Regarding the overall knowledge score within the studied workers, this study indicated that less than half of the workers had not poor knowledge. In contrast, more than one-third had average knowledge, and less than one-fifth had insufficient knowledge. This may be due to awareness campaigns and community health services provided, besides, online educational programs for preventing occupational health hazards.

This result was incongruent with the study performed by **Mahmoud & Abd El-Aziz, (2021),** entitled "Occupational Health Hazards among Workers in Ceramic Factories" which showed that less than one-fifth of the studied workers had well total knowledge scores related to occupational health hazardous. Also, this finding was incompatible with the study carried out by **Mousa et al., (2024),** who reported that more than three-quarters of the respondents were aware of the adverse impacts of pesticides on human health and the environment, and knowledge about the influence of agro-chemicals among was comparatively high.

According to the distribution of the studied workers regarding their utilization of personal protective equipment, the present study displayed that most of the workers reported both the availability and use of respiratory masks. Additionally, the majority reported the availability and use of safety boots. Moreover, most workers reported the availability and use of safety face shields. On the other hand, overthink two-fifths of the studied workers reported the availability, but not the use, of asbestos gloves and ear muffs. This may be due to workers awareness regarding serious

health problems that result from working in fertilizers manufacturing and the importance of personal protective equipment in preventing these health problems.

This outcome was aligned with the study conducted by **Asgedom et al., (2019),** who noted that about two-thirds of studied workers were employing at least one type of PPE while at work and responded that the factory provides PPE. This result disagreed with **Abd El Rahman et al., (2022),** they studied "Occupational health hazards among workers in glass manufacture industries" and found that two-fifths of workers do not use personal protective devices.

Regarding total score of reported practice among studied worker, the current study revealed that, over than three-quarters of the studied workers had satisfactory level of practice while, less than one quarter of them had unsatisfactory level of practice regarding using of the personal protective equipment. This may be due to sufficient level of knowledge and workers safety practices and the PPE role in preventing different health problems.

This result is corroborated by **Mahmoed & Abd El-Aziz, (2021),** who demonstrated that most of studied workers examined exhibited satisfactory practices in preventing occupational health hazards. But, this finding was different with the study conducted by **Mohammed et al., (2022),** which entitled "Safety Measure and First Aid Program among Workers in Delta Fertilizer and Chemical Company regarding Occupational Health Hazards" and revealed that less than three quarters of studied workers had unsatisfactory total level of practices pre- program.

With respect to the relationship between the socio-demographic characteristics of the studied workers and their overall level of practice, the current study found statistically significant differences in relation to years of experience, age, and type of work. However, no significant statistical relationship was found between the overall level of practice and marital status, educational level, training courses, or department of work.

This result is consistent with **Abad-Elzaher et al. (2018)**, who studied "Workers' Knowledge and Practice about Occupational Hazards and Safety Measures in Bakeries in Assuit City" and found no statistically significant distinction among educational status and marital status of the workers and their use of safety measures. However, this outcome is inconsistent with **Debela et al. (2023)**, who investigated "Occupational Health and Safety Practices and Associated Factors among Workers in Ethiopia's Metehara and Wonji Sugar Industries" and found no statistically significant distinction between the overall levels of practice among workers and their work experience.

Regarding the correlation between the total level of knowledge and the total level of practice among the studied workers, the present study illustrated a statistically significant positive correlation between these two variables. This can be explained by the fact that as knowledge improves; it affects workers' perceptions of the importance and need for good practices, thereby increasing their desire to protect themselves from serious health problems resulting from exposure to chemical substances.

This outcome was similar to that of the study performed by **Mohammed et al. (2022)**, who demonstrated a statistically significant correlation among total knowledge and practices. This outcome conforms to **El-Ghany & Mahmoud (2019)**, who documented a positive association between the level of workers' knowledge and their practices. Additionally, this result was similar to that of **Elsayed et al. (2023)**, who revealed a highly statistically significant positive correlation among total knowledge about occupational health hazards and practices related to avoiding these risks among the studied workers.

Conclusion

According to the outcomes of this study, it can be concluded that there is a statistically significant positive correlation between the total level of knowledge and the total level of practice among the studied workers. Less than one fifth of the workers had a poor level of knowledge, while more than one-third had anfair knowledge, and less than half had a good level of knowledge. More than three-quarters of the workers had a satisfactory level of practice with using personal protective equipment, whereas less than one-quarter had an unsatisfactory level of practice.

Recommendations

- Progress and appliance training program for workers to enhance their knowledge and practices about occupational health hazardous.
- All workers in the factory should have access to personal protective equipment.
- Workers should have access to comprehensive information about risks through mass media, such as videotapes, presented in simple language that accommodates the educational levels of most workers and provides information about maintaining a safe working environment.

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