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Establishing Occupational Health and Safety Management System in a Libya Oil Company According to ISO 45001:2018
Case Study: Waha Oil Company

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Keywords:	A B S T R A C T
Accidents Insurance and Compensation Polices ISO 45001 Occupational Health and Safety, Waha Oil Company	The main aim of the paper is to identify the level of Occupational Health and Safety (OHS) systems application in the Waha Oil Company. This study also examines the employee's perspective (PE) regarding the application level of the systems of occupational health and safety. The study has shown that the majority of employees are satisfied with the level of occupational health and safety means and procedures in their workplace, also the employees agreed that the company holds training programs and sessions on occupational health and safety affairs, and the results have shown that employees are satisfied with the insurance and compensation policies in the company. The study has adopted a quantitative approach with deductive reasoning based on a case study model to test for a correlation between two main variables which are (OHS and EP). Also, this approach allows analysis of the numerical primary data generated from the questionnaire using the statistical software SPSS. According to the results of this study, it was concluded that there is a statistically significant linear correlation between the two variables and that this relationship is positive, meaning that OHS as an independent variable can predict EP as a dependent variable.

إنشاء نظام إدارة الصحة والسلامة المهنية في إحدى طبقاً للمواصفة ISO 45001:2018

دراسة أنموذج: شركة الواحة للنفط

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الكلمات المفتاحية	الملخص
الحوادث المخاطر سياسات التأمين والتعويض ليبيا ISO 45001 الصحة والسلامة المهنية صناعة النفط شركة الواحة للنفط	تتمثل الأهداف الرئيسية للورقة في التعرف على مستوى تطبيق أنظمة الصحة والسلامة المهنية (OHS) في شركة الواحة للنفط. كما تتناول هذه الدراسة وجهة نظر العاملين بالشركة (PE) فيما يتعلق بمستوى تطبيق أنظمة الصحة والسلامة المهنية. أظهرت الدراسة أن غالبية العاملين راضون عن مستوى وسائل وإجراءات الصحة والسلامة المهنية في أماكن عملهم، كما أن العاملين متفقون على قيام الشركة بإعداد وتقديم برامج ودورات تدريبية حول شؤون الصحة والسلامة المهنية، وكانت النتائج تبين أن الموظفين راضون عن سياسات التأمين والتعويضات في الشركة. وقد اعتمدت الدراسة المنهج الكمي مع الاستدلال الاستنباطي المعتمد على أنموذج دراسة الحالة لاختبار العلاقة بين متغيرين رئيسيين هما الصحة والسلامة المعنية (OHS) وأداء العاملين (EP). كما يسمح هذا الأسلوب بتحليل البيانات العددية الأولية الناتجة عن الاستبيان باستخدام البرنامج الاحصائيSPSS. وبناء على نتائج هذه الدراسة تم التوصل إلى أن هناك

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علاقة خطية ذات دلالة إحصائية بين المتغيرين وأن هذه العلاقة إيجابية، أي أن الصحة والسلامة المهنية كمتغير

مستقل يمكن التنبؤ بـ EP كمتغير تابع.

1. Introduction

The concept of health and safety culture is not a new phenomenon in the business world. It has been developed and evolved over the last many years. However, the concept has gained significant recognition and attention in recent years. This is due to regulatory pressure, workforce empowerment, the need to avoid legal litigations, and the development sustainable working environment [1]. All business organizations irrespective of their nature, scope and size of operations have started assigning high importance to safety, and health-related issues. As a result, the concept of health and safety is being cultivated in the overall culture and philosophy of business organizations. The strategies authorities across the world also affirm the fact that health and safety culture is one of the highest priority areas of business operations at present and will continue in the future [2].

Over the years, most companies realized that the traditional intervention methods have fallen short of providing the expected outcomes and results. The failure of the safety practices has led to the need to redefine the safety activities that should be incorporated into a particular safety and health program. This has also led to the need to determine the level of resources to be allocated to the implementation of the safety and health program. Most behavioral-based studies have considered intervention as a single factor that failed to observe the interactive effects of other safety activities. The evaluation and implementation of a single intervention factor could be justifiable in situations where the other interactive factors are assumed constant.

Hundreds of thousands of people work in oil and gas extraction all over the world; ensuring their health and safety is a major concern for employers, regulators, trade associations, industry groups, and local communities. Work in this industry involves physical labour, operations, heavy machinery, hazardous chemicals, often remote locations, and all weather conditions, resulting in an elevated risk of physical harm and the need for special protections to reduce this risk. The history of the oil and gas supply is marked by several accidents with severe environmental and social impacts. The application of occupational health and safety systems are very important factors for occupational safety in the oil industry. This study mainly aims to identify the level of the application of the systems of occupational health and safety in the Waha Oil Company.

2. Literature review

Safety culture and safety climate have often been used interchangeably, although the climate has been described as reflecting attitudes, perceptions, and beliefs, while culture is more complex, reflecting values and norms [3]. Safety climate may be seen as a ''snapshot'' of the safety culture, reflects the perception of an organization shared by those participating, and is more superficial and transient than culture [4]. Safety climate is usually explored through questionnaires, often composed of thematic questions relevant to safety, and has resulted in many different scales [4-6]. In a study analyzing safety climate scales used, [4] identified main themes important for safety climate in 19 studies in the nuclear industry, oil and gas industry, chemical sites, factories, manufacturing plants, transport, and construction. These themes included management, safety systems, risk, work pressure, competence, and procedures/rules.

The largest producer of oil in Libya is the National Oil Corporation (NOC), which is owned by the state and which, together with its smaller subsidiaries, produces approximately 60% of the oil output of Libya. Of this company's subsidiaries, the Waha Oil Company is a significant upstream producer of its crude oil [7].

In economic terms, ILO [8-10] estimates that roughly 4% of the annual global Gross Domestic Product (GDP), or US$1.25 trillion, is siphoned off by direct and indirect costs associated with occupational accidents and diseases such as lost working time, workers' compensation, the interruption of production and medical expenses. Similarly, an analysis of refinery losses due to 123 refinery fires over 15 years from 1965 to 2000, demonstrated a trend of rising losses over the period [11].

3. Problem of Statement

Human resources are the most important assets of an organization. The success or failure of an organization is largely dependent on the calibre of the people working therein. Without positive and creative contributions from people, organizations cannot progress and prosper. In order to achieve the goals or the activities of an organization, therefore, they need to recruit people with requisite skills, qualifications, and experience. While doing so, they have to keep the present as well as the future requirements of the organization in mind. Moreover; the work in the oil and gas companies is characterized by the high risks level that directly or indirectly affect the human element. The management of these companies must provide the best standards of health and occupational safety to protect workers from any potential risks and hazards during their work performance.

Workplace injuries can be regarded as a proxy for firms' safety performance [12]. Previous researchers have shown that over 80% of accidents result from unsatisfactory management [13-15]. Accidents may develop from a sequence of deficiencies involving poor safety management and poor comprehensive management systems [12], [16] [17]. Workplace injuries can also contribute to employee stress and job dissatisfaction and further increase turnover rates [18]. The application of occupational health and safety standards contributes to increasing the safety level in the work environment and then increases the level of work satisfaction among employees. Therefore; the main problem in this research can be formulated in the following statement:

What extent to which the Libyan Waha oil company implement the rules and regulations of the ISO 45001 occupational health and safety management system?

4. Importance of Study

This study is the first of its type to identify the level of occupational health and safety systems application in the Waha Oil Company. This study also examined the employee's perspective regarding the application level of the systems of ISO 45001 occupational health and safety. This study shed light on the importance of applications of the systems of occupational health and safety in the work environment, because of their effective role in creating a safe and secure work environment for all employees within the company. The application of these safety systems plays the main role in increasing the morale level of all employees which will positively affect their performance level and their productivity. The Libyan industrial companies suffer from the weak implementation of all systems and programs of occupational health and safety. Therefore, the result of this study may be used to shed light on the importance of these systems on the quality of life of all human resources. This study seeks to achieve the following objectives: Identify to what extent the Waha oil company implements the rules and regulations of occupational health and safety.

Identify the extent to which the management of Waha Oil Company supports the implementation of occupational health and safety regulations.

Identify the extent to which employees of the company commit to the application of occupational health and safety regulations and its procedures during work performance.

Identify the extent to which the employees are satisfied with the level of occupational health and safety means and procedures in their workplace. Identify to what extent to which the company holds training programs and sessions on occupational health and safety affairs. Identify the extent to which the employees are satisfied with the insurance and compensation policies in the company.

5. Methodological approach

This study has adopted a quantitative approach with deductive reasoning based on a case study model to test for a correlation between two main variables which are (OHS and EP).

The reason for adopting the quantitative approach is the relatively large size of the study population, which through this approach will allow the

researcher to collect the largest amount of primary numerical data within the narrow time window while also giving the possibility to generalize the findings (University of South Carolina, n.d.). Also, this approach allows for analyzing the numerical primary data generated from the questionnaire using software called SPSS (Statistical Package for the Social Sciences) which will save time and effort.

The reason for choosing deductive reasoning is when a known theory or phenomenon is examined, the deductive reasoning method is used to assess if that theory is applicable in specific circumstances [19]. The specific situation in this research is in Waha Oil Company where the data generated by the employees of this company is to be analyzed and used to either accept or reject the research hypothesis in this case.

A case study design was adopted for this research, with Waha Oil Company as the location under which the study took place and its employees as the target population

With more than 7000 employees and daily production of crude oil estimated at 300,000 barrels per day, Waha Oil Company ranks second as the largest exporter of crude oil in Libya. It also operates in many locations in the Libyan desert and on the coast, in addition to owning the largest gas production plant in the country. For the following reasons, this company was chosen to be the subject of the case study:

- As the researcher is an employee of the company, it was possible to obtain the required approvals to conduct the study on the company's employees in addition to using the company's internal correspondence system to distribute the questionnaire electronically.
- The company has a large number of employees and thus constitutes an ideal study population.
- The researcher is familiar with the company's locations and the distribution of its employees, and therefore it was possible to find a way to get their participation and convince them to fill out the questionnaire.
- The company has an important position in the Libyan oil industry, and therefore the results generated by this company will be of equal importance.

Table 1: Cronbach's Alpha results for Pilot and main study generated from SPSS.

Reliability Statistics		Reliability Statistics		Reliability Statistics		Reliability Statistics	
Cronbac	N	Cronbac	N	Cronbac	N	Cronbac	N

5.2 Study population and sample size

The company's employees represent the study population, as the study targets random samples to ensure equal opportunities for all employees to participate and to avoid bias, you only need to be a Waha employee to be eligible to participate. Also, the questions within the questionnaire are general, simple, and easy to answer.

According to HR, the company has about 6000 workers throughout all locations and the headquarters. Taro Yamane sample size calculator was utilized to determine the sample size, which was 362, however, there was not enough time to collect more than 100 responses (see limitations section).

5.2.1 Participants recruitment

The survey was published electronically via Google Forms which is a free service; the link was distributed in two methods:

First via social media, since the company's employees are heavily involved in the company's social networking pages and groups, the survey link has been posted on all social media pages and groups, with explanations clarifying the goals and encouraging the participants to participate in the survey.

Once the participant clicks on the link, they will be presented with the participant's information page, where they will find all the relevant information, including frequently asked questions regarding research, data management, and confidentiality, at the bottom of this page, there will be an inform consent statement where the participant will have to check all the boxes to be transferred to the questions page. The second method is to receive the questionnaire link through the company's internal correspondence system, which will contain the same information and the same steps followed in the previous method.

5.3 Data analysis

A set of statistical tests was used to reach the research objectives and to

5.1 Research data collection methods and tool (Quest.)

In this study, a five-point Likert scale questionnaire was used as a data collection tool. The reason for adopting this tool is that the researcher expects a range of answers and therefore, the participants were not required to answer (yes/no), but they were given a choice between a range of answers strengths from strongly agree to strongly disagree.

5.1.1 Questionnaire structure

Part 1 is the demographic data of the participants such as age, gender, years of experience, and job position.

part 2 consists of 18 questions related to occupational safety and health in the company, safety culture, and employees' awareness of the importance of occupational safety in the work environment, in addition to questions related to occupational safety management in the company.

Part 3 consists of 14 questions related to the performance of employees.

Maintaining a cohesive context (positive phrasing) is essential to the questionnaire's consistency [20]. Therefore, care was taken to formulate all items of the questionnaire in a unified positive context.

5.1.2 Questionnaire reliability and validity

A small-scale pilot study was conducted on 100 employees of Waha Oil Company, who were excluded from the main study. After collecting the data, the questionnaire items were subjected to the Cronbach's Alpha test, which tests the internal consistency of the questionnaire items. Each scale has been individually tested and the results were 0.923 for Ohs Items and 0.922 For Ep Items. The questionnaire was also subjected to the same test again after collecting data in the main study, and the results were 0.866 for the OHS variable and 0.801 for the EP variable, see Table (1). This means that the value of the reliability coefficient exceeds 80%, which is more than acceptable for the purposes of scientific research, as the threshold level is 70%. [21].

h's Alpha	of items	h's Alpha	of items	h's Alpha	of items	h's Alpha	of items
.923	18	.922	14	.866	18	.901	14

test the research hypothesis where the SPSS software was used during all statistical tests.

The following is the data analysis plan in progressive order:

a) Overview of the study population, including percentages and distribution of participants according to their demographic characteristics, such as age, gender, experience, and job position.

b) Descriptive statistics (Mean and Stand Division) to measure the participants' trending responses to the questionnaire items.

c) One-way ANOVA test to determine differences in employee performance in terms of their demographic characteristics.

d) Test for data normality to determine the use of Parametric or Nonparametric statistics to be used to test the study hypothesis the normality sig value results were above 0.05 which means data is normally distributed therefore parametric approaches were used.

e) Pearson correlation was used to determine the relationship between the dependent variable (Employee performance) and the independent variable (Occupational health and safety).

5.4 Ethics considerations

There are certain ethical issues that need to be considered into account since the research involves a population of individuals and is being conducted within the premises of a company. and they are as follows:

5.4.1 Human participants

a) The questionnaire is directed at the workers of the Waha Oil Company, and their participation is entirely voluntary. It does not target any vulnerable or special groups, such as minors or people with special needs.

b) No potentially embarrassing, offensive, or sensitive questions were included in the survey just general questions that don't have any personal character, In addition to general demographic questions about gender, age, years of experience, and job position.

c) Participation was entirely voluntary, with the participant retaining

the right to withdraw no later than August 7, 2022. Where they had the opportunity to see the participant's information, agree to the informed consent, and how to contact the researcher and his supervisor if needed.

d) The questionnaire also does not include any questions about personal information of a confidential or sensitive nature for participants, such as a social security number, bank account number, medical insurance, or national number, in addition to the possibility of writing a pseudonym instead of the original name, mentioning that it is to be cited in case of withdrawal.

e) The data generated by the questionnaire is completely confidential as it is stored in the researcher's encrypted memory stick with a password, where only the researcher or his supervisor can view the generated data, and the data will be destroyed immediately after the purpose of the study.

6. Results

The presented results represent the participation of 100 employees of the Waha Oil Company, where all questionnaires were collected, and all were valid.

6.1 Participant responses per category

6.1.1 Gender

Figure1, below shows the distribution of participants according to their gender, with males making up the overwhelming percentage at 97%, and only 3% for females.
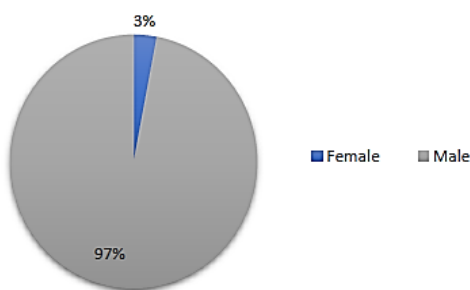

Fig. 1: percentage of responders per gender

6.1.2 Age

The bar graph in Figure 2, below represents the participants according to their age group, as the two age groups 25-34 and 35-44 made up the largest number of participants, with 50% and 34% respectively. On the other hand, the young group of 18-24 constituted only 7%, while the older age group of 45-54 constituted about 9% of the overall participants, and finally, no participants exceeded the age of 55.
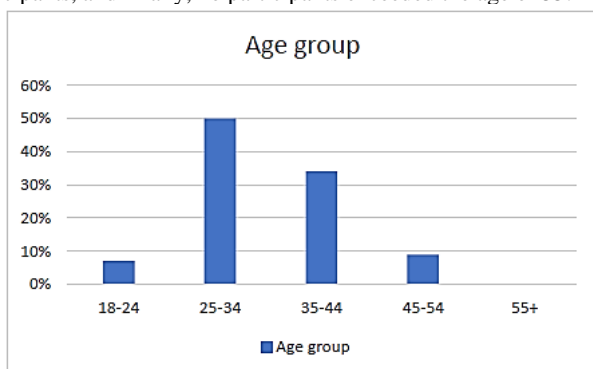

Fig 2: Responses per age group

6.1.2 Experience

The bar chart in Figure 3. below illustrates the distribution of participants according to years of experience, the category of 4-10 years constituted more than 41% of the sample of participants. The experience category 11-20 years comes in second place with about 35%, while both categories (less experienced and those whose years of experience exceeded 21 years) come in last with 6% and 18%,

respectively.

Fig 3: Responses per year of experience

6.1.4 Job position

Figure 4, below represents the distribution of participants according to their job position, the higher percentage represents the ordinary employees by 70%. While those with smaller leadership positions such as supervisors and coordinators represent 20% and 4%, respectively, while the higher positions such as superintendents, managers, and their equivalents represent 2% and 4%, respectively.
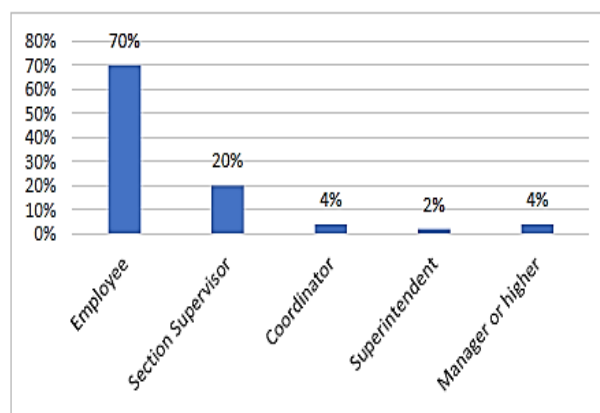

Fig. 4: Responses per position

6.2 Descriptive statistics on participants' responses to the questionnaire

In this part, a descriptive statistic on the participants' responses to some of the most important items of the questionnaire that are related to the objectives of the study, and that is by comparing the total mean of the response on the survey items in Table 3. with Likert scale scoring Interval referenced in Table 2. to find out the overall trend of the participant's response to a particular item.

Table 2: Likert scale scoring range. (Pimentel & Pimentel, 2019)

Likert scale description	Scale	Interval lenght	Interval
Strongly disagree	1	0.80	1.00-1.80
Disagree	2	0.80	1.81-2.60
Neutral	3	0.80	2.61-3.4
Agree	4	0.80	3.41-4.20
Strongly agree	5	0.80	4.21-5.00

6.2.1 Occupational health and safety OHS

The following Table 3 provides a summary of the responses that participants provided on the independent variable items related to OHS. The mean score for the entire variable was 3.5, with a standard deviation of .529, Where the highest responses were to the item (In the workplace there are signs and posters to spread safety awareness) with a mean of 4.14 with a standard deviation of .73 and with a general direction of Agree. With a mean of 3.03 and a standard deviation of 1.1, the Item (Company's local labor union work on creating occupational safety measures) had the lowest average, as its overall orientation was towards Neutral.

Table 3: OHS most important items. (SPSS output).

	Mean	Std. Deviation	Direction
In the workplace there are signs and posters to spread safety awareness	4.1400	.73882	Agree
There are department within the company that are competent to monitor safety and occupational health at work.	3.8300	.79207	Agree
Safety officers at various work sites perform their duties, inform workers about unsafe activities, and provide solutions and advice.	3.8100	98160	Agree
There are procedures and means adopted by the company to reduce work accidents in the workplace.	3.7500	.88048	Agree
The company has a spedial department to provide safety procedures, clarify instructions and distribute them.	3.7400	.89465	Agree
There are competencies and experiences in senior management who can work on developing the management of occupational safety and health systems.	3.4900	.91558	Agree
The Occupational Safety and Health Management enxourages workers to participate in decisions that affect their safety.	3.3900	1.04345	Neutral
I think the worker has confidence in the top management's ability to handle matters of Occupational safety and health in the company.	3.1800	.94687	Neutral
Total responses	3.563	.529	Agree

6.2.2 Management role

As for the package of items in the OHS section of the questionnaire that is related to the role of management role in improving OHS conditions, the participant's responses were towards Agree with a mean of 3.5 and a standard deviation of .55 see Table 5 /Table 4.

Despite the general Agree trend on the questionnaire's items related to the role of management, the participants decided to be neutral regarding the management's encouragement for them to participate in making decisions related to safety in their workplace, as shown in Table 4.**Table 4:** management commitment questionnaire items

	N	Mean	Direction
In the workplace, there are signs and posters to spread safety awareness	100	4.1400	Agree
There are fire extinguishers in all workplaces and there are training programs on how to use them.	100	4.0500	Agree
There are departments within the company that are competent to monitor safety and occupational health at work.	100	3.8300	Agree
Safety officers at various work sites perform their duties, inform workers about unsafe activities, and provide solutions and advice.	100	3.8100	Agree
There are procedures and means adopted by the company to reduce work accidents in the workplace.	100	3.7500	Agree
The company has a special department to provide safety procedures, clarify instructions and distribute them.	100	3.7400	Agree
There is an effective occupational safety and health system that is followed within the company.	100	3.6300	Agree
There are competencies and experiences in senior management who can work on deveioping the management of occupational safety and health systems.	100	3.4900	Agree
The Occupational Safety and Health Management encourages workers to participate in decisions that affect their safety.	100	3.3900	Neutral
Valid N(listwise)	100		

Table 5: participants' overall view toward management commitment in enhancing OHS

	N	Minimun	Maximun	Mean	Direction
Management role	100	2.00	4.79	3.5936	Agree

6.2.3 Employee Performance EP

Table 6. below represents the means of participants' responses to the questionnaire items that are related to EP, the highest item was (You think training is important in improving your work performance) with a mean of 4.59 and a standard deviation of .62 as the general trend of responses to the item was strongly agree, while the lowest item was (You feel that the company is constantly41working to improve your working conditions) with mean of 2.8 and a standard deviation of 1.05 so that the general trend of this item is Neutral. The overall mean score for this variable was 3.47, with a standard deviation of.50, indicating a generally agreeing trend.

Table 6: EP most important items. (SPSS output)

	Mean	Std.Deviation	Direction
You think training is important in improving your work performance.	4.5900	.62109	Strongly agree
You think that being involved in making decisions within the company gives you the motivation to improve your performance	4.1300	.71992	Agree
Management is interested in knowing the reasons thar affect your performance and trying to improve them.	2.9000	1.08711	Neutral
You feel that the company is constantly working to improve your working conditions.	2.8900	1.05309	Neutral
Total responses	3.4771	.50374	Agree

6.3 Differences in employees' views on performance based on their demographic characteristics

In this section, the differences in the employee's views on performance will be identified based on their demographic characteristics, where the gender factor will be ignored because it is not feasible to perform it due to the lack of female participants, which constituted only 3% of the overall sample.

One-way analysis of variance ANOVA will be used in these tests for the following variables: Age, Experience, and Job position. As shown in Table 7. the sig values for the variable age, job level, and experience are greater than .05, and therefore there are no differences in the employees' view of performance due to the demographic variables.

Table 7: ANOVA test between EP and Demographic groups

ANOVA resulte Sig. < .05 there is difference Sig. > .05 there is no difference	
Demographic variable	Sig
Age	.112
Experience	.185
Job position	.285

6.4 The relationship between OHS and EP

In this section, the correlation between the dependent variable and the independent variables will be identified. However, a test of the normality of the data must first be conducted to determine which of the parametric and non-parametric analyses will be used. According to [22], parametric analysis, such as Pearson correlation, is used when the data is normally distributed. On the other hand, non-parametric analysis, such as is violated.

As shown by the SPSS outputs in Table 8. / Figure 5, the sig. value of the normality test between the two variables was .200 which exceeded 0.05 therefore, there are no apparent violations of data normality thus parametric analysis will be used to determine the relationship by using Pearson correlation.

Table 8: Tests of Normality results SPSS output

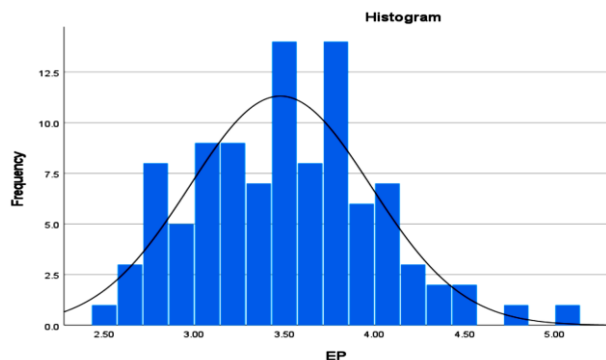| Tests of Normality			
	Kolmogorpv-Smimov[a]		
	Statistic	df	Sig.
EP	.069	100	.200*
*. This is a lower bound of the true significance.			
a. Lilliefors Significance Correction			

Fig. 5: Normality results histogram SPSS output

Table 9: Pearson correlation results between EP and OHS / SPSS output

	Correlations		
EP	Pearson Correlation	1	.723**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	25.121	19.098
	Covariance	.254	.193
	N	100	100
OHS	Pearson Correlation	.723**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	19.098	27.805
	Covariance	.193	.281
	N	100	100

6.5 Pearson correlation results

Table 9. below represents the results of the Pearson correlation test that was conducted between the dependent variable "EP" and the independent variable "OHS", which shows that there is a statistically significant positive correlation between the two variables with .723** and Sig. value .000 which is less than .05 indicating the significance of this correlation.

6.6 Hypothesis testing

Referring to the results of the analysis tests that were presented in the previous sections, in this section, it will be decided to reject or accept the study hypothesis based on the statistical analysis results.

1. The first hypothesis: Null hypothesis. H0 There is no statistically significant correlation between OHS and EP. Alternative hypothesis. H0 There is a statistically significant positive correlation between OHS and EP. According to the findings presented in Table 9., the Pearson Correlation test reveals a significant positive correlation between the independent variable OHS and the dependent variable EP, with a sig value that is lower than.05, which leads to rejecting the null hypothesis H0 in favor of the alternative hypothesis Ha.

2. The second hypothesis: Null hypothesis. H0 Participants do not see that management has any role in improving safety conditions in the company. Alternative hypothesis. Ha Participants see that management is committed to and plays its role in improving occupational safety and health in the company. According to the results in Table 8., which includes the mean of a group of the questionnaire items that are related to the role of management in improving safety conditions, the participants' opinions leaned towards the direction of Agree, and therefore the null hypothesis is rejected in favor to the alternative hypothesis.

3. The third hypothesis: Null hypothesis. H0 There are statistically significant differences in employees' performance views due to their demographic characteristics (gender, age, experience, job position). Alternative hypothesis. Ha: There are no statistically significant differences in employees 'performance views due to their demographic characteristics (gender, age, experience, job position). According to the result of the ANOVA test mentioned in Table 9., there are no statistically significant differences between the participant's response to the variable of workers' performance and their demographic characteristics, and therefore the null hypothesis is rejected in favor of the alternative hypothesis.

7. Conclusion

1. There is a statistically significant linear correlation between the two variables and this relationship is positive, meaning that OHS as an independent variable can predict the EP as a dependent variable.

2. Neutralizing the demographic characteristics of the participants, means that there are no patterns in the response of the participants according to their demographic characteristics.

3. The company's employees believe that the management plays its role in terms of providing safety conditions, however, they chose to be neutral regarding their involvement in making decisions related to safety in their workplace.

4. The study design was based on the participants' responses to the questionnaire and was not based on accident and performance statistics and reports. This is under study and research, is whether this relationship will be maintained by comparing the statistics of accident performance records. Therefore, the results of this study are useful.

5. With all the mentioned above, this study contributed to shedding light on occupational safety and health and its direct relationship with workers in one of the largest Libyan oil sector institutions, which is a new environment and setting for this type of study, as no similar study was conducted in this sector in this country before.

8. Recommendations

The practical implications of this study are summarized by educating and encouraging decision-makers in the Libyan oil industry to invest more in their human resources safety and health by the systematic introduction of safety programs and training, not only for the sake of legal compliance but also to increase the productivity of employees and thus the profitability of these companies.

This study can also have academic applications as it is a starting step for deeper research with a different research design, which should be based on a real comparison between the safety performance of institutions by examining the accidents and injuries statistics work in the company (under study) and between the annual appraisal records of employees in those years which would answer whether this relationship would still exist using these settings or not.

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