

Summary

Health Hazards and exposure indicators among onshore drilling workers: Neglected area needs an action

المخاطر الصحية ومؤشرات التعرض لها بين العاملين في مجال الحفر البري: منطقة مهملة تحتاج إلى عمل

Background: The oil and natural gas sector has a significant place in the world's economy. It increases the risk of work related fatality, injury and diseases. Safety of the employees is the top priority oil and gas industry where exploration activities carried out in deep and harsh environment with more sophisticated technology to meet the market demand increases the risk of employee health and safety (**Adebola, 2014**). Efforts to reduce injuries and illnesses, medical costs, and productivity losses and to improve overall morale are a critical part of these company operations. They must develop strategies for compliance with worker health and safety requirements. Also need strategies for meeting exposure standards. Drilling companies must take precautions that are necessary to limit workplace health and safety injuries and illnesses especially among the major areas of drilling fluid exposure: Shale shaker house, drilling floor, mud pit system, sack room, laundry services, and deck operations (**Bediako and Amorin, 2010**).

The aim: of the present study was to assess occupational health hazards and exposure indicators among onshore drilling workers.

Research questions:

RQ1: What is the awareness of workers about health hazards found in their work place?

RQ2: What are the exposure indicators to occupational health hazards?

RQ3: What is the awareness of drilling workers about hazard control measures used in their company?

RQ4: What is the level of workers' acceptance to health and safety activities applied in the company?

II. Methodology

Research design: A descriptive design was used.

Setting and Sample: Convenience sample of drilling workers were selected under the inclusion criteria (60 workers). The study was done in Egyptian drilling company in Kalbasha, Marsa Matrooh.

Tools of data collection:

Questionnaire was developed by the researcher after reviewing the related literature to assess:

- Characteristics of workers that include; age, experience, training courses and occupation.
- Awareness of workers about occupational health hazards found in their work place.
- The exposure indicators to occupational health hazards.
- Awareness of workers about hazard control measures used in their company.
- The level of workers' acceptance to health and safety activities applied in the company.

The main results of the present study:

- It showed that all studied workers reported chemical hazard one of the occupational health hazards found in their company, and 83.3% of them mentioned physical hazards, followed by ergonomic hazards 58.3% and psychosocial hazards 45.0%.
- The majority of studied workers reported that they exposed to hydrogen sulfide (93.0%) and sodium hydroxide (90.0%) in their workplace and about one third (36.7%) of them mentioned that they exposed to sulphur dioxide (SO₂).
- Most of studied workers were aware about methods of hazards control used in their company, the highest percentages were for using alarm system.
- About two thirds of studied workers reported that they satisfied from the health and safety activities applied in their company.

Conclusion: About one third of studied workers suffered from health problems related to exposure to occupational hazards in their work; they suffered from dermal, respiratory and musculoskeletal problems.

Recommendation: Effective health education programs and obligatory free training about hazards and safety measures should be provided to the workers.