Occupational Health Research Center

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Assessment of Health Safety and Environment Management System function in contracting companies of one of the petro-chemistry industries in Iran:a case study

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Introduction

Health, Safety, Environmental Management Sistem (HSE-MS)

- **Working safely and in an environmentally responsible manner are the right of employees.**

- **Some of HSE-MS benefit**

- **Assessment**
- **Auditing**
- **Implement all requirements of the Oil , Petrochemical, Gas Industry in HSE-MS.**

Introduction (Continued)

Model "OGP" (Seven Elements of HSE-MS)



Material and Method

- **Cross Sectional Study**
- **Participants**

14 Contracting Companies	Field	Workers
6- 7- 8- 9-10- 11- 13	Equipment/facilities maintenance	483
1-2-3	Transportation	
4- 5- 12	Catering	
14	Landscaping	

Material and Method (Continued)

- Data Collection Tool
  - Questionnaire

35 Questions (Managers) → **Based on OGP, Model**

  - Checklist

13 Questions (Workers) → **Actual HSE related activities or indicators**

Material and Method (Continued)

- HSE-MS Guideline Seven Elements
  - Leadership and commitment

3 indicators

  - Policy and strategic objectives

2 indicators

  - Organization, resources and Documentation

12 indicators

Material and Method (Continued)

- HSE-MS Guideline Seven Elements (Continued)
  - Evaluation and risk management
    - 3 indicators
  - Planning
    - 3 indicators
  - Implementation and Monitoring
    - 6 indicators
  - Auditing and reviewing
    - 6 indicators

Material and Method (Continued)

- **Data analysis**
  - **(SPSS) version 19.0**

Questions → **Yes = 10 Score**
Except(implementation & monitoring =20 score)

- **Descriptive statistics (Mean & Percentage)**

Score %	Level Based on Expert Panel
Below 50	Unacceptable
Between 50 and 75	Acceptable
Between 75 and 90	Well
Above 90	Desirable

Material and Method (Continued)

Ethical Consideration



- All participants were given information about this study.
- All the data were kept confidential.

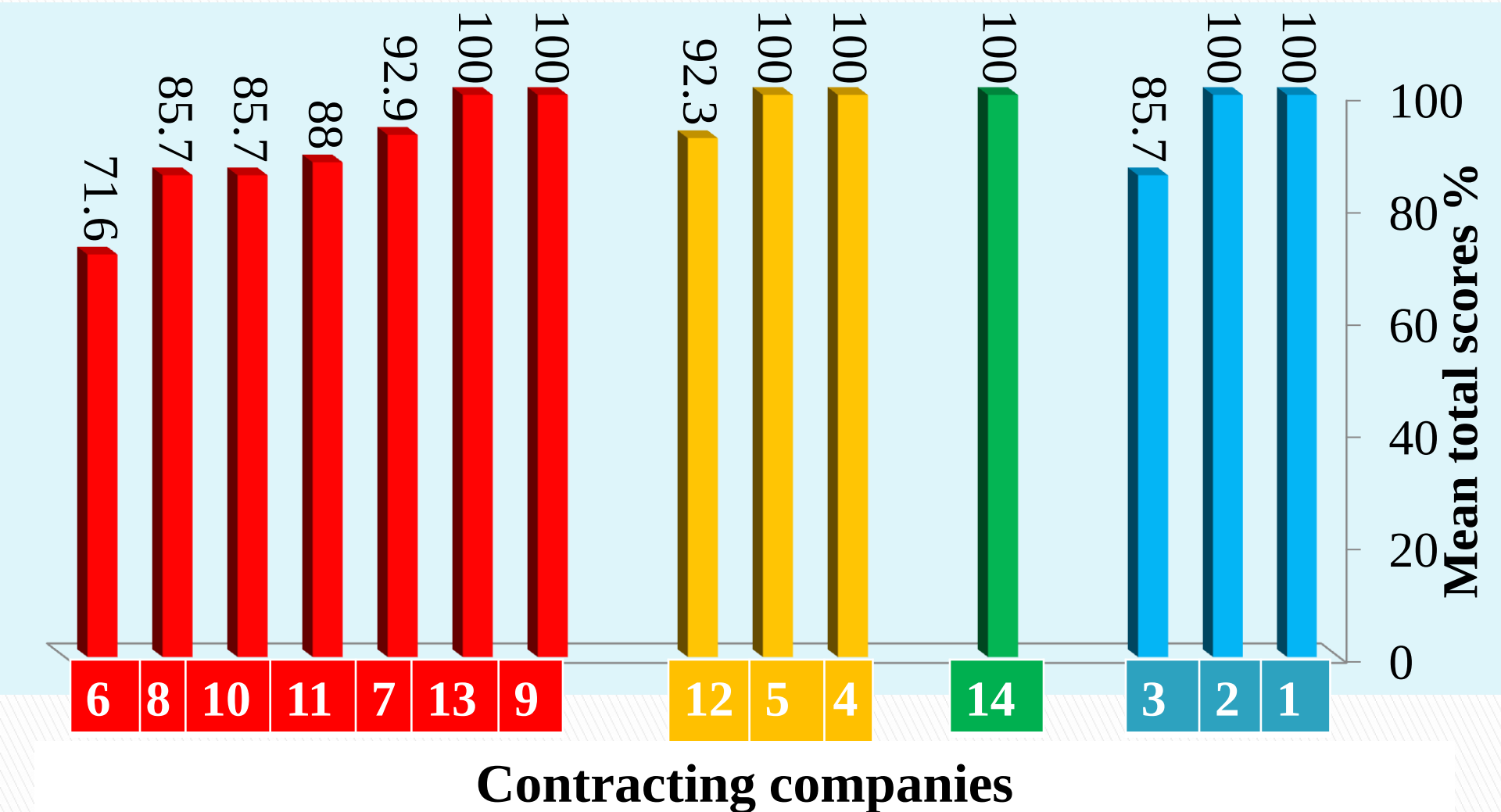
Results

Table 1-Percentage of mean total scores of indicators of 7 elements of HSE-MS of contracting companies

Elements of HSE-MS (Index)	number of Indicators	mean total scores %
Leadership & commitment	**3**	**97.6**
Policy & strategic objectives	**2**	**82.2**
Organization, resources & documentation	**12**	**92.9**
Evaluation & risk management	**3**	**97.4**
Planning	**3**	**88.1**
Implementation& monitoring	**6**	**89.3**
Auditing & reviewing	**6**	**89.2**

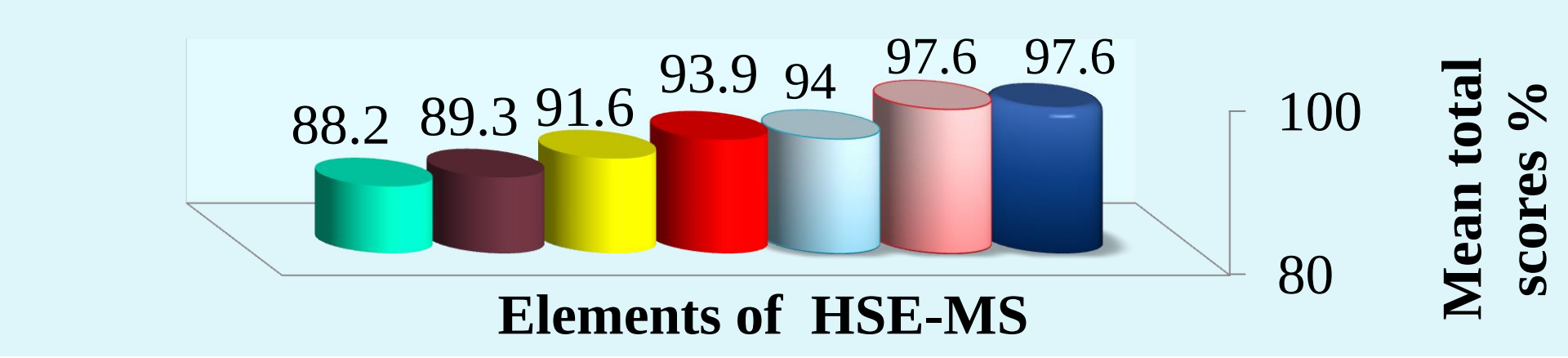
Results (Continued)

Chart 1-Percentage of mean total HSE-MS scores of each contracting companies



Results (Continued)

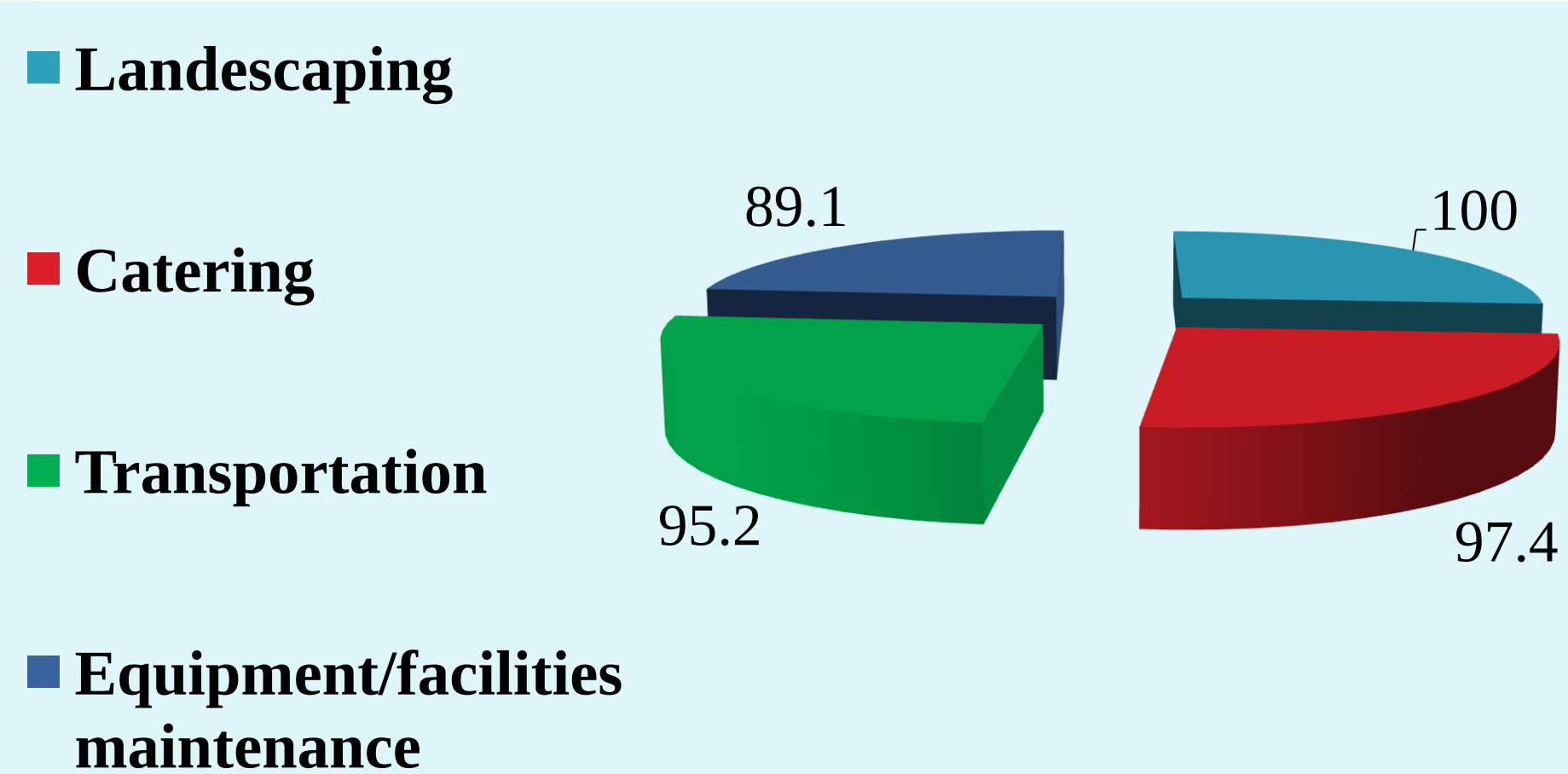
Chart 2 -percentage of mean total scores of each element of HSE-MS of contracting companies



- Auditing and reviewing
- Evaluation and risk management
- Planning
- Policy and strategic objectives
- Leadership and commitment
- Implementation and Monitoring
- Organization, resources and Documentation

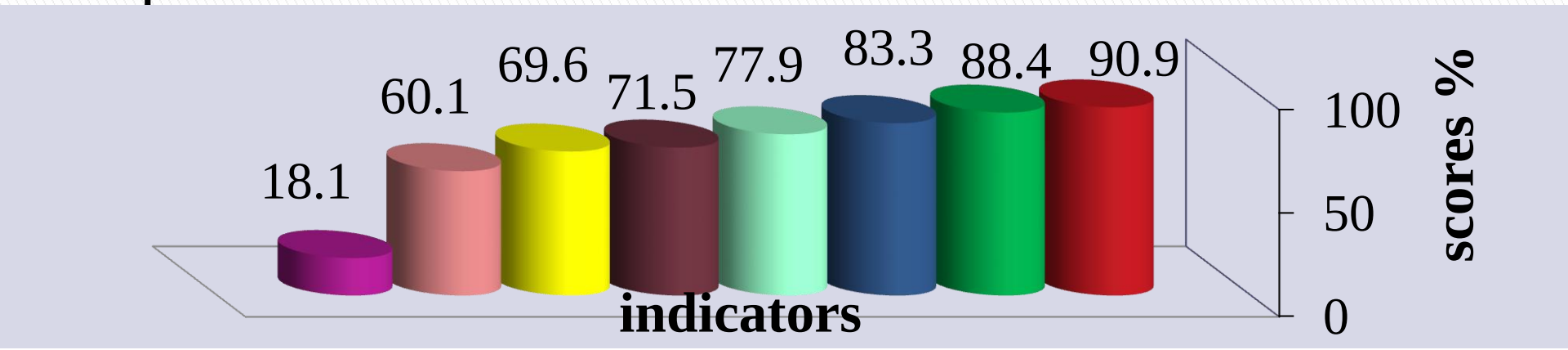
Results (Continued)

Chart 3 -percentage of mean total HSE-MS scores of contracting companies in different field of work



Results (Continued)

Chart 4 - percentage of mean total scores in each indicators reported by workers in contracting companies



- Using protective and safety equipments
- Periodic medical examination
- Training on work skills
- Participation in HSE decision making and implementation
- Emergency preparedness training
- HSE training
- Continued HSE training
- Occurence of injuries

Conclusion

➢Overall functioning of HSE-MS system in contracting company

Item	level
Indicators of 7 elements of HSE-MS in companies	Well or Desirable
Each element of HSE-MS in companies	Well or Desirable
Elements of HSE-MS in each companies	Well or Desirable ❖Except no 6
7 element in different field of companies	Desirable

Conclusion (Continued)

- Overall functioning of HSE-MS system in contracting company (workers' reports)

Mean total scores in each indicators	Indicator
highest	Using appropriate protective equipment
lowest	Continued HSE training
Total	All in two companies

Conclusion (Continued)

- Occupational injuries in contracting company (workers' reports)

Occupational injuries	Field
Maximum	Transportation equipment/facilities maintenance
Fatal	NO

Outline

- This study was the first study conducted to assess the performance of HSEMS

- **Results showed**

  - Need for more auditory and regulatory actions.
  - High level of recallable injuries.
  - No record of fatal injuries.

Outline (Continued)

- **In conclusion**

HSE-MS was functioning at a desirable level

Regulatory monitoring of parent company

However, it was not sufficient

References

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The Basic Rules in HSEE

- **Be Aware!**
- **Be Alert!**
- **Be Alive!**




Thank You!