

## The Role of Supervision and Management Control on the Esfahan Oil Refinery Staffs' Safety

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**Abstract:** The purpose of this research is the supervision and management control on the staffs, so the research method is applied as practical. To gather information the interview and questionnaire tools were used. The statistical sample volume is equal to the statistical society that is about 70 individuals. And data were categorized by the use of Likert comparing method and the obtained results were evaluated.

**Key words:** Events, continuous improvement, control, critical condition, crisis management

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### INTRODUCTION

Because the human is the ultimate of creation and development factor and variation in nature, the final target is the security and health, so experts and professional agents in environment and human health were attributed to control and reduce the working environment events reduction and presenting proper and constructive solutions for staffs mental and psychological and physical health.

Today attention to the human sources is the most valuable view that in recent two decades has made modern thoughts for human source management challenges increasingly, hence, the proper use of human source requires designing specific strategies and performing proceedings to supervise and control management about the staffs security so that by enhancing the staffs mental and physical health level, the management status is identified to achieve the targets and obtaining the acceptable quality level. The human source is the most valuable organizational wealth that has significant importance in keeping it at the mental and physical condition.

In human source keeping system, issues as the health and working environment safety, prevention of events due to working, sport programs operation and health, performing the mental issues and making occupational security are of the fields that could assist the human in keeping and protecting the valuable wealth (Yan, 2000).

### Terms and concepts

**Event (accident):** In dictionary the term event is the occasion or phenomenon and in the international working encyclopedia it is attributed to the predicted event and

out of expectation. We can assume that event is the accident that occurs with physical and chemical damages to people and individuals (Kazemi, 1994).

It is the happening that has occurred during the job and there is no intention for it previously as the involving factors in the event could be considered as human, environment and event

**Continuous improvement:** The professional healthy management improvement process and security to achieve the operational improvement at the whole system in direction of organizational safety and healthstrategy control (Alvani, 1992).

One of the main duties of supervision and controlling management on the activities is to identify everything according to the plan based on the Henry Fayul idea, the released instruction and determined principals are called controlling.

**Crisis condition:** Conditions under which the factory, organization or system is faced with collapse.

**Crisis management:** Combination of legal authorities, organizational institutions, equipments and physical facilities and methods, operational plans studying programs and communication and informational systems that are used for designing critical condition and organizing.

**Hazard:** The damage potential source or condition it is actually the human injuries that lead to damages to properties and equipments, environment or combination of them.

**Incident:** It is the accident that leads to occurrence of an event or it has potentiality to occur an event.

**Monitoring 5:** It is the process that evaluates the operation quality continuously and it has effect on the individual or group behavior.

**The occupational health and safety (Jelodary, 2000):** It is the system of conditions and factors that could affect the staffs, workers and personnel's health.

**The OA and S management system:** A part of management system that facilitates the safety and health risks due to organizational activities.

**Risk:** It is the combination of function or possibility and incidents due to a subject of dangerous event occurrence.

**Safety:** It is the degree of hazards scape that protects the human source and health toward the industrial dangers. The environment condition effect should be safe and secure.

## MATERIALS AND METHODS

The present research is practical in which the research has used the past studies and events back grounds according to which he has tried to evaluate the managers, experts and supervisors view about the safety through the safety analysis techniques by questionnaire and available interview and by presentation of proper strategies in presenting proper techniques in prevention of management events occurrence it could assist the management events avoidance in controlling and supervision issue.

The statistical society in this research includes the management, experts and supervisors categories in related organizations and departments of Esfahan oil refinery that 88 individuals of statistical society were considered as the research statistical sample according to the gathered questionnaires in n = 70 (Table 1).

Esfahan City oil refinery company has been considered as the research main environment that researchers in library method by using scientific sources, magazines, occurred events information in past through providing questionnaire, research and present interview with referring to the available documents has attempted to gather documents and information.

In this research, the researchers has attempted to evaluate the events during years 76-80 to realize the mutual effects of supervision and managers control (as the independent variable) on the events reduction (as the

Table 1: The research statistical sample and society presentation

Job category	Total	Gathered questionnaires	Diploma	Post diploma	BS	MS
Manager	7	5	-	-	3	2
Expert	35	38	-	-	25	3
Supervisor	46	37	25	10	2	
Total	88	70	25	10	30	5

Table 2: The test signs concepts

Test signs	Concept
j	Questionnaire questions subcategory quantity
S <sub>j</sub>	The j sub test variation
S <sup>2</sup>	Test total variation
α	Test accuracy coefficient

Table 3: The effective factors grade average comparison on reduction of events and prevention of their occurrence

Groups	Factors	Grade average
A	Factors which are influential in staff mentality	03/4
B	Factors which have influence on the events occurrence roots reasoning from the managers' and supervisors view	84/2
C	Factors which are influential in working environment safety and obeying security principals from the managers' and supervisors view	41/2
D	Factors which are influential in safety training classed holding that leads to reduction of events	04/3
E	Factors which could be effective on the events occurrence prevention	69/2

dependent variable) to identify that to what extent the techniques and training methods with proper planning could avoid unintentional effects and provide the proper results as much as possible. To determine the measurement tool safety capability and proving testing by the use of cronbach's alpha, the alpha coefficients were calculated according to below equation (Table 2):

$$r_{\alpha} = \frac{j}{j-1} \left( 1 - \frac{\sum s_j^2}{s^2} \right)$$

The distributed questionnaire validity coefficient between the respondents was equal to 0.86 that was meaningful in x = 1% and it shows the high validity of measuring tool:

$$r_{\alpha} = \frac{30}{29} \left( 1 - \frac{34.59}{205.07} \right) = 0.86$$

The selected tool for questionnaire research included 30 questions that the researcher has changed the quality factors to quantity types by the use of Likert and by valuation of these factors from 1-5 the effective factors influence rate has been determined by categorization method in reduction of events and prevention of their occurrence (Table 3).

$$X_r^2 = \frac{44}{35}$$

According to  $X_r^2$  at level of  $P \leq 1\%$ . We see the meaningfulness; therefore, the factors categorization from the respondent idea is the same in reduction of events and prevention of their occurrence which has not been effective and the most related reason is due to group A and the minimum rate is related to the group C.

## RESULT AND DISCUSSION

In this research, it has been attempted to evaluate the management role in improving working environmental condition and the results were presented in the form of effective factors in safety and health condition improvement and available obstacles. The effective factors in improving health condition and working environment safety are including blow items:

- Increase of workers cooperation in safety and health programs
- Increase of managers awareness and priority in safety and health issues
- Activity toward removing health problems solving

Available obstacles in improving working condition that are including:

- Client attention to safety issues and prioritization
- 2-workers attention to safety issues
- Defected knowledge and information of clients about the staffs safety problems
- Client information and knowledge
- Economical improper condition

While each of above mentioned obstacles is removed through management modern methods application, the safety condition improvement and working environment safety will quarantine the staff health protection.

**Edited programs:** Success in performing security management system is due to the changing system that paves the way for scientific outcomes that is essential for achieving the staffs' health targets simultaneously to the economical development that leads to the correct

management in controlling and supervising staffs which is one of the important factors in efficiency and increase of practicality.

## CONCLUSION

The result of this research represent that various obstacles as knowledge and defected information of staffs about security issues and improper conditions of economy are effective in working environment that by correct planning, staff training and application of new management method and staff cooperation we can proceed to improve the working environment correction and saving it which are influential factor in keeping human sources.

## SUGGESTIONS

- By increase of personnel safety culture we can avoid the human damages and events occurrence to some extent
- Preparing report about the unsafe condition realization and continuous following to remove it
- Making strengthened policies in addition to continuous supervision in performing security regulation and development of working environment safety standards
- Staffs cooperation in safety training plans and use of their suggestions in improving unsafe conditions
- Make industrial units staff familiar with correct working methods and make them familiar with the systems and methods to come up with events and prevent of their occurrence

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