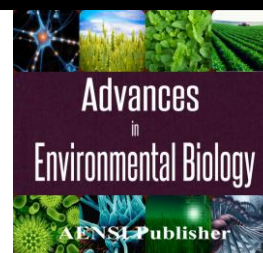




AENSI Journals

## Advances in Environmental Biology

ISSN-1995-0756 EISSN-1998-1066

Journal home page: <http://www.aensiweb.com/AEB/>

## Relationship Between Safety Environment and Job Satisfaction of Employees in Sabzevar Steel Project

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### ARTICLE INFO

#### Article history:

Received 15 June 2014

Received in revised form

8 July 2014

Accepted 4 September 2014

Available online 20 September 2014

#### Keywords:

Safety environment, satisfaction, employees, Sabzevar steel project

### ABSTRACT

Introduction: Safety environment Governing workplace are included resulting values, attitudes and interests of individual and group Competencies and patterns of behavior that management commitment to immunity And occupational health organization, management style and specifies its effectiveness and job satisfaction indicates reacting That individuals by comparing actual achievements and anticipated the achievements comparing with their jobs shows. Methods: This study is a descriptive - analytic study Among the staff Sabzevar steel projects in 1393 was done the number of samples with a confidence level of 95% random sampling stratified 69 individuals were determined. ., Environmental research projects Sabzevar steel Which includes various departments and units Two data collection instruments used in this study were safety environment and job satisfaction and Were completed by the workers and the analysis of data using has been used SPSS version 16. Results:

- 1 - There was no significant relationship between job satisfaction and safety climate
- 2 - Predicted that workers can express their satisfaction, Compared with their unhappy colleagues, Further will be committed to safe work policies be the same quality the average two groups of workers are satisfied and dissatisfied workers.
- 3 - To predict that workers can express their satisfaction Compared to their unhappy counterparts, relatively fewer events will be recorded. Average satisfaction with the quality of the same variable in both injured workers and accident is not.

Conclusion: The assessment of safety environment can be described as a preventative index to assessment of the safety performance from the results obtained it can be used to improve Safety of the organization.

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**To Cite This Article:** Aziz Rahimizadeh and Mustafa Karami., Relationship Between Safety Environment and Job Satisfaction of Employees in Sabzevar Steel Project. *Adv. Environ. Biol.*, 8(12), 835-841, 2014

## INTRODUCTION

The concept of safety environment in the past few decades, have been entered to the Safety issues Although safety environment doesn't completely cover the safety culture But there is a good source for information about safety culture safety environment To survey perceptions and understanding of employees about workplace Management level of interest and actions related the degree of contributions of individuals Pays on risk control

Safety environment governing a workplace the resulting values, attitudes and interests of individual and group Competencies and patterns of behavior that management commitment to safety And occupational health organization and management style will determine its efficacy Many researchers have investigated the structural safety environment But until the safety environment model proposed in 1980, No agreement on a number of factors that are necessary to measure safety environment Or the factors that are more effective doesn't exist. [1, 2] Safety environment, have different meanings in different cultures Safety culture are often misunderstood. Safety culture is a part of the organizational culture it has a deeper meaning than safety environment and the core values that are hardly available, was built And human resources and safety Is associated in an organization [3]. Safety climate is a useful concept The notable application to infer employee performance And identifying ways to control damage And finding appropriate ways (Rantann, Haytiynin and Matiyila, Holmes and Brown) And managers to find appropriate ways In Training And safety training And programs of the fittest and behaviors, evaluate the impact of research methods and Utilize in the field of safety environment [4].

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In this context, zahar1980 offered seven different factors describes the organization of events and some factors isolated eventful factories from Low incident factories. Brown and Holmes, in 1986 they used 40 questions and found a model that had three factor

Doubler and Beland To test the model 3 And Holmes used nine variables which It was almost like ZAHAR questionnaire Job satisfaction represents Attitudes and feelings that people have toward their jobs In other words, job satisfaction, indicating the reaction People by comparing actual achievements Expected achievements towards their jobs, Lak defines job satisfaction felt and believes that job satisfaction consists of four factors, salary, conditions promotion, career (and conditions employment benefits) The agents and relationships with colleagues and managers, and job characteristics In addition to these factors, personal characteristics of employees They also has an effect the rate of job satisfaction. One of these features is the age. Older workers generally are more pleasing. Intelligence also has an effect on job satisfaction. So that if consciousness is consistent with job they feel more happiness If intelligence employees is greater or less than Result to unhappiness [6].

Victorrom defines Job satisfaction as a psychological tendency toward role that employment plays in their jobs, In this definition According to the concept the role which consists the effectiveness in the performance of duty by a person if employee found themselves useful in their organization As a result, get satisfy, Fisher and Hanna, job satisfaction are considered psychological factors And it some kind of adaptation emotional that the jobs and conditions of employment assume. If be desirable job In this case, the person is satisfied with his job On the contrary, the job is not optimal In this case; the person will start to job dissatisfaction and seek to change it

Job satisfaction is also position in which social psychology perspectives Approaches complement other social scientists Such as economists and political scientist. Discussions about job satisfaction and study about work Is related to the pre-World War I At that time was thought which increase in wages Rest periods, increasing job diversity, social harmony and playing music at work Lead to a job satisfaction . Which results of studies on the effects of the so-called "Hawthorne" was obtained the newest model of the process to achieve job satisfaction and factors affecting it are presented which is related to the year 1977 (farat and Stark) has said.

In this study we have investigated the relationship between job satisfaction and safety environment. The main purpose of this study determine the relationship between safety environment and job satisfaction in Sabzevar steel project And specific objectives include the following cases

Hypothesis 1- are there a positive relationship between job satisfaction and safety environment workers who has high degree satisfaction the same amount of positive observations regarding the safety environment and vice versa

Hypothesis 2- expected that workers can express their satisfaction Compared to their unhappy colleagues; they will be committed to safe work policies.

Hypothesis 3-expected that workers can express their satisfaction Compared to their unhappy counterparts; relatively fewer events will be recorded

## MATERIALS AND METHODS

This study is a descriptive - analytic study was conducted among 2014 employees in Sabzevar steel projects The number of samples with a confidence level of 95% and a stratified random sampling 69 individuals were determined Environmental research is a project of National Iranian Steel Company Which includes different parts. The instrument used in this study, two questionnaires Information on safety environment and job satisfaction were completed by workers

Questionnaire and demographic information including variables including age, marital status, education level, work experience, a second job, working hours of the day and type of job.

Safety environment questionnaire is a questionnaire which contains 37 questions the questions in the questionnaire 5-choice Likert scale as "totally disagree, disagree, neither agree nor disagree, agree, strongly agree" Has been set By doctor Isa Mohammadi Zeidi, Doctor Rabi Ullah Farmanbar And Mohammad Sharif Husseini Determine the validity and reliability of the safety environment as measured by Cronbach's alpha coefficient, which is known to be variable inner compromise In this study all the factors above 0/6 The results show the reliability coefficient for the 0/82 for the first part Contains 21 variables Reliability coefficient 0/ 87 for second part was Consists of 16 variable

In the job satisfaction was used JDI questionnaire total of that 70 questions which had 5 selection The validity of the job descriptive index Opinion 5 persons and experts and professors of the Faculty of Economics, University of Isfahan, Using opinion of these professors and validity of this test can be job satisfaction It covers a lot of different categories. About calculation Unity and inner stability Job Description Index using the Cronbach's alpha respectively these coefficients were obtained: Nature of work (occupation) 0/80 Supervisor (direct responsible) 0/89, Et al 0/ 87 Promotions (upgrade) 0/90 Salaries and benefits 0/ 90 and workplace 0/ 80

Analysis performed on this test indicate that by MARAI which Job Description Index include Two main factors "job performance "The 34/16% of the total variance explained And components Promotion Salary and workplace are the important factors

JDI is the reliability of the questionnaire was evaluated by Cronbach's alpha coefficient which alpha level of 0/10 had been significant (% 93) This indicates the high reliability of the measuring instrument For data analysis has been used SPSS, version 16

Before determining the appropriate statistical methods to analyze, Assumption of normality, descriptive observations with the use of drawing chart Histograms and normal probability As well as inferential statistics using the Kolmogorov - Smirnov test, is investigated. If observations do not follow the normal distribution, non-parametric methods of statistical analysis used

#### Limitations:

Participants need to remember bad events industry was the main limitation of this study Analysis of the accident that happened in the past is always a memory error another limitation Method was reported by someone. Answers are often influenced by misinformation especially those that have incompatible job to counter this threat, the participants were promised that their data will be written to nameless and any member of the organization is not involved in any way in this investigation.

#### Discussion of Results:

Presents descriptive analysis of the demographic variables

**Table 1-1:** Sample Group of gender.

Percent	Abundance	
95.7	66	men
4.3	3	women
100.0	69	total

According to Table (1-1), most of the respondents are men.

**Table 2-1:** Experience An occupational event sample.

percent	abundance	
87.0	60	Don't have
13.0	9	have
100.0	69	total

According to Table (1-2), most respondents do not have a history of occupational accident

**Table 1-3:** Education of sample group.

percent	Abundance	
18.8	13	Cycle
49.3	34	Diploma
11.6	8	Associate Degree
20.3	14	Bachelor
100.0	69	Total

According to Table (1-3) most respondents were a diploma degree

**Table 1-4:** Marital status of sample group.

percent	Abundance	
14.5	10	single
85.5	59	married
100.0	69	total

According to Table (1-4) most of the respondents are married.

**Table 5-1:** Second job sample.

percent	abundance	
98.6	68	Don't have
1.4	1	have
100.0	69	total

According to Table (5-1), most respondents do not have a second job.

**Table 6-1:** Descriptive statistics of demographic variables.

The maximum amount	Minimum	Standard deviation	middle	average	number	
41.00	23.00	4.72157	30.000	31.029	69	age
15.00	1.00	3.95973	6.0000	6.3768	69	Work Experience
10.00	9.00	.48419	10.000	9.6377	69	The rate of the working day

**Table 7.1:** Descriptive statistics of safety environment variables.

The maximum amount	Minimum	Standard deviation	middle	average	number	
5.00	1.00	.84717	3.6000	3.4691	68	Management commitment to safety and priority safety issues
5.00	1.00	.94040	4.0000	3.7992	69	Knowledge workers and obey safety rules
5.00	1.00	1.00468	4.2500	4.0942	69	Workers' attitudes towards safety issues
14.40	1.00	1.59222	4.0000	3.9884	69	Workers' participation and commitment to safety rules
5.00	1.00	.96775	3.6667	3.5990	69	Workplace Safety
4.75	1.00	.93539	3.0000	2.7572	69	Emergency preparedness in the workplace
3.33	.67	.74057	2.0000	1.7826	69	More attention and higher priority on the safety of the products
5.00	1.00	1.16289	2.5000	2.5652	69	Ignoring the risks

**Table 8-1:** Descriptive statistics of variables of job satisfaction.

maximum	minimum	Standard deviation	middle	average	number	
5.00	2.18	.71080	3.4091	3.4666	69	Occupation
5.00	1.00	1.05397	4.0714	3.8043	69	Directly responsible
5.00	1.00	1.01854	3.6364	3.6943	69	Colleague
5.00	1.00	.96611	3.2857	3.1429	69	Upgrade
5.00	1.00	.97510	2.5556	2.6441	69	Salaries and benefits
5.00	1.00	.96095	3.2857	3.2919	69	Working conditions

**Table 9-1:** Descriptive statistics of the main variables study.

maximum	minimal	Standard deviation	middle	average	number	
4.91	.96	.64355	3.2646	3.2571	69	Safety environment
5.00	1.64	.70056	3.4562	3.3407	69	Job Satisfaction

Inferential statistics in this section, using appropriate statistical tests we will test this hypothesis, as mentioned in the preceding sections of this study, subjects were divided into three distinct groups. In the following, we will report the results to the assumptions of this study.

Analytical methods (test, Kolmogorov – Smirnov)

**Table 10-1:** Test results of Kolmogorov – Smirnov.

Significance level	The test statistic	number	Variable name
.131	1.167	68	Management commitment to safety and priority safety issues
.024	1.485	69	Knowledge workers and obey safety rules
.019	1.525	69	Workers' attitudes towards safety issues
.045	1.061	69	Workers' participation and commitment to safety rules
.052	1.097	69	Workplace Safety
.238	1.031	69	Emergency preparedness in the workplace
.044	1.380	69	More attention and higher priority on the safety of the products
.239	1.030	69	Ignoring the risks
.790	.651	69	Occupation
.201	1.071	69	Directly responsible
.358	.926	69	Colleague
.380	.910	69	promotion
.648	.738	69	Salary and benefit
.709	.702	69	Working conditions
.007	1.675	69	Safety environment
.817	.634	69	Job Satisfaction

Test, Kolmogorov - Smirnov hypothesis under study are defined as follows

$H_0$  = Observations follow a normal distribution

$H_1$  = Observation does not follow a normal distribution

Thus Considering that the test statistic is variable between 1.96 to -1.96 observations normality assumption (null hypothesis) is not rejected.

The main hypothesis of this study:

Check the status of variables (one-sample Student t-test)

This test compares the mean of a variable to a fixed value, it is designed. Assumptions of the study are as follows:

$$\begin{cases} H_0: \mu = 3 \\ H_1: \mu \neq 3 \end{cases}$$

**Table 11-1:** Test average comparison.

95% confidence interval		Significance level	The test statistic t	Standard deviation	AVAREAGE	Variable name
Upper bound	Lower bound					
.4117	.1025	.001	.64355	3.2571	69	SAFETY ENVIRONMENT
.5090	.1724	.000	.70056	3.3407	69	JOB SATISFACATION

The confidence level of 95% significance level The variable safety ENVIRONMENT and job satisfaction compared with 0.05 Note that the significance level IS of less than 0.05 And the corresponding confidence intervals are also positive range represents the ideal situation both variables in the organization.

#### Conclusions:

Hypothesis 1. are there a positive relationship between job satisfaction and safety environment the high degree of job satisfaction of workers, the proportion of positive observations regarding the safety environment and vice versa

Pearson for investigating the correlation between two variables is statistically significant or not, we test the following hypotheses.

$$\begin{cases} H_0: \rho = 0 \\ H_1: \rho \neq 0 \end{cases}$$

Represents the correlation coefficient between two variables is studied in the society.

**Table 12-1:** Evaluation of correlation value.

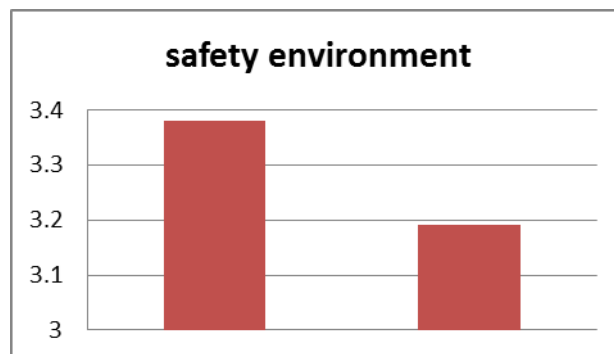
Job Satisfaction	The correlation coefficient		Safety environment
-.194	Significance level		
.111	Number		
69			

Comparing the significance level of the test error rate of 0.05 (greater than 0.05), it can be concluded that there is no significant relationship between job satisfaction and safety environment

Hypothesis 2 Predicts that workers who express satisfaction with their job, compared to their unhappy colleagues, the more they will be committed to safe work policies

Student t-test for two independent samples the test to compare the mean of a variable in two independent groups design. Assumptions of the study are as follows:

$$\begin{cases} H_0: \mu_1 = \mu_2 \\ H_1: \mu_1 \neq \mu_2 \end{cases}$$



**Table 13-1:** Test comparison of two independent groups.

95% confidence interval		Significance level	The test statistic t	Standard deviation of the difference	The average differences	Variable name
Upper bound	Lower bound					
.511	-.137	.253	1.152	.162	.187	Safety environment

P-value obtained at 95% confidence level for safety environment variables were compared with the value 0.05 Note that this value is greater than the coefficient of error (0.05) IS Not reject the hypothesis  $H_0$  Note that the confidence interval includes zero, indicating a range of quality out of the same in the two groups of workers are satisfied and dissatisfied workers.

Hypothesis 3 Predicts that workers who express satisfaction with their jobs than their unhappy counterparts, relatively fewer events will be recorded.

Student t-test for two independent samples

The test to compare the mean of a variable in two independent group's design Assumptions of the study are as follows:

$$\begin{cases} H_0: \mu_1 = \mu_2 \\ H_1: \mu_1 \neq \mu_2 \end{cases}$$

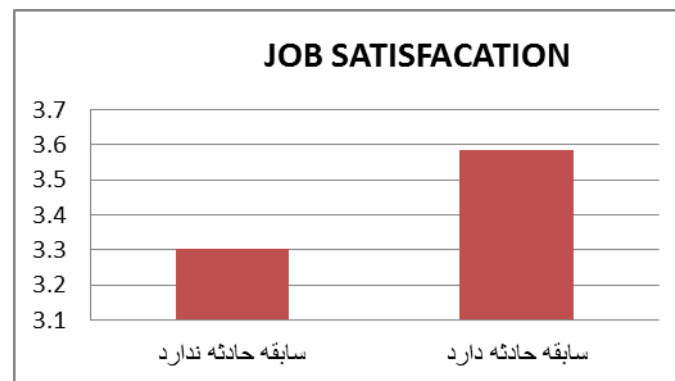


Table 14-1: Test comparison of two independent groups.

95% confidence interval		Significance level	The test statistic t	Standard deviation of the difference	The average differences	Variable name
Upper bound	Lower bound					
.221	-.777	.269	-1.114	.249	-.278	Safety environment

At the 95 percent confidence level p-values obtained for the variable of job satisfaction compared with 0.05 Note that this value is greater than the coefficient of error (0.05) IS Not reject the hypothesis  $H_0$  Note that the confidence interval includes zero, Represents the average of the same variable quality and satisfaction in the two groups of injured workers AND is not INJURED

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