

## **Analysis of Factors Affecting the Quality of Employees Training in Tehran Emergency Center**

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**Abstract:** The aim of this study is factors affecting the quality of employees training in Tehran emergency center. The method is descriptive-survey. The statistical population included all workers in Tehran Emergency Service Center which their number was about 343. Referring to Morgan's chart, 182 samples were selected randomly using random sampling. In this study a questionnaire was used in order to measure and evaluate. Validity and reliability of questionnaire was tested through the pilot questionnaire on a sample size of 20 people and reliability was estimated through Cronbach's alpha at 891. This amount represents the high reliability and internal consistency of questions in the questionnaire. To describe the data, we used frequency tables, mean line graphs, measures of central tendencies such as mean, standard deviation, skewness and elongation. Statistical hypothesis of assumptions was accomplished using inferential statistic such as Kolmogorov-Smirnov test, Chi-square, Mann-Whitney and Kruskal-Wallis tests.

**Key words:** Quality of training, Tehran Emergency Center, course evaluation, elongation, assumptions

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### **INTRODUCTION**

In the contemporary world, more than ever, survival of organizations depends on the balance between methods of work in organization and change, innovation and organizational learning. The management and educational planning experts believe that the key to this balance lies in the use of effective training mechanisms for staff. Training and development of human resources is considered as one of the main strategies of organizations to adapt positively to changing conditions. The life of organizations largely depends on the skills and knowledge of staff, better capabilities in these are as leads to more adaptable organizations to the changing environment. Training and development, continuing and planned education by management helps to improve competency levels of organizational performance. Staff also must be trained to overcome the problems and difficulties caused by the rapid changes of the organization, so they can better take advantage of their talents and help the organization to achieve its goals. One of the ways to do this mission is also employee training which provides access to short-term training for staff to maximize their abilities, skills and attitudes.

In line with more complex jobs, the importance of employee training also has been raised. Rapid changes in the last quarter of the century in the developed countries, has caused increasing pressure on organizations to

provide services that adapt to the current situation. Moreover, the possibility that an employee learns a skill with the help of a teacher and continues this way to more than a few decades without fundamental change is very weak or totally impossible. Officials in organizational units are forced to think about the position and success of their organization, and thus one of the options for increasing knowledge in the organization is the employee training courses. Supervisors believe that the employee training courses can foster the knowledge, skills and appropriate attitudes in staff (Edmonds, 2007) and in the meantime, studies have shown that high quality employee training could be one of the factors influencing the effectiveness of the organization. Therefore, in this study we focus on identifying and analyzing the factors affecting the quality of the employee training in the Tehran Emergency Center. Regarding these issues, in this research we seek to answer the question, what factors improve the quality of employee training in Tehran Emergency Center.

Ghasemi investigate the effect of employee training on job performance of staff of Bank Sepah in Tehran. This study is descriptive and with functional purpose. The statistical population is all staff of Bank Sepah in Tehran Province. To determine the sample size, random sampling was used due to the normal distribution of the sample. The data collecting method was through questionnaire designed by the researcher which measure the performance of staff in three areas of employment,

vocational skills and changing attitude. Questionnaires reliability was determined 94 using Cronbach's alpha statistical method. According to the normal distribution of the sample, t-test and SPSS Software was used for data analysis. Employee's performance in three areas (job knowledge, technical and professional skills and attitude change) was found higher than the standard and ideal level. The findings also showed that employees have found these training seff ective in their professional knowledge and vocational and technical skills more than change in their attitudes change.

Saadatmand and Mohaqqeyan (2014), studied the factors affecting the quality promotion in employee training of elementary teachers in Shahin Shahr-Isfahan. The research method was descriptive-survey. The sampling method is stratified research. Data were collected by self-made questionnaire with 39 questions. The questionnaire's reliability was determined/88 using Cronbach's alpha coefficient. Data were analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (t-test). The results suggest that factors such as training method, application assessment, implementing of continuous evaluation, using encouragement methods and monitoring education process were more effective than the average on the quality improvement of employee training.

Shabak studied factors affecting the quality of long-term employee training and the degree of these factors from the perspective of teachers, principals and education professionals in Tehran. For the purposes of the study, a sample of 600 teachers, principals and professionals were selected using random sampling and a questionnaire includes 86 questions was conducted on them.

Cronbach's alpha coefficient was equal to 986. The simple structure obtained these results: the first factor with 21 articles reflects the impact of budget and time, the second factor with 22 articles reflects the impact of educational content, the third factor with 16 articles reflects teachers scientific level, the fourth factor with 15 articles reflects students motivation and effort, the fifth factor with 10 articles indicates the influence of the educational environment and the sixth factor with 3 articles represents the management of the course and other factors, according to Scree plot did not have a significant impact and have been removed. The results of the variance test for comparison of four groups: there is a difference between the four groups. Group 3 is different from Group 1 and 4 and from the statistic perspective it has a significant difference. Total average of Group 3 (teachers) is more than others.

Andtaymaz (2001) has studied the ways to enhance the effectiveness of training in organizations. In this

regard the opinions of managers and employees were investigated about the 6 main elements educational courses: needs assessment, learning resources, coaching, methodology, implementation and evaluation conditions. Research survey was chosen to answer these questions. The results showed that among the main elements of a training course, training methodology was more effective than assessment, learning content, the coach and evaluation.

Hatami in a survey entitled assessment and evaluation of employee training of human resources in Azad University in improving the performance of managers and employee, studied the knowledge, skills and attitudes of administrators and faculty staff in academic units. The results revealed that factors such as knowledge, skills and attitudes have the same effectiveness degree.

Kazemi and Hamrahi studied the evaluation of quality of employee training courses in the province Fars in Iran based on the CIPP model. The statistical population in this study consisted of all those participated in employee training courses organized by the Office of Research and Training in Fars province during 2008. From the perspective of learners, the findings of this study showed that background aspect in employee training in the province of Fars have a desirable quality. Input as well as output aspects in employee training in the province of Fars do not have a desirable quality.

Fatehimannesh in a study entitled the effectiveness of employee training of staff members in crisis management bureau, has investigated the effectiveness of employee training on staff members of crisis management bureau in Tehran in order to provide appropriate instructional strategies to improve preparedness for earthquake crisis management. The results provided appropriate strategies to specialized training for staff members in Tehran's regional crisis management (with an emphasis on preparedness against earthquakes): to review topics of the course according to their strengths and weaknesses and needs derived from the research results. Completing the database of crisis management bureau according to current and future needs, developing and implementing a comprehensive training program with emphasis on readiness of employees in crisis management headquarter in the earthquake situation.

Nafar as factors studied the effective factors on success in short-term training courses for administrators in Department of Energy. This research is a descriptive research and has been done in order to identify and prioritize the factors affecting the success of short-term training courses for administrators in Department of Energy. At first four categories including educational,

organizational, interpersonal and environmental that was thought to be the main factors determining the most relevant to their research was selected and then based on the framework of the study, 94 factors were developed. These 94 factors which include 26 training factors, 40 organizational factors, 13 individual factors and 15 environmental factors were assessed in form of a four-part questionnaire through six group of responders including: scientific experts, the water and power industry experts, designers of training courses, executives and managers and experts in training centers and executives attending training courses. Among most important results can be noted that from a total of 94 factors, 46 of them can be put in six separate groups including 16 Educational factors, 19 organizational factors, 10 personal factors and one environmental factor. The results also reflect the relative consensus among the second, third, fourth, fifth and sixth and relative differences between first and sixth group.

Mashir (1998) in his survey entitled "Assessing the Quality of Employee Training in Gilan Agricultural Department from the Perspective of Employees" concludes that specialized training courses have increased awareness of employees but do not satisfied the higher needs of employees. The time and management of courses were appropriate and also instructors had good scientific and theoretical capabilities. Minor features such as facilities were relatively good but the time allocated for subjects was not enough.

Hashimoto and Yu (1980) in a study which was conducted in France from 1986-1992 showed that productivity in industry has increased due to increasing of trained staff. In other words by one percent increase in trained staff, productivity increases 2%.

Walter (2000) in his study deals within effectiveness of employee training courses. The results of his study indicate that employee training are not effective due to high costs and a waste of time and ineffective teaching methods. Maybe such conclusions could be linked to cases in the US air travel agencies. According to this study, if the training courses are not commensurate with the job field of aviation employees, they cause symptoms such as increased errors, reduced productivity and effectiveness.

Ayton (2000) in one of his researches on the importance of employee training, came to the conclusion that organization's quality and employee's attitude can be raised through high-quality training courses and high technology facilities.

**MATERIALS AND METHODS**

**The statistical population and sample:** The statistical population included all employees in the central building of emergency center in Tehran. According to information

their number has been reported about 343 people. The sample size is estimated 182 people according to Morgan's table. The selection of people is done through random sampling.

**Research tools:** Specialized books and articles have been used for collecting data and research history. The information is gathered through distribution of a questioner.

**The data analysis:** Descriptive and inferential statistical methods were used according to the hypotheses of survey to analyze the data obtained from questionnaire. In this study we have used frequency tables, line graphs of means, central tendency indexes such as mean, standard deviation, skewness and elongation. Appropriate inferential hypothesis including Kolmogorov-Smirnov test, Chi-square, Mann-Whitney and Kruskal-Wallis were used in order to do statistical analyzes.

**RESULTS**

**Hypothesis 1:** Tendencies and interests of participants are effective on improving the quality of employee training in Tehran's emergency service center.

Chi-square test was used in order to evaluate the first hypothesis of the survey and analyzing the impact of tendencies and interests of the participants on improving the quality of training in emergency center.

Results from Table 1 shows that the calculated value of Chi-square ( $X^2 = 123.769$ ) with 14 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the attitude and interests of the participants is effective on improving the quality of training in employees of Tehran Emergency Center.

**Hypothesis 2:** The applicability of the course is effective on improving the quality of training in employees of Tehran Emergency Center. Chi-square test was used to test the applicability of the research and analysis of the impact on improving the quality of training in employees of Tehran Emergency Center.

Results from Table 2 shows that the calculated value of Chi-square ( $X^2 = 106.923$ ) with 13 degrees of freedom at a significance level of 0.01 is higher than the critical  $x$  at

Table 1: Chi-square test for the effect of tendencies and interests of participants on improving the quality of training

Index	Degree of freedom	$X^2$	Significance level
Tendencies and interests of the participants	14	123.769	0.0001

Table 2: Chi-square test to assess the effect of quality of training course

Index	Degree of freedom	X <sup>2</sup>	Significance level
Applicability of the course	13	106.923	0.0001

Table 3: Chi-square test for the effect of the implementation of course at the right time on improving the quality of training

Index	Degree of freedom	X <sup>2</sup>	Significance level
Implementation of course at the right time	8	70.89	0.0001

Table 4: Chi-square test for the effect of the implementation of the program in the right place to improve the quality of training

Index	Degree of freedom	X <sup>2</sup>	Significance level
Implementation of course in the right place	11	66.044	0.0001

a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the application of course is effective on improving the quality of training in employees of Tehran Emergency Center.

**Hypothesis 3:** Running the course at the right time is effective on improving the quality of training in employees of Tehran Emergency Center. Chi-square test was used in order to assess the third hypothesis and impact analysis of implementation of the program at the right time to improve the quality of training in employees of Tehran Emergency Center.

Results from Table 3 shows that the calculated value of Chi-square ( $X^2 = 70.89$ ) with 8 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the implementation of the program at the right time is effective to improve the quality of training for employees of Tehran Emergency Center.

**Hypothesis 4:** Running the course in the right place is effective to improve the quality of training for employees of Tehran Emergency Center. Chi-square test was used to evaluate the fourth research hypothesis and the impact of the implementation of courses in the right place to improve the quality of training for employees of Tehran Emergency Center.

Results from Table 4 shows that the calculated value of Chi-square ( $X^2 = 66.044$ ) with 11 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the implementation of the program in the right place is effective to improve the quality of training for employees of Tehran Emergency Center.

**Hypothesis 5:** Teachers are effective to improve the quality of training for employees of Tehran Emergency Center. Chi-square test was used in order to evaluate the

Table 5: Chi-square test for the effect of the quality of teachers on training improvement

Index	Degree of freedom	X <sup>2</sup>	Significance level
Teachers of the course	12	165	0.000

Table 6: Chi-square test for the effect of educational facilities on improving the quality of training

Index	Degree of freedom	X <sup>2</sup>	Significance level
Educational facilities	12	108.429	0.000

Table 7: Chi-square test for the effect of the evaluation process to improve the quality of training

Index	Degree of freedom	X <sup>2</sup>	Significance level
Course evaluation	14	102.670	0.000

hypothesis fifth and analysis of the impact of training quality of teachers on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 5 shows that the calculated value of Chi-square ( $X^2 = 165$ ) with 12 degrees of freedom at a significance level of 0.01 is more than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the teachers are effective on improvement of training quality for employees of Tehran Emergency Center.

**Hypothesis 6:** Educational facilities are effective on improving the quality of training for employees of Tehran Emergency Center. Chi-square test was used to evaluate the hypothesis sixth and analyzing the impact of educational facilities on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 6 shows that the calculated Chi-square ( $X^2 = 108.429$ ) with 12 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the educational facilities are effective on improving the quality of training for employees of Tehran Emergency Center.

**Hypothesis 7:** Evaluation Process of course's Quality is effective on improving the quality of training for employees of Tehran Emergency Center. Chi-square test was used to evaluate the hypothesis seventh and analysis of the impact of course's evaluation Process on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 7 shows that the calculated value of Chi-square ( $X^2 = 102.67$ ) with 14 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the evaluation process is effective on improving the quality of training for employees of Tehran Emergency Center.

Table 8: Chi-square test for the effect of management and executive factors on improving the quality of training

Index	Degree of Freedom	X <sup>2</sup>	Significance Level
management and executive factors	15	137.297	0001.

**Hypothesis 8:** The management and executive factors are effective on improving the quality of training for employees of Tehran Emergency Center. Chi-square test was used in order to evaluate the hypothesis eight and analysis of executive factors on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 8 shows that the calculated value of Chi-square ( $X^2 = 137.297$ ) with 15 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the management and executive factors are effective on improving the quality of training for employees of Tehran Emergency Center.

## DISCUSSION

**Discussion about the first hypothesis:** Tendencies and interests of participants are effective on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 1 shows that the calculated value of Chi-square ( $X^2 = 123.769$ ) with 14 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the attitude and interests of the participants is effective on improving the quality of training in employees of Tehran Emergency Center.

**Discussion about the second hypothesis:** The applicability of the course is effective on improving the quality of training in employees of Tehran Emergency Center. Results from Table 2 shows that the calculated value of Chi-square ( $X^2 = 106.923$ ) with 13 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the application of course is effective on improving the quality of training in employees of Tehran Emergency Center.

**Discussion about the third hypothesis:** Running the course at the right time is effective on improving the quality of training in employees of Tehran Emergency Center. Results from Table 3 shows that the calculated value of Chi-square ( $X^2 = 70.89$ ) with 8 degrees of freedom at a significance level of 0.01 is higher than the critical

value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the implementation of the program at the right time is effective to improve the quality of training for employees of Tehran Emergency Center.

**Discussion about the fourth hypothesis:** Running the course in the right place is effective to improve the quality of training for employees of Tehran Emergency Center.

Results from Table 4 shows that the calculated value of Chi-square ( $X^2 = 66.044$ ) with 11 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the implementation of the program in the right place is effective to improve the quality of training for employees of Tehran Emergency Center.

**Discussion about the fifth hypothesis:** Teachers are effective to improve the quality of training for employees of Tehran Emergency Center. Results from table 5 shows that the calculated value of Chi-square ( $X^2 = 165$ ) with 12 degrees of freedom at a significance level of 0.01 is more than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the teachers are effective on improvement of training quality for employees of Tehran Emergency Center.

**Discussion about the sixth hypothesis:** Educational facilities are effective on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 6 shows that the calculated Chi-square ( $X^2 = 108.429$ ) with 12 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the educational facilities are effective on improving the quality of training for employees of Tehran Emergency Center.

**Discussion about the seventh hypothesis:** Evaluation process of course's quality is effective on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 7 shows that the calculated value of Chi-square ( $X^2 = 102.67$ ) with 14 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the evaluation process is effective on improving the quality of training for employees of Tehran Emergency Center.

**Discussion about the eighth hypothesis:** The management and executive factors are effective on improving the quality of training for employees of Tehran Emergency Center.

Results from Table 8 shows that the calculated value of Chi-square ( $X^2 = 137.297$ ) with 15 degrees of freedom at a significance level of 0.01 is higher than the critical value (Chi-square table), so the hypothesis is confirmed. In other words one can say with 99% confidence that the management and executive factors are effective on improving the quality of training for employees of Tehran Emergency Center.

### CONCLUSION

The results have shown that the attitude and interest of participants, practical courses, attending courses at the right time and right place, teachers, educational facilities, course evaluation process and managerial factors are important to improve the quality of training in Tehran Emergency Center.

### IMPLICATIONS

**Proposals according to the findings of the research:** The important point is that just education and training courses can not help emergency center to achieve its objectives. Training should be established according to the principles and scientific methods to meet the needs. In order to achieve this goal, weaknesses and damages to the course should be identified and eliminated to avoid the waste of resources. More attention should be paid to all educational stages including needs assessment, design, planning and implementation of employee training to identify the strengths and weaknesses.

Since, the content of employee training such as applicability, being up to date, awareness of training needs and improving the performance of staff is one of the important steps in improving the quality of the training, thus selecting the content and methods of pre-service and in-service training of staff is a basic necessity for emergency center authorities. One of the factors affecting the quality of training in emergency service center is orientation and attitude of participants. So, linking employee training with other

systems such as job classification, salary and staff assessment and career promotion is important and effective.

One of the most important factors in improving the quality of training is being up to date as well as functionality of training programs. Employee-training is a very useful way to accommodate employees with their new situation and preparing them to deal with new conditions. Another important factor in improving the quality of training for employees in emergency center is the evaluation of training programs. Because only through educational evaluation, weaknesses and shortcomings can be identified. Therefore, it is proposed to pay more attention evaluation factor. Finally, it is suggested that seminars on the importance of training and its role in improving the performance of employees be held at different level of managers in emergency center.

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