Influence of Supervisors' Demographic Factors on their Training Needs- An Empirical Evidence

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Abstract

Supervisors are the most important assets of an organization. They play a decisive role in obtaining quality work from their subordinates and they are treated as a dynamic element for giving life to an organization. The success and growth of an organization depends largely upon the caliber and performance of its supervisors. Therefore, every organization must take an effort to improve the quality of its supervisors for which the organization should design a supervisory training programmes. Every training programmes must be related to the specific needs of the individual employees, like wise the supervisory training programmes also to be linked with the specific needs of the supervisors. A training programme should be conducted only after the training needs are analysed specifically and clearly. The effectiveness of a supervisory training programme can be judged only with the help of the training needs of the supervisors identified in advance. The supervisory training programmes which are ill directed and inadequately focused do not serve the purpose of the trainers, the trainees, or the organization, hence identification of supervisory training needs based on supervisors' demographic factors, becomes the top priority of every progressive organization. In this context, the authors have made an attempt to identify the supervisory training needs and also to examine the influence of certain demographic factors on the training needs of Supervisors The research study has been conducted in a power generating, profit making public sector organization situated in central part of Tamil Nadu, South India. The results of the research has been discussed in this article.

Introduction

Organizations in general and Indian organization in particular are presently forced to operate in a turbulent environment due to globalization. Such organizations need to have experienced as well as well trained employees to perform the activities, in such a way to meet the global competition. Rapid changes in the environment have not only made the jobs more complex but have also created increased pressures for the organizations to readapt the products and services offered to compete in this fast changing globalized scenario. Therefore, in a highly competitive environment, training is an inevitable and most vital activity, which is must for maintaining a viable and knowledgeable workforce.

Every organization must have not only experienced and well trained employees to perform the activities to them but also have efficient supervisors so that they can derive quality work from the employees. In a rapidly changing business scenario training is an activity, which is must for maintaining a viable and knowledgeable supervisors. In case the current job occupants (supervisors) are equipped enough to meet the challenges of change, training is not required, other wise training is necessary to increase the versatility and adaptability of supervisors.

Training needs are felt by the supervisors when they find/perceive deviation between standard performance and actual performance of its employees. It is not that only workers need training, of course the workers need training to operate machines, work effectively and efficiently and avoid accidents etc., simultaneously supervisors also need to be trained and developed to grow and acquire maturity of thought and action.

Success of any training program largely depends upon proper identification of training needs. The success and growth of an organization depends largely upon the caliber and performance of its supervisors as they are the leader of the work-force. Therefore, every organization must take a stringent effort to improve the quality of the supervisors for which it should meticulously design a supervisory training program. Every training program must be related to the specific needs of the individual supervisors. Hence, the assessment of training needs becomes a prerequisite for designing and conducting a training program.

Need for Training

Training is the act of improving one's knowledge and skill to improve his / her job performance. Training is job-oriented. It bridges the gap between what the employee has and what the job demands. For that matter, imparting

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training to employees working in all organized sectors of human activity is no longer a matter of debate. As a matter of fact, of late, the need for training has been recognized as an essential activity not only in the business organizations, but also in academic institutions, professional bodies and the government departments. For example, attending one orientation and two refresher courses has been made compulsory for the university / college teachers with an objective to improve their knowledge and skill for improving their job (teaching) performance. Several conditions have contributed to make the organizations realize and recognize the need for imparting training to their employees.

Clement Sudhakar and Reeves Wesley (2000) have listed the need for training is:

- ❖ To increase productivity
- ❖ To improve quality
- ❖ To help a company fulfill its future personal needs
- ❖ To improve organizational climate
- ❖ To improve health and safety
- ❖ To prevent obsolescence
- ❖ To enhance personal growth

Review On Training Needs Assessment (TNA)

Employees are likely to need training under certain conditions. A training need assessment is a process for exploring these conditions and determining exactly what training is needed. The basic needs assessment is conducted from three different perspectives or levels of analysis. These are organizational analysis, task analysis and person analysis.

McGhee and Thayer (1961) pointed that assessment of training needs involves three types of analysis: organization, operational (task) and person analysis. For the past thirty years, theoretical and empirical perspectives on the identification of training needs within organizations have been based upon this tripartite framework. Further they propose that needs analysis should be undertaken at the organization level to determine where training initiatives should best be directed in the pursuance of organizational objectives. Finally they stress that the incumbent is a key source of information about the skills needed to perform the job adequately.

Morano (1973) contends that employees are aware of their skill weaknesses and performance deficiencies and therefore, are in the best position to determine their own training needs. Needs assessment is extremely important for trainers in order to plan, manage and allocate program resources, and evaluate training program results (Mitchell

and Hyde, 1979). They further pointed out that in public sector organizations, because training resources are limited through lack of funding or lack of organizational planning, there is a low level of training skills and unavailability of other training resources ; a needs assessment is necessary to obtain the most from the training dollar.

Ozgediz (1983) pointed out that assessing training needs by performance reports or by bosses' views does not always reflect the true situation and needs of employees, because they may be unclear, may not have been prepared recently or may be subjected to family, kinship, tribalism and friendship ties. He further stated that public sector training is often treated as a concrete event, rather than part of an overall programme of organization improvement, few trainees are selected on the basis of greatest need, bureaucratic policies and patronage play more important roles. Also, another researcher (Smith 1977) argued that in most developing countries, individuals are selected for training for reasons other than training needs.

Bittel and Ramsey (1983) conducted a national level survey to identify the knowledge and skill requirements of supervisors (N=7,000) from variety of organizations. The survey includes 18 typical knowledge of skills requirements including skills such as : talking to employees on a one-to-one basis ; planning and controlling; use of personal time ; motivating employees ; and counseling an employee. This study concluded that supervisor's greatest confidence in general human relations skills, communication, motivation and performance appraisal. Supervisor show less confidence in specific administrative skills, particularly in policies and procedures and they have least confidence in statistical skills, computer applications and improving productivity.

The article written by Minocha, O.P (1994) on "Training in public sector undertakings: A systematic approach" revealed that assessment of training needs, which is an essential prerequisite of a training program is not normally being conducted in public sector undertakings.

Training Program's effectiveness can clearly be influenced by the success in identifying the training needs, because of the important role that needs assessment can play in identifying individuals who must be trained, designing training programs that relate to the needs of both individuals and organization, outlining the required time, determining objectives and required skills and required resources for training programs can be identified which leads to reduced costs (Bee and Bee, 1994).

Ronald J. Burke (1996) examined in his study "Training needs at different organizational levels with in a professional services firm," whether women and men at similar organizational levels report the same training needs and whether women and men at different organizational level report similar or different training needs. The result of the study indicated that women and men reported the same level of training needs at same level, but at the same time women and men expressed mixed response in different organizational level.

Punia, B.K. (2002) has identified the training needs of supervisors of an Indian organization. The study recommends that supervisors should be trained in interpersonal relations, conflict management, delegating skills, positive thinking, communication and listening, value system, supervision skills, motivating skills and time management. Another research study of Chinnadurai and Udayasuriyan (2006) has identified supervisory training needs of supervisory of power generating public sector organization as, to acquire new kills in the profession, positive attitude with other, change the attitude of subordinates, techniques of conselling and computer related application. Fredric and Lyme (2003) conducted a study on "Assessing Training Needs: A Skills Approach", the concern of this study was to examine the training needs of supervisors based on more objective variable, such as age, education, size of government and number of employees supervised. Differences were identified. Age and education have negative associations with training needs, which predominantly human relations or human resources oriented. Older, more educated supervisors have less need for this type of training.

Training Needs For Supervisors – An Overview

❖ Supervisors should be trained on positive thinking in the larger interest of employees and that of organizations.
❖ They should be trained on improving supervision skills and stimulate the creative thinking.
❖ They should also be trained in managerial functional areas such as planning, organizing, directing and controlling.
❖ Supervisors should be trained to cultivate the ability to analyse problems and take appropriate action.
❖ Techniques of counselling and enforce discipline are other areas of training for supervisors.
❖ They should be trained in the skills of communicating, listening and feedback.
❖ Training on positive leadership and team building must be taught to the supervisors.

❖ Supervisors should also be trained in motivating skills.

Present Study

Present study is the exploratory study, based on self reported level of training needs obtained from a sample of supervisors of a single large power generating public sector organization. This study has made an attempt to find out the level of training needs of the supervisory employees in relation with certain demographic variables namely, Gender, Age, Marital Status, Level of Educational Qualification. Place of work and the Length of service. Therefore, the following objectives and hypotheses were framed for this study.

Objectives

- To find out the training needs of the supervisors.
- To examine the influence of certain demographic factors of the supervisors on their training needs.

Hypotheses

H1 : The supervisors do not differ in their level of training needs with respect to gender.

H2 : The supervisors of different age group do not differ in their training needs.

H3 : Marital status of the supervisors does not influence their training needs.

H4 : Educational qualification does not influence the training needs of the supervisors.

H5 : The supervisors working in different divisions do not differ in their training needs.

H6 : The length of service of the supervisors does not influence their training needs.

Research Design

The purpose of the present study is to identify the level of training needs of the supervisors working in three different divisions of a public sector organization. In order to achieve the purpose of the study a survey design is employed. The survey design is selected because it is the best suited method to collect data of a large group of people. A survey is a way of obtaining self-reported information about the attitudes, beliefs, opinions, behaviours and other characteristics of a population (Samuel McClelland, 2004). This survey design is chosen because it is the best way to get information from many people at one time unlike interviews and other methods that will demand much time. As time is critical in conducting the study, the survey design is the most appropriate way and a natural choice to administer standardized questionnaires to many people.

Population and Sample

The population of the study consists of supervisory employees working in various divisions of the organization. The population of the supervisors of the organization is 1042. The sample that was taken from the organization was based on proportionate random sampling. The samples were classified according to the respondents' place of work (divisions). The same percentage of respondents was taken from the three major divisions of the organization being studied. The percentage that was taken from each division is thirty per cent (30%). This type of random sampling was used because the random selection results in equal opportunity to be given for the respondents of various divisions of the organisation (Robinson, K 1981).

The required sample size was determined based on a method suggested by Goldstein, (1986). A method for determining the required minimum sample size was used to ensure adequate population representativeness of a survey. The details of the sample size required for the study is exhibited in Table-I. The respondents were then classified according to their demographic characteristics and the place of work to reflect the various divisions in the sample.

The Table II presents demographic characteristics of the sample. There were more number of male supervisors than female supervisors, this may be a reason that employing women for supervisory assignment in coal and power industry is generally less in numbers. The supervisors of about 12 per cent from below 30 years old, more than half of the sample size (68 per cent) from the age group 31-45 years and 20 per cent of supervisors have been chosen as respondents from the age group above 45 years. The majority of the respondents of the sample (89 per cent) were married and the remaining respondents about only 11 per cent were bachelors. There were about 91 supervisors (29 per cent) out of 313 supervisors having Diploma as their educational qualification, 56 supervisors having Arts and Science degree and major portion of the respondents (53 per cent) having Professional degrees like B.E., M.E., M.B.A. and MCA. More or less, equal numbers of supervisors have been chosen as respondents from Mines (43 per cent) and Thermal Power Stations (41 per cent) and the remaining supervisors (16 per cent) were drawn from Corporate office as respondents for this study. Minor portion (8 per cent) of the sample having less than 10 years of experience, about 71 per cent of the sample are having the length of experience between 11 and 20 years and 66 respondents (21 per cent) out of 313 respondents having the length of experience above 20 years.

The data has been extracted through a structured questionnaire namely **'Supervisory Training Needs Assessment Scale'** developed by Chinnadurai & Udayasurian, 2005. The scale comprises 19 items is designed to elicit detailed information with respect to the assessment of supervisory training needs pertaining to the training input knowledge, skill and attitude.

The questionnaires were distributed to the respondents personally when they reported for attending the supervisory training programmes. All the respondents are the participants of the training programmes, they were contacted and got the questionnaires filled by them and collected before the programmes begin.

The supervisory training needs assessment variables were evaluated on the pre-decided scale as shown here :

Strongly agree - 5 points		Disagree	- 2 points
Agree	- 4 points	Strongly Disagree	- 1 point
Neutral	- 3 points		

Analysis and Interpretation

The analysis is being centred around to find answers for the two basic research questions, (i) What are the levels of training needs of the supervisors pertaining to 19 different training needs for improving Knowledge, Skills and Attitude? (ii) Do the demographic factors of supervisors influence their training needs for improving Knowledge, Skills and Attitude?

An over view of the data presented in the Table-III reveals that all the supervisory respondents expressed different level of training need for different training variables. Among these 19 different training variables, the supervisors assigned maximum score (above 4 points) for the variables such as, new skills in the profession, leadership skills, communication skills, team building skills, computer related applications, emotional intelligence and controlling skills. However, they assigned considerable amount of score (more than 3.5 points) to the rest of the training variables which in turn indicates that they have more inclination towards the training programmes in these 19 various training areas as their level of training need fall between neutral and agree categories in the Likert's five point rating scale.

To find the answer for another research question, do the demographic characteristics of executives influence their

training need? The hypotheses framed for the study have been tested by using the statistical tools 't' test and One-Way ANOVA. The summarized results of these tests are presented in the Tables-V and VI and the same is discussed here.

Hypothesis - I

Null hypothesis Ho: There is no significant difference between Male and Female supervisors in their training needs for improving Knowledge, Skills and Attitude (KSA).

The Table-V indicates that the calculated 'p' value (0.37) for the training need dimension "KSA" is found to be greater than 0.05 at 5% level of significance. Since the calculated 'p' value for the training dimension KSA is greater than 0.05, the null hypothesis H0 is accepted. Hence, it can be concluded that there is no significant difference between Male and Female supervisors in their training needs for improving Knowledge, Skills and Attitude.

Hypothesis - II

Null hypothesis H0 : There is no significant difference among the supervisors in their training needs for improving Knowledge, Skills and Attitude with respect to Age group. The Table VI shows that the calculated 'p' value for KSA is 0.50 which is greater than the value 0.05. So, it is needless to say that H0 is accepted. Results of the One-way ANOVA reveal that there is no significant difference among the supervisors in their training needs towards the training dimension KSA.

Hypothesis - III

Null hypothesis H0: Marital Status does not influence the training needs of the supervisors for improving Knowledge, Skills and Attitude.

It could be noted from the data presented in the Table-V that the calculated 'p' value (0.52) for the dimension KSA is found to be greater than 0.05. Since the 'p' value, calculated for the dimension KSA is greater than 0.05, it is clear that the null hypothesis H0 is accepted. Hence, it can be understood that the demographic variable marital status does not influence the training needs of supervisors related to the dimension KSA.

Hypothesis - IV

Null hypothesis H0 : The supervisors of different Educational Qualifications do not differ in their training needs towards the training dimension KSA.
It is also known from the Table -VI that the 'p' value (0.35) calculated for the dimension KSA is greater than 0.05.

Since, the calculated 'p' value (0.35) is greater than 0.05 at 5% level of significance, the null hypothesis H0 is accepted. Hence, it is implied that the educational qualification of the supervisors does not influence their training needs.

Hypothesis - V

Null hypothesis H0: The Place of Work (Division) of the supervisory employees does not influence their training needs for improving Knowledge, Skills and Attitude.

The Table-VI presents the 'p' value as 0.53 for the dimension KSA. Since the calculated 'p' value is greater than 0.05 at 5% level of significance, the null hypothesis H0 is accepted. So, it is inferred from the results of One-Way ANOVA that the place of work of the supervisors does not influence their training needs for improving Knowledge, Skills and Attitude.

Hypothesis - VI

Null hypothesis H0 : Supervisors having different Length of Experience do not differ in their training needs towards the training dimension KSA.

From the data presented in the Table-VI it is clear that the calculated 'p' value (0.86), for the training dimension KSA is greater than 0.05 at 5% level of significance. Since, the 'p' value is greater than 0.05, the H0 is accepted for the training need dimension KSA. Hence, it could be concluded that the length of experience of the supervisors does not influence their training needs.

Findings

The collected data from the supervisory respondents were converted as means scores. The careful analysis of the mean scores (Refer Table IV) and the analysis of the mean scores led to various interesting findings such as:

❖ Both male and female supervisors expressed almost the same level of training need for improving Knowledge, Skills and Attitude. However they differ each other in their mean scores assigned by them to the 19 different training variables. This finding fall in line with the findings of Ronald, J.Burke (1996).

❖ The older and younger supervisors fall in line with their level of training needs and the middle aged supervisors expressed slightly low level of training need than their younger and older colleagues/ counterparts. This findings reminds the findings of Ford & Lyme (2003).

❖ Though the mean scores of married and bachelor

supervisors are slightly differed, yet both categories expressed their willingness to attend training programmes for improving Knowledge, Skills and Attitude.

❖ The training needs of the supervisors who have Arts/Science degree as their educational qualification are lower than the Diploma and Professional degree holders. In these two categories the supervisors of diploma holders have low level of training needs.

❖ The supervisors working in Mines expressed low level of training needs than their counterparts working in Thermal Stations and Corporate Office. It is further found that the supervisors working in Thermal stations and Corporate office expressed same level of training needs.

❖ The training needs level of highly experienced supervisors is found at high level and at the same time the supervisors belong to low and medium experienced categories expressed almost the same level of inclination towards the training programmes for improving Knowledge, Skills and Attitude.

In addition to these findings, it is also found from the results of 't' test and One-Way ANOVA that no demographic factors (considered for the study) of the supervisors influences their training needs.

Summary and Suggestions

The results of the analysis and interpretation of the data collected from the chosen supervisors have driven to various interesting findings which in turn led to important suggestions which could be considered by the policy makers while taking policy decisions on identifying supervisory training needs. The following are the suggestions to be considered by the policy makers for taking pre-training decisions and choosing the supervisory training programmes.

❖ Gender need not to be taken in to consideration while choosing the supervisors as trainees for supervisory training progremmes.

❖ Since the demographic factor 'Age' does not influence the training need level of the supervisory employees, it could be ignored while choosing them as participants for the supervisory training programmes. But at the same time, the Age of the supervisors may be taken into consideration incase they are on the verge of retirement as suggested by Savita Rastogi (2002).

❖ Both bachelor and married category of supervisory employees should be given equal opportunity to take part in the supervisory training programmes as trainees.

❖ In general, the educational qualification does have nothing to do with the level of training needs of the supervisory employees. How ever, it is suggested from the results of the analysis and interpretations of the respondents' mean scores of their level of need for supervisory training programmes, the supervisors to be given preference for taking part in the supervisory training programme as trainees irrespective of their educational qualification.

❖ Though the supervisors of Mines expressed low level of training needs comparing with their counterparts of Thermal Power Stations and Corporate office, yet they should also be trained along with the supervisors of Thermal Power Stations and Corporate office in these 19 supervisory training programmes.

❖ Since the supervisors having high and low level of experience needed more number of supervisory training programmes in relation with the 19 supervisory training programmes they should be trained in the related training programmes. Though the supervisors having medium level of experience (11-20 years) expressed comparatively low level of training needs, yet they should also be given opportunity in taking part in the supervisory training programmes.

The above suggestions offered based on the influence of various demographic factors on respondents' level of training need and the scoring pattern followed by the supervisory respondents in assigning scores for their supervisory training needs. The mean scores assigned by the supervisors for their training need and the influence of demographic factors of the supervisors on their need for training collectively suggest that:

❖ Each and every supervisory employees of different divisions irrespective of their demographic characteristics to be given equal opportunity for participating the supervisory training programmes as trainees in order to shape and prepare themselves more vibrant to the turbulent work environment.

Conclusion

The research study Influence of Supervisors' Demographic Factors on their Training Needs- An Empirical Evidence conducted in the power generating public sector organization

reveals various interesting facts. The demographic factors namely gender, age, marital status, educational qualification, place of work (Division) and the length of experience do not influence the supervisory training needs of supervisors. It is also found that the supervisory training need level of these supervisors is above the average level. These findings have suggested that all supervisors (N=313) chosen as respondents to be trained in the 19 various supervisory training programmes.

Appendix

Table 1: Sample size required for the study

Organization	Population	At 30% required sample size
Power generating public sector organisation	1042	313

Table 3: Mean scores of the Supervisors' training needs for Improving Knowledge, Skills and Attitudinal Change

S.No.	Training Variables	Mean Scores
1.	New skills in the profession	4.51
2.	Leadership skills	4.24
3.	Positive attitude with others	3.75
4.	Change the attitude of subordinates	3.76
5.	Planning skills	3.51
6.	organization skills	3.64
7.	Techniques of counseling	3.97
8.	Enforce discipline	3.55
9.	Supervision skills	3.66
10.	Communication skills	4.19
11.	Team building	4.27
12.	Motivating skills	3.95
13.	Awareness of safety measures	3.96
14.	Creativity	3.98
15.	Ability to analyse problems	3.89
16.	Computer related applications	4.20
17.	Directing skills	3.87
18.	Emotional Intelligence	4.02
19.	Controlling skills	4.07
	Total	3.95

Table 2: Demographic Characteristics of Respondents

Characteristics	N	%*
Gender		
Male	244	78
Female	69	22
Age		
Below 30 years	38	12
31-45 years	213	68
Above 45 years	62	20
Marital Status		
Married	279	89
Bachelor	34	11
Educational Qualification		
Diploma	91	29
Arts & Science Degree	56	18
Professional Degree	166	53
Place of Work (Division)		
Mines	135	43
Thermal Power Stations	28	41
Corporate Office	50	16
Experience		
Below 10 years	25	8
11-20 years	222	71
Above 20 yrs.	66	21

* Expressed in rounded of percentage

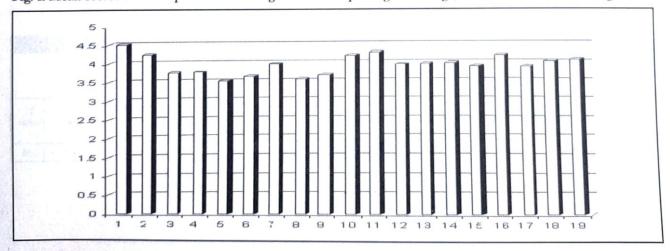**Fig. 1: Mean scores of the Supervisors' training needs for Improving Knowledge, Skills and Attitudinal Change**

Table-4: Mean Scores of Supervisory Training Needs for Improving Knowledge, Skills and Attitudinal change

Training Variables	Gender		Age			Marital		Education			Division			Experience		
	Male	Female	Below 30 yrs.	31-45 yrs.	Above 45 yrs.	Married	Bachelor	Diploma	Arts/ Science Degree	Professional Degree	Mines	Thermal Stations	Corporate Office	Below than 10 yrs.	11-20. yrs.	Above 20 yrs.
New skills in the profession	4.51	4.45	5.00	4.46	4.55	4.48	5.00	4.71	4.36	4.50	4.53	4.51	4.45	4.63	4.54	4.43
Leadership skills	4.26	4.09	4.67	4.12	4.45	4.22	4.75	4.06	4.18	4.31	4.19	4.28	4.23	4.13	4.19	4.32
Positive attitude with others	3.74	3.82	4.00	3.63	4.00	3.78	3.00	3.35	3.73	3.88	3.53	3.90	3.86	3.50	3.65	3.95
Change the attitude of subordinates	3.79	3.55	4.00	3.78	3.69	3.78	3.25	3.47	3.59	3.91	3.58	3.92	3.77	3.88	3.79	3.70
Planning skills	3.51	3.45	3.33	3.40	3.76	3.53	3.00	3.41	3.18	3.66	3.44	3.44	3.73	3.50	3.33	3.76
organization skills	3.65	3.55	4.00	3.62	3.66	3.63	3.75	3.47	3.36	3.79	3.56	3.59	3.86	3.75	3.54	3.76
Techniques of counseling	3.99	3.82	4.33	3.86	4.17	3.97	4.00	3.88	3.77	4.07	3.89	4.05	3.95	3.75	3.88	4.14
Enforce discipline	3.53	3.64	3.67	3.51	3.62	3.52	4.25	3.47	3.27	3.67	3.25	3.69	3.77	3.75	3.40	3.70
Supervision skills	3.63	3.91	3.33	3.65	3.72	3.68	3.25	3.88	3.36	3.71	3.50	3.82	3.64	3.63	3.60	3.76
Communication skills	4.20	4.09	4.00	4.12	4.34	4.19	4.00	4.12	4.00	4.28	4.11	4.18	4.32	3.75	4.21	4.24
Team building	4.27	4.27	4.00	4.18	4.48	4.26	4.50	4.29	4.09	4.33	4.11	4.31	4.45	4.25	4.25	4.30
Motivating skills	3.95	3.91	4.00	4.00	3.83	3.96	3.75	4.06	3.41	4.12	3.69	4.15	4.00	3.88	3.98	3.92
Awareness of safety measures	3.95	4.00	4.67	3.88	4.07	3.96	4.00	3.59	4.00	4.05	3.75	4.00	4.23	4.50	3.85	4.00
Creativity	3.95	4.18	3.33	3.89	4.24	4.01	3.25	4.06	3.95	3.97	3.89	3.97	4.14	3.88	3.87	4.16
Ability to analyse problems	3.84	4.27	4.33	3.74	4.17	3.87	4.25	3.88	3.82	3.91	3.67	4.03	4.00	4.00	3.75	4.05
Computer related applications	4.16	4.45	4.33	4.09	4.41	4.19	4.25	4.35	4.05	4.21	4.08	4.21	4.36	4.25	4.08	4.35
Directing skills	3.81	4.27	4.00	3.88	3.83	3.88	3.50	3.47	3.68	4.05	3.64	3.97	4.05	3.88	3.83	3.92
Emotional Intelligence	3.99	4.27	4.00	3.91	4.28	4.03	3.75	4.12	3.91	4.03	3.69	4.21	4.23	4.13	3.92	4.14
Controlling skills	4.08	4.00	4.00	4.02	4.21	4.06	4.25	3.82	3.91	4.21	4.00	4.05	4.23	3.88	4.02	4.19
Total	3.94	4.00	4.05	3.88	4.08	3.95	3.88	3.50	3.41	3.65	3.80	4.01	4.07	3.94	3.88	4.04

Source: Computed

Table-5: Results of 't' test for demographic characteristics and Supervisory Training Needs

Training Need dimension	Gender				't' value	'p' value	Marital Status				't' value	'p' value
	Male		Female				Married		Bachelor			
	Mean	S.D	Mean	S.D			Mean	S.D	Mean	S.D		
KSA*	75.12	8.70	76.44	10.15	0.89	0.37	75.36	8.57	74.22	10.35	0.64	0.52

Source: Computed
*Knowledge, Skills and Attitude

Table-6: Results of One-Way ANOVA for demographic characteristics and Supervisory Training Needs

Training Need dimension	Age group					Educational Qualification					Place of Work (Division)					Experience				
	Below 30 yrs.	31-45 yrs.	Above 45 yrs.	'F' value	'p' value	Diploma	Arts/ Degree Science	Professional Degree	'F' value	'p' value	Mines	Thermal Power Stations	Corporate office	'F' value	'p' value	Below 10 yrs.	11-20 yrs.	Above 20 yrs.	'F' value	'p' value
KSA*	73.90	75.23	75.79	0.67	0.50	74.78	74.21	75.79	0.62	0.35	75.89	75.14	74.52	0.62	0.53	74.80	75.52	75.17	0.14	0.86

Source: Computed
*Knowledge, Skills and Attitude

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