

## THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN

Muhammad Abid<sup>1</sup>, Ahmed Imran Hunjra<sup>2</sup>, Babar Khalid<sup>3</sup>

### Abstract

Several linemen of electricity distribution companies died every year while working on the transmission lines in Pakistan. Although safety department of each electrical distribution companies works dynamically for safety and development of operational staff but unfortunately fatalities rate of linemen are not overcome. This study has been conducted to discuss the root cause of fatalities and low performance of operational staff. The population of study was 200 linemen of IESCO. A questionnaire was adopted from the previous study of Anonymous (2011). One independent variable and two dependent variables with 34 number of item used in the research study. In this research study impact of safety training was measured on the fatalities and high performance through different statistical techniques and found Safety training reduces the fatal accidents and improve the performance of the organizations. Loss of linemen life put enormous effect on the organization and also on the organization performance but arrangement of safety training can only become advantageous for linemen when they focuses their mind towards learning training and latest technique which become helpful for improving the performance of organizations.

**Keywords:** Safety Training, High performance, Fatal Accidents, IESCO, Nigeria, Pakistan

### 1. Introduction

Electrocution is the fifth major cause of workers death. During twelve years period from 1980 to 1992, 5348 workers (411 annually) were electrocuted while performing their duty on transmission lines according to report of NIOSH (National Institute for Occupational Safety & Health). Although almost everybody around the world has direct or indirect concern with electricity but majority does not know that only 7.5 watt or 120 volt electrical shock may cause death of a healthy and highly skilled worker. The first worker, in the world, who died due to alternating current (having capacity of 250 volt) in 1879 in France, was a stage carpenter. In USA, approximately 7% fatalities are only due to electrocution. In 1994, National Safety Council reported that "electrocution is fourth major reason behind the death of persons in USA. According to report of OSHA (Occupational Safety & Health Administration) 944 electrocution fatalities occur yearly and approximately 61% are due to touch of humans with high voltage transmission lines. While working on transmission & distribution system, linemen is injured, burnt and die due to electric shock or from falling down from pole. When a worker comes in magnetic field of electricity, specific capacity of current passes through his nervous system and damages the internal organs of body immediately. Severity of damage depends on the magnitude of current and its path that flows through the worker's body and organs (Nancy and Stout, 1998).

---

<sup>1</sup>Col. MBA Student, Allama Iqbal Open University, Islamabad, Pakistan

<sup>2</sup>Lecturer, UIMS-PMAS-University of Arid Agriculture Rawalpindi, and PhD Scholar Iqra University Islamabad, Pakistan. [ahmedhunjra@gmail.com](mailto:ahmedhunjra@gmail.com), 00923457162527

<sup>3</sup>MBA Student, UIMS-PMAS-Arid Agriculture University Rawalpindi, Pakistan  
[babar\\_changwani@outlook.com](mailto:babar_changwani@outlook.com)

## **THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

Pakistan Press International reported on December 27, 2011 “one hundred skilled linemen of distribution companies die per year in the country” and up till now approximately 700 linemen have died during operational duty hours due to electric shocks. 300 incidents on average basis occur every year in the country and 100 employees lose their precious life. Currently 66,000 operational staff (line men & assistant linemen) is working in the country. Operational staff (Line men) of electricity distribution companies performs their duty in extreme danger on live high & low tension lines as well as on distribution and power transformers as compared to workers of other department in the country. The main reason behind these fatal accidents are non-availability of safety training, lack of equipment and personal protective equipment (PPE). Mr. Khurshid Ahmad, General Secretary of Pakistan WAPDA Hydro-Electric Central Labor Union, stated that due to Central Bargaining Agent (CBA)’s efforts the department enhanced the amount of Ex-Gratia grant for electrocuted employees’ families from Rs.200000/ to Rs.500000/. According to his statement the compensation package is very low, therefore families of deceased operational staff are also supported out of CBA’s fund and an amount of Rs.1,75,000/ p.m. is disbursed. He also stated that even the millions of rupees cannot be a substitute of human life and put emphasis on safety of worker while on duty (Shah, 2011).

So keeping in view the rising rate of death and injuries, safety training is the ultimate key to success in all electricity-related activities and companies. A trained worker may be more beneficial and a source profit to the company as compared to the one who lacks training. Training to the line staff is quite beneficial in the context that it improves reliability and sustainability of electricity and rehabilitation of the system in a more efficient way. Training is a complete and continuous process which is adopted to polish the skills and internal abilities of the line staff so that they can perform maintenance activities on the transmission lines safely (Kennedy, 2008). Introduction and implementation of Safety Policies is essential in order to prevent fatal and non-fatal accidents. Safety training is the linchpin of any electrical work. Some salient features of a safety policy include providing adequate and appropriate equipment to the individual line men, explaining and observing the standard operating procedure, arranging safety seminars and conferences on monthly or quarterly basis and allowing the maximum possible number of employees to attend the safety program and monitoring the activities of the line staff, whether they are working up to the standard or not. Launching of safety drills/parade periodically and inspection on regular basis to check durability and reliability of Tools & Plants, job briefing schedule every day before starting the maintenance and operational activities etc. are all measures for improving the standards of safety and maintenance works. It is the prime responsibility of the management to provide safe working environment and equipment along-with appropriate training for workers and supervisors, enhance awareness amongst the workers to follow safety rules & instructions and ensuring implementation of the principal of “safety first”.

Training is the efficient growth method of the thoughts, information, ability which is required by an individual to carry out an assigned task effectively and development is the expansion of the person in terms of skill and consciousness. In an organization training & development is an essential activity especially for high level assignments, it raise the efficiency and standards of individuals performance and helps in meeting the requirements of the Association. Training & Development assists in exploitation of HR that further helps the employee to achieve the desire goals as well as achieved the individual superiority. Training & Development helps in rising the job knowledge and talent of employees at each level. Training & Development helps to expand and enhance the organizational graph. It also helps in making the educational traditions within the

## **THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

company. This study will talk to one explicit feature of HRM i.e. Training, to see if the company and type of training presented by IESCO through its own and outer sources have any impact on its processes and output. Majority of operational staff is illiterate, untrained and not well equipped while duty hours. More over the whole distribution infrastructure of IESCO is over loaded with dismantle poles, conductors, transformers, lengthy underground cables and congested PVC of consumers become the cause of fatal accidents and become huge hindrance in the way of improving the performance. This study gives assessment about the global advancement and latest techniques those are necessary to adopt for full fill the demand of safety training on contemporary basis in the country to improve performance of individual employees and its aggregate impact on whole the organization. This study become supporting for creating the innovation and integration for whole the infrastructure of the electricity distribution companies in various component of power system in Pakistan such as generation, transmission, and distribution.

The main objective behind this research is to remove the obstacle and hindrances due to operational staff is far away from training and learning and work for the growth of training culture having modern techniques and latest equipment that become helpful for improving the performance of organization as well as reduction in the fatal accidents.

### **2. Literature Review**

It is vital when developing a group that everybody is dedicated to the issue at hand and this will be only when an organization's workforce will be trained. Without solution factors, it would have been complicated to apply the training & development system in an organization and it may not have got much success in an organization. Training has direct relationship with the employee's performance. Principally training is a formal & systematic modification of behavior through learning which occurs as result if education, instruction, development, & planned experience (Armstrong & Taylor, 2014). Because of the practical implications of training, it is important to have training that is effective. Studies have proven that more costly but effective training can save money that is wasted on cheap but inefficient training (Ginsberg, 1997). Therefore, training has acquired a strategic value for hotels (Partlow, 1996; Tihanyi et al., 2000), since service quality depends on employee customer care effectiveness (Tsaor and Lin, 2004). Turcotte et al. (2003) highlighted a strong link between business strategy and employee training. The authors found that firms emphasizing a human resources strategy or research and development strategy are much more likely to sponsor training than those with no strategy. Chowhan (2005) concluded that the existence and intensity of training activities in a firm depend on the level of technological competency that exists in that firm, rather than on its being a member of a technology based industry.

There were many positive outcomes of training and development. Effective Implementation was limited, as the training and development were not integrated within the culture and process of the organization. Staffs generally rate such training as a high priority (Raynes and Sumpton, 1987; Sturme, 1992). The main purpose is to increase the understanding regarding organization's performance in relation to training and development. The other factors are remuneration and elements such as participation, feedback, fairness, responsibility, the theoretical framework includes training and development, financial as well as non-financial remuneration and research done in later years regarding participation, feedback, fairness, responsibility, development and Work-atmosphere connected to organization's performance. Companies in the world wide are now facing transformation and difficulty and it is more vital than ever to have the accurate employees in order to complete the requirements of the consumers. Companies and trade are emerging, new

## **THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

technologies are continually developed and the knowledge and awareness of employee's importance is greater for every day. Many companies are looking for the right proficiency in different areas, and human resources are therefore an important competitive factor that needs to be taken into consideration while engaging trade (Ljungberg & Bergquist, 2005).

For this most of the companies assemble training & developments programs for their employees. Organizations have to poise both production and efficient workforce to be successful. Even a company has got success to find the right employees this is not sufficient. A critical issue is to make employees best and decrease the turnover rate. Brilliant employees can be a special foundation of gain for an organization (Crowley & Siegler, 1999), but how to attain this may be a major confront. What do employees desire from their Association in order to think dedicated? The reply is they want safety of their prospect/future that is only with the training and development. The main reason for job is to obtain income (Carter, 2007), but could bosses do more in order to keep their employees? Or even more important, what do people wants from their bosses in order to sense loyalty and eager to stay? There may be dissimilarity between how bosses attempt to give employees about their stay and satisfaction about their jobs.

Training and development is a major element for performance. Job satisfaction has also a vital role as it satisfies the employee himself and improves the work also (Chen, 2008). In older literature the focus has been on the relationship between training and development and job satisfaction as well as remuneration. In the 1940's, 1950's and 1960's several studies were made (Ohio, Michigan and the Hi-Hi leader). Employee's satisfaction builds on elements such as a higher participation if combined with performance related job satisfaction to create a good work group there has to be a good working environment. This arises when group members feel trust and confidence and as a result they treat each other with respect and this may only because of training and development. The training and development applications should be useful to industrial personnel in preparing them for delivering improved performance on the job. The applications will help them understand the options and the impact of decisions. These applications have the potential to improve industry performance by reducing the learning curves of the workforce. Staffs of the Training and Development Unit are available to assist managers or individual staff to identify training needs and can advises on appropriate ways to meet identified needs. These include mentoring, coaching, attendance at an internal or external course, or completion of a qualification. Managers and other decision makers prefer information and data on business related results to make decisions about how to allocate resources, including resources for training activities (Clark & Mattson, 2005). Training for the sake of training, an approach that focuses on developmental ideals and supportive organizational environments, is not aligned with today's business realities, including compressed career progression pathways, budgetary cuts and constraints, highly competitive environments, and market driven economic philosophies. Designing, delivering, evaluating, and clearly documenting the combined performance related job satisfaction to create a good work group there has to be a good working environment. This arises when group members feel trust and confidence and as a result they treat each other with respect and this may only because of training and development.

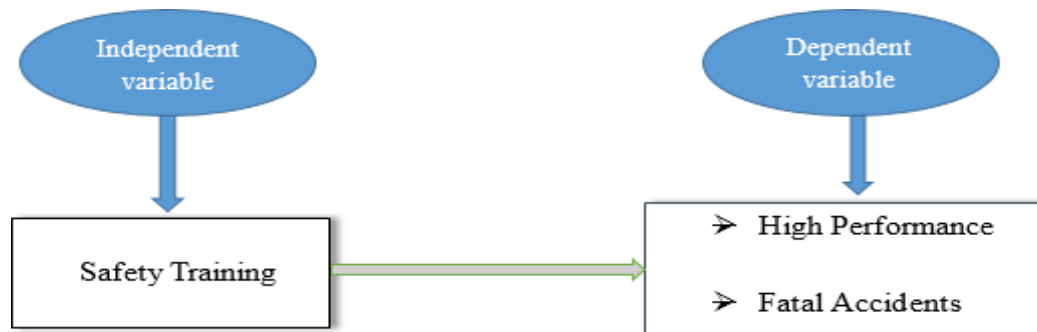
### **3. Theoretical Framework**

In this study "Impact of safety training on the performance of employees of electricity distribution companies in Pakistan." focuses the role and impact of safety training on reducing the fatal incidents and improving the performance of employees in electricity distribution companies. This study strongly emphasis how safety training is necessary for running and driving the operational

## THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN

system frequently and without interruptions and elaborates those methods and techniques by which reduces the injuries, burn, fall of line man from pole and death of operational staff (lineman) and eliminate the causes behind these events of line man death, burn, injuries. More over how employees of organization perform their duties with training and complete satisfaction as well as outcome of organization with skill full persons. In this research study there is one independent and two dependent variables adopted that complete the study two hypothesis has been made.

Figure-1



### Hypotheses

**H1:** There is significant and positive relationship between safety training and performance.

**H2:** There is significant and negative relationship between safety training and fatal incidents.

### 3. Methodology

After literature review, going through the conclusion of previous research done by management authors and social scientists, maximum support provided by NIOSH, OSHA, FACE and authentic reports of global institutes and research centers. Structured questionnaire is obtained from the study of Anonymous (2011). The questionnaire covers all the three variables i.e. high performance, safety training and fatal accidents which are intended to cover in present study. In this study, probability sampling technique has been used for data collection. The total or the aggregate number of all the linemen is known as population. The total number of the members selected from population is called as sample size. The population of this research was the total number of Line men of IESCO and the sample size of the population was randomly selection of 200 employees (only linemen) of IESCO. After collecting the feedback from respondents, data is entered in the tabulated form then data is analyzed by using SPSS software. Different types of test were applied on the collected data such as Descriptive analysis, Regression analysis, t-test, Analysis of variance (ANOVA) has also been applied for finding the required results.

### 4. Results and Discussion

Results have been prepared on the basis of qualitative and quantitative data collected through questionnaire from the operational employees of an electricity distribution company. Results have been discussed in detail keep in view the research topic and objectives. The main objective of this study is to analyze the relationship of three variables on the performance of employees (for which a number of tests have been applied to analyze the collected data) and their impact on different variables has also been discussed in detail.

## THE IMPACT OF SAFTEY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN

Frequency distribution tests have been applied, and the results have been summarized. First of all, frequency distribution and descriptive statistics on account of the gender is shown in table-1.

**Table-1: Frequency Distribution and Descriptive Statistics with respect to “Gender”**

Gender	Number of Responses (N=200)	
	Frequency	Percentage (%)
Male	200	100%
Female	00	00
Total	200	100%

It is clear from the above table-1 that 100% are the male respondents (200 males). Although IESCO Recruitment Policy puts no bar in recruitment of females on lines/ operation posts, however, due to cultural constraints no female has ever opted for appointment on these posts. That is the reason that all the population and sample of the study consists of males only and none of the respondents is from females.

**Table-2: Frequency Distribution & Descriptive Statistics with respect to “Experience”**

Organization	Number of Responses (N=200)	
	Frequency	Percentage (%)
<10	53	26.5
11-20	37	18.5
21-30	69	34.5
>30	41	20.5
Total	200	100

Table-2 represents that 53(26.5%) respondents have less than 10 years working experience on transmission & distribution lines, 37(18.5%) respondents have working experience ranging from 11-20 years. Maximum of the respondents 69(34.5%) have working experience between 21-30 years while 41(20.5%) respondents have maximum i.e. more than 30 years working experience of transmission & distribution lines. The table shows that there is a negligible gap between the employees having less than 10 years' experience shows that the company is inducting operational staff on regular basis and there may not be a problem of brain drain of operation staff in future and the employees having 21-30 years' experience which is maximum in number are assets of the company being highly skillful, energetic and willful employees which lift up a company to a high profit earning companies. The employees having more than 30 years' experience are of age of above 50 years who highly experience but performs duty as line foreman.

**Table-3: Frequency Distribution and Descriptive Statistics with respect to “Age”**

**THE IMPACT OF SAFTEY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

Number of Responses (N=200)

Organization	Frequency	Percentage (%)
16-20	1	0.5
22-27	4	2.0
28-33	56	28.0
>33	139	69.5
Total	200	100

Table-3 represents that only 1(0.5%) number respondent is below 20 years of age while number of respondents having age limits from 22 to 27 years are 4(2%). The number of respondents having age limit between 28 to 33 years is 56(28%) whereas maximum respondents i.e. 139 are over 33 years of age. This table clearly indicates that the rate of retirement is much more than the rate of induction and at some point of time there will be an acute shortage of technical experienced staff.

**Table-4: Frequency Distribution & Descriptive Statistics with respect to “High Performance”**

Items	<i>Percentage response rate (N=200)</i>				
	Disagree	Neutral	Agree	Mean	St. Dev
1. Trained employees are more effective and efficient as compare to untrained.	67	16	117	3.5300	1.54630
2. Trained employees get more incentives.	36	23	141	3.8650	1.36237
3. Do you require further training for the motivation and improvement of the performance to help you to increase overall productivity of the organization?	34	41	105	3.7100	1.15437
4. Training and development program will give me better idea of the career path, which I want to pursue.	34	56	110	3.5350	1.04125
5. Leadership and decision making training is provided to the employees.	56	39	105	3.2800	1.16118
6. Trained employees make less numbers of mistakes as compared to the untrained.	75	29	96	3.1700	1.44274
7. Training program help you to stay up to date with new processes or procedure related to your job.	28	28	144	3.8250	1.15805
8. Trained employees understand problems and get solution quickly.	29	33	138	3.6850	1.07309
9. T&D plans & policies respond quickly & effectively to changing business needs.	61	51	88	3.0950	1.19714

The above referred data analysis explains that how many respondents agree, disagree or neutral, with reference to different parameters of the high performance and results are interpreted with the mean and standard deviation. According to table-4, the mean of first statement is 3.5300 with 1.54630 standard deviation. This study reveals that maximum respondents agree that the trained employees

## THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN

are more effective and efficient as compared to untrained and this is a positive response. As for as the second question is concerned, mean value of second item is 3.8650 and standard deviation is 1.36237. This response supports this research as training is prerequisite for up-gradation, promotion and allowances etc. According to the third item of High Performance, mean of this item responses is 3.7100 with the standard deviation of 1.04125 and same like mean values of fourth, fifth, sixth, seventh, eighth and ninth items are 3.2800, 3.1700, 3.8250, 3.6850 and 3.0950 respectively. All of the responses of the items of high performance are showing positive results and we can say, training is a means of motivation and satisfaction of the employees and necessary for high performance of the organization.

**Table-5: Frequency Distribution and Descriptive Statistics with respect to “Safety Training”**

Items	Percentage response rate (N=200)				
	Disagree	Neutral	Agree	Mean	St. Dev
1. Employees are motivated towards training programs.	58	45	97	3.1900	1.31245
2. Training programs are job oriented.	57	36	107	3.3400	1.28164
3. Organizational culture facilitates the training and development programs.	100	47	53	2.6650	1.16169
4. Training is provided in accordance with international standards.	88	55	57	2.6800	1.26713
5. Working conditions support the training program.	103	38	59	2.6200	1.26634
6. I get safety training as my organization issues the schedule of training.	57	45	98	3.2650	1.24601
7. I get training about safe work procedures to perform my job.	53	59	88	3.2050	1.16609
8. I have enough time to learn safe work procedures.	46	36	118	3.5000	1.29940
9. My safety training is reviewed or updated if there is an incident.	92	58	50	2.7600	1.19983

Safety training is the independent variable of this study and table 4.5 indicates response to different parameters mentioned against each. In response to the first item of the variable, mean value is 3.1900 with the standard deviation of 1.31245 and results reveals that Most of the respondents agree with this item of safety training because mostly are aware of the importance of training and the benefits and advantages associated with it. Same like the mean values of second, third, fourth, fifth, sixth, seventh, eighth and ninth are 3.3400, 2.6650, 2.6800, 2.6200, 3.2650, 3.2050, 3.5000 and 2.7600 with the standard deviation of 1.28164, 1.16169, 1.26713, 1.26634, 1.24601, 1.16609, 1.29940 and 1.19983 respectively. And maximum respondents agree to the second item that training programs are job oriented. According to third item, a large number of respondents disagree because organizational behavior of electricity distribution companies doesn't represent safety culture and same is the case of training program and fourth item results demonstrate that Large number of respondents disagrees to this question because infrastructure of electricity distribution companies consist of deteriorated, lengthy PVC of consumers service mains, dismantle poles & lines.



## THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN

Fifth item shows sometimes working conditions don't support the training program, especially peak hot summer season, rainy season, disaster, and less numbers of skilled persons in the subdivision. Response rate to the sixth question shows that organizations have become careful and have decreased fatal and non-fatal accidents rapidly. With respect to seventh item reveals, this is prime objective of training to protect from electricity and done work well to avoid any damages and this is possible only when trainee learn from training about safe work procedure. According to the eighth item of Safety Training majority of respondents agree with this item of safety training because the prime responsibility of training centers is to create the learning environment for employees and provide them platform to understand training code & conduct. Ninth item response represents, there is no any revised course schedule of training provided to the employees in case of fatal and non-fatal accidents.

**Table-8: Frequency Distribution and Descriptive Statistics with respect to “Fatal Accident”**

Items	<i>Percentage response rate (N=200)</i>				
	Disagree	Neutral	Agree	Mean	St. Dev
1. My Line Superintendent often checks me on duty, according to safety aspect.	140	19	41	2.1500	1.30615
2. My organization fulfils requirements of all tasks & jobs associated with safety risks	127	21	52	2.4150	1.31584
3. I always follow safe work procedures on duty.	45	38	117	3.5000	1.23598
4. I always assess risks relating to my simultaneously changing jobs	58	52	90	3.2700	1.20597
5. My LS briefs me and listens to me about performance & safety.	105	42	53	2.5300	1.28740
6. Management takes notice of what I say about safety.	95	52	53	2.6550	1.27834
7. I always report about safety incidents immediately as it happen.	59	57	84	3.1550	1.12575
8. Safety incident reports always get followed up by LS, SDO and top management.	59	47	94	3.1900	1.29704
9. If I report a safety issue where someone could get hurt, Mgt. takes notice of it	83	57	60	2.8700	1.14352
10. If I did not follow a safety instruction, I feel like I was letting the team down.	40	60	100	3.4100	1.16131
11. I feel that enough resources/money is put for safety by company.	85	62	53	2.7500	1.17661
12. Safety is highest priority of my Company.	76	53	71	3.0200	1.23987
13. I know who to ask about what to do if I get injured at work.	47	51	102	3.4350	1.13234
14. We all have to report all injuries straight away to management.	68	52	80	3.1400	1.26428
15. My Sub Division's Notice Board has a poster about injury management.	105	47	48	2.4850	1.30703

**THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

16. All Survivors of non-fatal accidents are offered suitable duties	69	51	80	3.0700	1.1925 6
--	----	----	----	--------	-------------

Here Fatal Accident is the dependent variable of this study and mean value of the first item of Fatal Accident is 2.1500 with the standard deviation of 1.30615 and results shows that Line Superintendent do not in position to check their staff while duty hours due to large numbers of liability and rush of work. According to the second item of Fatal accident, mean value is 2.4150, and this reveals that Large number of respondents disagree with this item because according to their opinion their organization do not full fill task related to the associated risks. According to the mean value of the third item which is 3.5000 and represents that Electricity is not visible unlike this it is hidden and for work on main lines, it is necessary to follow the proper safety rules and safe work procedure to avoid any life and property loss. According to the fourth item of this variable, mean value is 3.2700 and results demonstrate that IESCO electricity infrastructure consisted on transmission & distribution system, lengthy service mains (PVC), composite feeders, and several turns of transmission & distribution lines. When linemen and certified linemen face several unexpected conditions. Trained employees immediately understand the expected risk associated with suddenly changing task perhaps task related with transmission or distribution.

Fifth item represents the mean of 2.5300 which explains large numbers of respondents disagree with this item because line superintendent have several responsibilities of the subdivision and feeders as well as consumers complaints. So often Line Superintendent (LS) has no time to brief the linemen properly and sometime linemen intensively creates hindrances for LS as conventional culture hate of senior and junior in the organization. According to the Sixth item maximum respondents found disagree according to the mean value which is 2.6550, from this item of Fatal Accident and interpret that Director safety takes notice of any small incident happen in the organization. The mean value of seventh, eighth, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth and fifteenth item are 3.1900, 2.8700, 3.4100, 2.7500, 3.0200, 3.4350, 3.1400, 2.4850 and 3.0700 respectively and maximum number of items are agreed by the respondents. In order to identify the differences between the established variables with respect to different demographics of the respondents (for more than two variables), ANOVA test is applied.

**Table-9: ANOVA (Measures Differences between variables with respect to Experience (N = 200))**

Variables	Experience	N	Mean	F-value	P- value
Safety Training	< 10	53	3.3438	3.278	.022
	11-20	37	3.7958		
	21-30	69	3.5298		
	>30	41	3.4905		
	Total	200	3.5217		
High Performance	< 10	53	2.8679	3.204	.049
	11-20	37	3.1592		
	21-30	69	3.0193		
	>30	41	3.1165		
	Total	200	3.0250		
Fatal Accident	< 10	53	2.7146	3.565	.015

**THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

11-20	37	3.1014
21-30	69	3.0036
>30	41	2.9802
Total	200	2.9403

Table-9 summarizes the results of ANOVA test which was applied to find the difference of significance level of the Safety Training, High Performance, and Fatal Accident. The above tabulated results reveal that F & P-values on account of Safety Training are 3.268(>3) and 0.022(<0.05) respectively which establish a firm opinion about the significant difference. Tabulated results reveal that F & P-values according to High Performance are 3.204(>3) and 0.049(<0.05) respectively which establish strong opinion about the significant difference. Tabulated results reveal that F & P-values according to Fatal Accident are 3.565 (>3) and 0.015(<0.05) respectively which establish strong opinion about the significant difference.

**Table-10: ANOVA (Measures Differences between variables with respect to Age (N = 200))**

Variables	Age	N	Mean	F-value	P- value
Safety Training	16-21	1	3.1111	.645	.587
	22-27	4	3.8611		
	28-33	56	3.4563		
	>33	139	3.5412		
	Total	200	3.5217		
High Performance	16-21	1	2.0000	2.804	.041
	22-27	4	2.4722		
	28-33	56	2.9544		
	>33	139	3.0767		
	Total	200	3.0250		
Fatal Accident	16-21	1	2.1875	4.115	.007
	22-27	4	2.7656		
	28-33	56	2.7254		
	>33	139	3.0373		
	Total	200	2.9403		

Table-10 represents the results of ANOVA test, which was applied to find the difference of significance level of the Safety Training, High Performance and Fatal Accident. The mean value of respondents having age of 16 to 21 is 3.1111. Respondents having age between 22 to 27 and their mean value is 3.8611. The respondents having age between 28 to 33 and their mean value is 3.4563. Those respondents having age more than 33 years their mean value is 3.5412. It represents that the maximum mean value is 3.8611 having age group of 22 to 27. So there is significant relationship among age of having mean value 3.8611 with the Safety training because p value is  $0 < .05$  and F value is greater than 3. The respondents having age 16 to 21 their mean value is 2.0000. The respondents having age value between of 22 to 27 their mean value is 2.4722 and the respondents having age between 28 to 33 and their mean value is 2.9544. The respondents having age more than 33 their mean value is 3.0767. It represents the mean value having age of more than 33 is more than others. So there is significant relationship between age and high performance because p value is  $0 < .05$  and F value is greater than 3. The respondents having age 16 to 21 their mean value is 2.1875. The respondents having age value of 22 to 27 their mean value is 2.7656. The respondents having

**THE IMPACT OF SAFTEY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

age Between 28 to 33 and their mean value is 2.7254. The respondents having age more then33 their mean value is 3.0373. It represent the mean value having age of >3 is more than others so there is significant relationship between age and Fatal accidents because p value is  $0 < 0.05$  and F value is greater than 3.

**Table-11: ANOVA (Measures Differences between variables with respect to Qualification (N = 200))**

Variables	Qualification	N	Mean	F-value	P- value
Safety Training	Matriculation	92	3.4215	3.098	.017
	Intermediate	27	3.7366		
	Bachelor	13	4.0256		
	Masters	2	3.5556		
	Other	66	3.4731		
	Total	200	3.5217		
High Performance	Matriculation	92	3.0362	1.457	.217
	Intermediate	27	2.9794		
	Bachelor	13	3.3846		
	Masters	2	3.0556		
	Other	66	2.9562		
	Total	200	3.0250		
Fatal Accident	Matriculation	92	2.9327	.463	.763
	Intermediate	27	2.9259		
	Bachelor	13	3.1442		
	Masters	2	2.6563		
	Other	66	2.9252		
	Total	200	2.9403		

Table-11 represents the mean value of respondents (according to their qualification) and their relation with the Independent variable (Safety Training). The mean value of matriculation respondents is 3.4215, the intermediate respondents having mean value of 3.7366, the mean value of bachelor is 4.0256, and mean value master respondents is 3.5556, whereas the mean value of respondents having other qualification is 3.4731. According to the results of table, it represents the mean value of having Bachelor qualification is heighten then other respondents and it represents there is significant relationship between respondent is having Bachelor qualification and Safety Training (Independent variable). Because p value is less than 0.05 ( $0.009 < 0.05$ ) and F value is greater than 3 ( $4.0256 > 3$ ). Table-11 represents the mean value of matriculation respondents is 3.0362 and the mean value of intermediate respondents is 2.8431, the mean value of bachelor is 3.3846, the mean value master respondents is 3.0556 and the mean value of respondents having other qualification is 2.9562. According to the result of table, it represents the mean value of having bachelor qualification is more than other respondents and it represents there is significant relationship among respondents having bachelor qualification and High Performance (dependent variable). Because p value is less than 0.05 ( $0.001 < 0.05$ ) and F value is greater than 3 ( $3.3846 > 3$ ). The mean value of matriculation respondents is 2.9327. The respondents having intermediate qualification their mean value is 2.9259 and the mean value of bachelor is 3.1442, the mean value of master respondents is 2.6563 whereas the mean value of respondents having other qualification

**THE IMPACT OF SAFTEY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

is 2.9252. According to the results of table, it represents the mean value of having bachelor qualification is heighten then other qualification respondents and it represents there is significant relationship among respondents having bachelor qualification and Fatal Accident (dependent variable). Because p value is less than 0.05 ( $0 < 0.05$ ) and F value is greater than 3 ( $3.1442 > 3$ ).

**Table-12: ANOVA (Measures Differences between variables with respect to Number of Employees (N = 200))**

Variables	No Employees	N	Mean	F-value	P- value
Safety Training	1-10	50	3.8133	9.343	.000
	11-30	22	3.8990		
	31-50	25	3.2222		
	51-100	70	3.4937		
	>100	33	3.1145		
	Total	200	3.5217		
High Performance	1-10	50	3.2422	5.828	.000
	11-30	22	3.3131		
	31-50	25	2.9511		
	51-100	70	2.9429		
	>100	33	2.7340		
	Total	200	3.0250		
Fatal Accident	1-10	50	3.1763	5.316	.000
	11-30	22	3.0653		
	31-50	25	3.0600		
	51-100	70	2.8420		
	>100	33	2.6174		
	Total	200	2.9403		

Table-12 represents the results of ANOVA test, which was applied to find the difference of significance level of the Safety Training, High Performance and Fatal Accident. The mean value of respondents having age between of 16 to 21 is 3.2653. Respondents having age between of 22 to 27 their mean value is 3.0163. The respondents having age between of 28 to 33 their mean value is 1.8222. Those respondents having age more than 33 years their mean value is 2.3208. It represents that the maximum mean value is 3.2653 having age group of 16 to 21. So there is significant relationship among age of having mean value 3.2653 with the Consumption behaviour because p value is  $0 < .05$  and F value is greater than 3. The respondents having age 16 to 21 their mean value is 3.6190. The respondents having age value between of 22 to 27 their mean value is 3.0762 and the respondents having age of 28 to 33 their mean value is 1.8222. The respondents having age more than 33 their mean value is 2.1696. It represents the mean value having age of 16 to 21 is more than others. So there is significant relationship between age and electricity prices because p value is  $0 < .05$  and F value is greater than 3. The respondents having age 16 to 21 and their mean value is 3.7143. The respondents having age value of 22 to 27 and their mean value is 3.3095. The respondents having age Between 28 to 33 and their mean value is 2.6296. The respondents having age more than 33, their mean value is 2.2398. It represent the mean value having age of 16 to 21 is more than others so there is significant relationship between age and electricity prices because p value is  $0 < .05$  and F value is greater than 3.

**THE IMPACT OF SAFTEY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

**Table-13: Regression coefficients, standard errors in parentheses, t-values in brackets and p-values in italic:**

<b>Dependent Variable</b>	<b>Constant</b>	<b>Safety Training</b>	<b>R-Square</b>	<b>F-Statistics</b>
<b>Performance</b>	1.970	0.513	0.378	49.043
	(0.226)	(0.073)		
	[8.722]	[7.001]		
	<i>0.000</i>	<i>0.000</i>		<i>0.000</i>

The results argued that model is more significant ( $p < 0.05$ ) that also show significant association among performance that is more dependent variables (R-Square 0.378=and the F-value=49.043) and R- Square depict fitness for model and independent variable (Safety Training) may also account 51% variation in the dependent variable. When variables are evaluated individually, there is significant ( $p < 0.05$ ) as well as positive relationship among variables.

**Table-14: Regression coefficients, standard errors in parentheses, t-values in brackets and p-values in italic:**

<b>Dependent Variable</b>	<b>Constant</b>	<b>Safety Training</b>	<b>R-Square</b>	<b>F-Statistics</b>
Fatal Accidents	1.117	0.603	0.338	99.312
	(0.187)	(0.060)		
	[5.987]	[9.966]		
	<i>0.000</i>	<i>0.000</i>		<i>0.000</i>

The results argued that model is more significant ( $p < 0.05$ ) that also show significant association among Fatal Accidents that are more dependent variables (R-Square=0.338 and the F-value=99.312) and R- Square depict fitness for model and independent variable (Safety Training) model may also account 60 % variation in the dependent variable. When variables are evaluated individually, there is significant ( $p < 0.05$ ) as well as positive relationship among variables.

**Table-15: Correlation Matrix of Networking, Competence, Opportunity and Participation Correlations**

**THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

		P	FA	ST
	Pearson Correlation	1		
P	Sig. (2-tailed)			
	N	200		
	Pearson Correlation	.369**	1	
FA	Sig. (2-tailed)	.000		
	N	200	200	
	Pearson Correlation	.445**	.578**	1
ST	Sig. (2-tailed)	.000	.000	
	N	200	200	200

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table-15 represents the correlation matrix of consumption behavior, Electricity prices and Electricity crises. The results confirm in the table show the level of co-relational significance amongst one dependent and two independent variables by interlinking the different correlation coefficient values of Pearson. According to the results, achieved by using the application of correlation test. It is evident that core relation coefficient of Fatal Accidents is 0.36 and it means Fatal Accidents contribute 36% in performance. It shows there is strong correlation among Fatal Accidents and performance and it significantly impact on the performance because P value is  $P < 0.05$ . The core relation coefficient of Safety training is 0.44 and it means Safety training contribute 44 % in the performance. It shows there is strong correlation among Safety training and performance it significantly impact on the performance because P value is  $P < 0.05$ .

### 5. Major Findings and Discussions

Electricity is invisible enemy of living organisms especially linemen working on transmission lines. This study reveals that arrangement of training program often motivates the employees of electricity distribution companies, however some linemen complain that organizational culture does not support training due to heavy work load special in peak summer season. Chowhan (2005) concluded that the existence and intensity of training activities in a firm depend on the level of technological competency that exists in that firm, rather than on its being a member of a technology-based industry. So the companies should arrange some technology and improve organization culture for better performance because findings gives evidences that Safety training curriculum is not upgraded from time to time and doesn't commensurate with latest technology and the international standards in Pakistan.

And also study proved that employees are satisfied from safety training programs/schedules because they gain updated knowledge and techniques and share their practical/field problems and their solutions in the training programs. So organization can enhance productivity through proper training programs and also Ginsberg (1997) found due to the practical implementation of the training it is very necessary to obtain useful training that proves its effectiveness. Also Studies

## THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN

have proved that costly and effective training can save money that wasted on cheap and useless training.

### 6. Conclusion

This study is conducted and model has been developed for finding the impact of safety training on the performance of employees of an electricity distribution company in Pakistan. Data of 200 employees of IESCO has been collected through adopted questionnaire survey and association and relationship between these variables has been measured through correlation and regression analysis, descriptive and inferential statistics has been applied for measuring frequency distributions and significance level of variables with different demographic factors and after finding results and detail discussion, we can conclude Safety training can only be made effective if participating line staff is motivated and willing to learn. Training is a learning process in which curiosity plays a very important role and makes the training effective therefore the curricula, its contents, elaboration and explanations should inculcate a sense of learning and achievement among the participants. Mostly skilled and literate line staff is aware of the core value of training however a few line staff considers training as wastage of time and resources. Most of the line staff considers training only the way of getting incentive and promotion as training and departmental promotion examination are prerequisites for such incentives. This also indicates that such a staff neglects other aspects of training. Line staff gets training in training centers but the rules, procedures and practices while on duty is not completely followed due to socio economic and working environment. Latest techniques are introduced during the training sessions to prevent unsafe acts and conditions but unfortunately linemen gentry mostly adopt it only for the time being, that is the reason of high rate of fatal accidents. Organization can itself create safety culture and stimulate it but if a person becomes profligate then it is not possible to bind him for the same. Gap of personals between linemen and supervision gentry also do matter for implementing the safety techniques. Educational level of the participants also bars from understanding technical terms and soul of training. Since fatal accidents as well as non-fatal accidents only happen on breach of safety measures but it has been observed that action against the responsible line staff is taken only in case of non-fatal accidents and in case of fatal accidents just only prayer for late lineman.

### References

- Anonymous, N. D. (2011). Impact of Training and Development on Employees' Performance. A Case Study of Zenith bank of Nigeria. Issued on 31OCT2011 from Nigeria.
- Armstrong, M., & Taylor, S. (2014). *Armstrong's handbook of human resource management practice*. Kogan Page Publishers.
- Bergquist, M., & Ljungberg, J. (2005). Tales from the Crypt—Organizing IT-Business in the Dotcom. *Proceedings from IRIS 28*.
- By Electrocution, W. D. (1998). A Summary of NIOSH Surveillance and Investigative Findings. *US Department of Health and Human Services, DHHS (NIOSH) Publication*, (98-131).
- Carter, P. (2007). *Rethinking Organisational Behaviour: A Post-Structuralist Framework*. Pearson Education UK.
- Chen, M. K. (2008). Rationalization And Cognitive Dissonance: Do Choices Affect Or Reflect Preferences?



**THE IMPACT OF SAFETY TRAINING ON THE PERFORMANCE OF EMPLOYEES OF AN ELECTRICITY DISTRIBUTION COMPANY IN PAKISTAN**

- Clark, T. W., & Mattson, D. J. (2005). Making Carnivore Management Programs More Effective: A Guide For Decision Making. *Coexisting with large carnivores: Lessons from Greater Yellowstone*, 271-276.
- Crowley, K., & Siegler, R. S. (1999). Explanation and Generalization in Young Children's Strategy Learning. *Child development*, 70(2), 304-316.
- Ginsberg, L. (1997). Training for the Long Haul '. *Computer Shopper*, 17, 04.
- Kennedy, J. (2008). Electric Line Man Training, Presented by INDEV Specialist Manassas, Virginia.
- M.C Chowhan (2005). President of Table Tennis Federation India.
- Partlow, C. G. (1996). Human-Resources Practices of TQM Hotels. *The Cornell Hotel and Restaurant Administration Quarterly*, 37(5), 67-77.
- Raynes, N. V., & Sumpton, R. C. (1987). Training Needs Of Community Staff: WHAT DO THEY WANT?. *Journal of the British Institute of Mental Handicap (APEX)*, 15(3), 95-97.
- Shah, K., (2011). Hundred Line men of WAPDA dies annually. "Pakistan Press International." www. Article of Hydro World. Com. issued on December 27, 2011, Pakistan.
- Sturmey, P. (1992). Goal Planning For Adults with a Mental Handicap: Outcome Research, Staff Training and Management. *Mental Handicap Research*, 5(1), 92-108.
- Tihanyi, L., Ellstrand, A. E., Daily, C. M., & Dalton, D. R. (2000). Composition of the Top Management Team and Firm International Diversification. *Journal of Management*, 26(6), 1157-1177.
- Tsaur, S. H., & Lin, Y. C. (2004). Promoting Service Quality in Tourist Hotels: The Role of HRM Practices and Service Behavior. *Tourism Management*, 25(4), 471-481.
- Turcotte, J., Léonard, A., & Montmarquette, C. (2003). *New Evidence on the Determinants of Training in Canadian Business Locations. The Evolving Workplace Series. Catalogue No. 71-584-MPE No. 5.* Human Resources and Skills Development Canada. Service Canada, Ottawa, ON K1A 0J9, Canada.
- U.S. Department of Health and Human Services, *National Institute for Occupational Safety and Health* (US DHHS, NIOSH). (1998). NIOSH.