

Attitudes of OHS Inspectors towards Practicing Factory Inspection in Egypt

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Abstract: Workplace inspection is part of a comprehensive health and safety program in which the workplace is closely examined on a regular basis of identifying and reviewing potential and actual hazards associated with equipment, tools, and industrial processes. The aim of the present study is to investigate the process of factory inspection as a tool of pertaining safety and welfare of employees in Egypt as well as to study the attitudes of inspectors who are responsible for the process of factory inspection in Egypt. The present study is conducted on 210 inspectors. 145 of them belong to different industrial, commercial, and service enterprises in Egypt and classified as group [A]. The other 65 inspectors are members of the Ministry of Labor in Egypt and classified as group [B]. Two forms of questionnaires are formed to provide personal, professional, and attitudinal data. Percentages of males in group [A] inspectors (95.2%) are greatly higher than that in group [B] (46.0%). The bachelor degree in group [B] inspectors (89%) is more predominant than in group [A] inspectors (50.3%). The main source of occupational health and safety (OHS) knowledge for group [A] inspectors is the training programs (75%), while, it is the practical training or by asking seniors for group[B]. The predominant aims of inspectors are safe work environment, safe workers and mitigation of occupational hazards. Some of job descriptions are identical. There are significant variation between the two groups of inspectors in how they evaluate work environment, ($P=0.00001^*$). Only 78% and 91% of groups [A] and [B] inspectors, respectively know the Egyptian Labor Law No.12/2003. In case of danger, 73% of group [A] and 72% of group [B] inspectors take action(s) coincide with their responsibilities as informing management. There is non-significant variation between their opinion regarding the importance of the field of OHS and environment. Factory inspection is an important tool in assisting OHS programs. Efforts should be directed to enrich knowledge of inspectors continuously. Legislative knowledge is also needed. Inspectors should be continuously encouraged and supported from all involved authorities; this will help them do perfectly. Employers should be encouraged to fulfill the requirements of OHS programs.

Key words: Factory inspectors; Egypt; Occupational health and safety (OHS)

INTRODUCTION

World 's working population is major social and individual factors and access to contributors to economic and social health services. The availability of development. Their health is not only interventions to prevent occupational affected by workplace hazards but also by hazards and to protect and promote the

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health of working team in the workplace is essential.^[1]

Workplace inspection is part of a comprehensive health and safety program in which the workplace is closely examined on a regular basis of identifying and reviewing potential and actual hazards associated with equipment, tools, and industrial processes. Inspection also helps identifying hazards that are associated with unsafe acts. Inspectors also ensure that existing hazard controls are functioning adequate and determine what control measures are further needed. Inspectors need thorough and continuous training to perform their job effectively.^[2]

Safety at work has been of importance from the time that human beings use implements, equipment or tools for their work. The Universal Declaration of Human Rights, adopted by the United Nations General Assembly in 1948, recognized the right of all people to just and favorable working conditions. Since its inception in

1948, WHO "World Health Organization" in Geneva has recognized the utmost importance of improving the health status of working populations and has been developing international collaboration in this area in order to attain "Health for All", the health of workers must be protected and promoted through the development of adequate multidisciplinary occupational health programs and services. WHO has paid special attention to co-operation and co-ordination of its work with the ILO{International Labor Organization}to protect the workforce and to ensure safety and health at work .The ILO was created in 1919 primarily for the purpose of adopting international standards to cope with problems of labor conditions.^[3]

The aim of the present study is to investigate the process of factory inspection as a tool of pertaining safety and welfare of employees in Egypt as well as to study the attitudes of inspectors who are responsible for the process of factory inspection in

Egypt.

MATERIAL AND METHODS

1. Subjects

The present study is conducted on 210 inspectors. 145 of them are considered occupational health and safety inspectors and belong to different industrial, commercial, and service enterprises in Egypt. This group of inspectors is classified as group [A]. The other 65 inspectors are members of factory inspectors of the Ministry of Labor in Egypt. This group of inspectors is classified as group [B].

Group [A];{n=145} are geographically classified as 106 from Alexandria, 29 from Bohera, 4 from Gharbeya, 2 from Marsa Matrouh, and one participant from each of Port Said, Cairo, Kena, and Assyout

Group [B];{n=65} are geographically classified as 32 from Alexandria, 23 from Bohera, and 10 participants from Gharbeya.

2. Materials

Two forms of questionnaires are formed,^[4-7] the first form is for group [A] and

the second form is for group [B]. Questionnaires provide knowledge about the following:

- a- Personal data; including age, sex, level of education, years of employment, certificates, and training programs acquired.
- b- Professional data; including source of knowledge about occupational health and safety (OHS), aim(s) [as an inspector], job description, scope of the role of inspector, how to evaluate a work environment? occupational hazards to which they are exposed, types of measurements they carry out, laws of labor and environment they know, the presence of a special department for each of OHS and environment; or the presence of a special department for both of them; or the presence of just a committee for OHS (Group [A] only), awards of OHS and/or environment their enterprises have gained (Group [A] only), and

finally the tools they use in inspection (Group [B] only).

c- Attitudinal data; including qualifications and characters needed in the person who carry out inspection, experiences and skills acquired, action(s) to be done in case of danger; adequacy or inadequacy of action(s) and causes of inadequacy, evaluation of the degree of importance of the field of OHS and environment, satisfaction about the role of inspector and the cause(s) in case of dissatisfaction, satisfaction of each of Groups [A] and [B] about the role of each other, and finally co-operation between each of them.

The two forms of questionnaires were reviewed and tested carefully before the course of the study.

3. Methodology

Some of the participants of Groups [A] and [B] were interviewed in their offices. Others were interviewed while they were attending the basic training program of OHS

4. Data handling

Forms were carefully coded and data were reviewed, verified, and entered to SPSS-12 package. Data were statistically analyzed.

RESULTS AND DISCUSSION

1. Personal Data

Personal data of inspectors are represented in Table (1). Considering the distribution of inspectors according to their age, all selected age intervals are represented more or less equally and the difference between the two groups [A] and [B] is not statistically significant.

Percentages of males in group [A] inspectors (95%) are greatly higher than that in group [B] (46%). On contrast, Percentages of females in group [A] inspectors (5%) are greatly lower than that in Group [B] inspectors (54%). This highly significant variation between the two groups of inspectors ($P=0.00001^*$) with respect to sex may be due to preference of males in the industrial sector (group [A] inspectors)

especially under the umbrella of privatization. In addition, regulations in Egypt restrict working of females in hazardous locations. On the other hand, Ministry of Manpower and Immigration (Governmental sector) gives equal chances for employment of males and females. Also, salaries in industrial sector are higher than those in governmental sector, so; men prefer to work in industrial sector. Group [B] inspectors in Egypt have university degrees and their salary range from LE 200 to 500 ; while most of group [A] inspectors are graduated from secondary schools and their salaries range from LE 300 to 1200.

Regarding level of education, the highly significant variation between the two groups of inspectors ($P=0.0001^*$) is clear. The bachelor degree in group [B] inspectors (89%) is more predominant than in group [A] inspectors (50%). The remaining 11% of group [B] inspectors have post graduate degree in the field of OHS. 48% of group [A] inspectors have secondary school degrees

and are employed as OHS technicians.

There is non-significant variation between the two groups with respect to years of employment. The highly significant variation between the two groups with respect to certificates and training programs acquired is noticeable ($P=0.0001^*$). The basic and/or advanced program of OHS is the predominant program for group [A] and group [B] inspectors (35% & 85%, respectively). Only 8% of group [B] inspectors acquire program of fire prevention and extinction. No one of them attends environmental health program or environmental ISO program. This may lead to shortage of there OHS knowledge and reduction of the environmental sense which is very important in completing the OHS inspection process. In contrast, group [A] inspectors attend a variety of programs.

2. Professional Data

Professional data of inspectors are represented in Table (2). The main source of OHS knowledge for group [A] inspectors

is the training programs outside their enterprises (75%), while the main source of OHS knowledge in group [B] inspectors is the practical training inside their enterprises either through practicing in field work, or by asking seniors at work. Carefully organized training programs constitute only 36% of the knowledge attained by group [B] inspectors. This may be due to lacking financial resources in the Ministry of Manpower and Immigration for group [B] inspectors. Also, companies and other workplaces are enforced by law to finance training of OHS staff [Table (2)-a], ($P=0.00002^*$).

Table (2)-b shows that the predominant aims of group [A] and group [B] inspectors are safe work environment, safe workers, and mitigation of occupational hazards. Compliance with relevant provisions of legislations is one of the aims of group [B] inspectors while it is not such that for group [A] inspectors ($P=0.00001^*$).

Some of job descriptions of group [A] inspectors are identical to that of group [B]

inspectors. Some job descriptions are specific to group [A] only; others are specific to group [B] only as clear in Table (2)-c. Similar job descriptions include recognition of hazards, ensure accessibility of PPE, training, and obligation of using them; and in addition to recording of accidents and different assessment processes. Group [B] inspectors do not consider that the assessment of hazards is one of their responsibilities. This is a misunderstanding among them as one of the responsibilities of this group is assessment of hazards in enterprises under inspection to check compliance with occupational and environmental exposure limits. In addition, 78% of them mention that instrumentation is one of the methods they use for work environment evaluations [Table(2)-e].

Scope of roles of group [A] inspectors can be arranged according to their opinion as listed in Table (2-d) in the following order: planning and application of fire

prevention, OHS, emergency, workers' training programs, electric shock prevention, chemical hygiene, respiratory protection, and environmental impact assessment programs. Others (30%) say that they only share in application of already planned programs. Roles of group [B] inspectors can be arranged according to their importance in the following order: as provision of advices for workers and employers; inspection of accidents and claims; inspection of compliance between laws and levels of exposure. The scope of roles of the two groups are completely different.

There are significant variation between the two groups of inspectors in how they evaluate work environment as illustrated in Table (2)-e, ($P=0.00001^*$). Group [A] inspectors depend on experience of their seniors, scientific experiences, measurement using available instrumentations, their long experience, and finally the descriptive evaluation to evaluate

their work environment. Group [B] inspectors use the same methods of evaluation but they do not use the assistance of scientific experiences.

Table (2)-f indicates the significant variation between group [A] and group [B] inspectors with respect to occupational exposures especially to heat, noise, improper lighting, radiation, vibration, dust, gases and vapors, and corrosive liquids. Also, there are non-significant variation between them with respect to exposure to electric shocks, accidents, and biological exposures.

There are significant variations between the two groups of inspectors which have the availability to measure heat stress, noise, and lightning. There are also non-significant variation between the two groups in measuring radiation, vibration, dust, gases, and vapors as clear in Table (2)-g. Only 6% of group [B] inspectors can not measure any hazards and this converge with their opinion about job description appears in

Table (2)-c in which group [B] inspectors decide that assessment of hazards is not one of their job descriptions.

One of the most important indicators of completing OHS inspection process by both groups of inspectors is their information about laws, regulations, and decisions justify this sector. Only 78% and 91% of groups [A] and [B] inspectors, respectively are acquainted with the Egyptian Labor Law No.12/2003. In addition, 35% and 23% of them respectively know the Egyptian Environmental Law No. 4/1994. Moreover, only 51% and 15% of them know the decision of Minister of Manpower and Immigration No. 211/2003. Furthermore, 16% and 80% of them respectively know decision No 453/1954 responsible for giving and renewing licenses for enterprises, [Table (2)-h].

51% of group [A] have only an OHS department, 11% of them have two separate departments, one for OHS and the other for environment, and 28% have only

one department for OHS and environmental issues. 10% of group [A] inspectors decide that they have neither OHS nor environmental departments [Table (2)-i]. 54% of them decide that their enterprises do not gain any awards or certificates in OHS and environmental fields; 27% of them decide that their enterprises are looking forward to gain environmental- ISO (ISO-14000, 14001) and OHS ISO (ISO 18000, 18001). 16% of group [A] inspectors decide that their enterprises have gained environmental ISO and 7% of them have gained OHS- ISO, [Table (2)-j].

Regarding tools that group [B] inspectors use, 85% of them decide that they at least need notebook, papers, or check list, 80% of them need instruments for undergoing work environment evaluation, 68% need means of transportation, and 38% of them decide that they need instruments for evaluation of the environmental impacts of enterprises under inspection, [Table (2)-k].

3. Attitudinal Data

There is non-significant variation between Group [A] and [B] inspectors in personality requirements as shown in Table (3)-a. These requirements are honesty, practical skills, activity, ability to analyze, and ability to see accurate details. While there is highly significant variation between the two groups ($P=0.004^*$) in the physical characteristic required for completing their work as high physical fitness; and ability to run, climb, and move quickly from one place to another.

Some skills that must be acquired due to long experience among group [B] inspectors are not mentioned by them as criticizing listening, decision making, contact skills, OHS skills, and scientific and technical skills as illustrated in Table (3)b.

In case of danger, Table (3)-c indicates that 73% of group [A] and 72% of group [B] inspectors take action(s) coincide with their responsibilities as informing management of the enterprise (group [A]), and informing

management of Ministry of Manpower and Immigration (group [B]). They also inform workers to use PPE. Group [A] inspectors promptly apply emergency plan. Some of group [A] and group [B] inspectors (35% and 23%, respectively) believe that the actions they follow during danger are enough and adequate to prevent hazard occurrence or propagation. Others believe that these actions are not enough and recommend more engineering controls, increasing awareness about occupational and environmental hazards among workers and employers, increasing financial resources for OHS, making assessment techniques available, increasing legal obligations, and coordination between sectors responsible for OHS. 65% of group [B] inspectors recommend increasing environmental and occupational awareness. This reflects their feeling about lacking occupational and environmental awareness, which may be due to lacking of training programs in this field., Table(3)-d.

There is non-significant variation between the opinion of the two groups of inspectors regarding the importance of the field of OHS and environment. 99% of group [A] and 100% of group [B] inspectors decide the importance of this field as very important, or relatively important. [Table (3)-e].

The highly significant variation between the degrees of satisfaction of the two groups of inspectors ($P=0.00041^*$) is greatly obvious in Table (3)-f. It is clear that the satisfaction among group [A] inspectors (77%) is higher than that among group [B] inspectors (69%). Group [A] dissatisfied inspectors decide the causes of their dissatisfaction to be; lack of awareness among workers about OHS, the great hostility that OHS team facing from production and administrative sectors, lack of OHS equipment, OHS staff bears great responsibility especially if unwanted actions occur, most training programs are restricted to specialists and members of committees,

and finally the salaries given to the OHS department for completing their responsibilities is much lower than that given to the production sectors. Moreover, their salaries and annual bonus are reduced in case of occurrence of any incidents or accidents in their enterprises.

On the other hand, the causes of dissatisfaction of group [B] dissatisfied inspectors [Table (3)-g] according to their opinion are: the unavailability of transportation means so they undergo field visits depending on their own expenses or on the very small transfer bonus. Other dissatisfaction causes include the hostility they face from in-plant OHS staff, and employers of enterprises under inspection, the gap between the courses they studied in their faculties (Science, Engineering, Agriculture,..., etc) and their job responsibilities, many complaints they face are not correct. Moreover, group [B] inspectors are sometimes obligated to ignore defects to satisfy their seniors and

employers of enterprises under inspection. In addition, the formal legal actions take a lot of time, the potential hazards they exposed to, lack of authority to enforce any changes, and finally the laws are not applied and legal affairs lack follow up.

All the previous causes of dissatisfaction among group [A] and group [B] inspectors cause them to be frustrated, unfruitful. These also give rise to negative attitudes towards their responsibilities and duties and towards their community as a whole.

As factory inspection process necessitates the co-operation between the two groups of inspectors. Most of the two groups of inspectors believe that the other group does not co-operate with each other (Table (3)-h). Otherwise, 73% of group [A] inspectors have classified group [B] inspectors as being highly co-operative. On the other hand, 65% of group [B] inspectors have classified group [A] inspectors as being relatively co-operative. The difference

between the opinion of the two groups is highly significance ($P=0.0001^*$) as shown in Table (3)-i.

Progress in bringing occupational health to the developing countries is painfully slow. In addition, many other health issues compete with occupational health for scarce funding. Poverty and disease are scourges in many countries, and industrialization is believed to be the way to overcome them. So, they do their best efforts to rapidly increase Industrialization; but, experience of developed countries with the costs of occupational health is that a very substantial financial burden is being shifted to the industrializing countries through the process of globalization.^[8]

Egypt as an industrial-agricultural country is greatly interested in occupational-environmental safety and health regulations especially on the political level. Ministry of Manpower and Immigration put the Labor Law No. 12/2003 with its annexes. Also,

Ministry of Environment in cooperation with the Egyptian Environmental Affairs Agency put the Environmental Law No. 4/1994, its annexes, and its executive's rules no.338 for the year 1995 and 1741 for the year 2005. In addition, the Law of Health Assurance, the Law of Social Security, and many other laws are present.^[9]

Problems in developing countries including Egypt are resistance to enforcement of regulations and labor standards, and the local workers' inability to claim compensation for injuries and illnesses. Moreover, many multinational corporations often take advantage of these conditions. ILO reports that occupational health and safety laws cover only 10 percent of the population in developing countries, omitting many major hazardous industries and occupations. These omissions include agriculture, fishing,

forestry, and construction, small-scale enterprises, and the informal sector. ^[10]

CONCLUSION

Factory inspection is an important tool in assisting OHS programs within different enterprises.

RECOMMENDATIONS

1. Efforts should be directed towards programs to OHS personnel, periodically and not only for beginners. Training programs and information on legislative actions, safe working, and emergency procedures are essential.
2. Inspectors should be continuously encouraged and supported from all involved management and authorities; to help them perform perfectly.
3. Employers should be encouraged to fulfill the requirements of OHS programs

Table (1): Distribution of Inspectors According to Their Personal Data.

a-Age	Group A		Group B	
	No.	%	No.	%
20-	36	25	19	29
30-	56	39	14	22
40-	31	21	22	34
50-	22	15	10	15
Total	145	100	65	100
χ^2 P	7.03 0.071			
b-Sex	Group A		Group B	
	No.	%	No.	%
Male	138	95	30	46
Female	7	5	35	54
Total	145	100	65	100
χ^2 P	67.00 0.00001*			
c-Level of education	Group A		Group B	
	No.	%	No.	%
1. Post graduate education	2	2	7	11
2. University degree	73	50	58	89
3. Secondary school	70	48	0	0
Total	145	100	65	100
χ^2 P	51.50 0.0001*			
d-Years of employment	Group A		Group B	
	No.	%	No.	%
<5	53	37	28	43
5-	25	17	3	5
10-	26	18	9	14
15-	15	10	8	12
20	26	18	17	26
Total	145	100	65	100
χ^2 P	7.90 0.09			
e-Certificates/Training programs	Group A		Group B	
	No.	%	No.	%
1. Basic/advanced program for OHS*	50	35	55	85
2. Fire prevention & Extinction program	43	30	5	8
3. First-aid program	15	10	0	0
4. Training program for candidates of OHS committee	11	8	0	0
5. Environmental Health program (and/or) 1 st Environmental ISO	9	6	0	0
6. Protection of work environment from exposure to dust or solvents	4	3	0	0
7. Topics not related to OHS (computer, Quality Assurance, Maintenance, Quality ISO ... etc)	11	8	7	11
χ^2 P	49.11 0.0001*			

*OHS: Occupational Health and Safety.

Table (2): Distribution of Inspectors According to Their Professional Data

a-Source of information about OHS*	Group A		Group B		
	No.	%	No.	%	
1. Training programs outside the enterprise	108	75	24	36	
2. Seniors at work	61	42	47	72	
3. Training programs inside the enterprise	57	40	51	78	
4. Training within the enterprise	60	42	44	68	
5. Through practicing & experience	72	50	58	89	
6. Self education (through Internet ... etc)	20	14	16	25	
7. Conferences	22	15	15	23	
8. Post-graduate studies	5	3	7	11	
χ^2 P	32.50 0.00002*				
b-Aims	Group A		Group B		
	No.	%	No.	%	
1. Be sure that the work environment is safe	109	76	56	86	
2. Be sure that the workers are safe	103	72	56	86	
3. Mitigation of occupational hazards	98	68	53	82	
4. Ensure compliance with relevant provisions of legislations	0	0	44	68	
5. Keep elements of production	5	3	3	5	
6. Health education	0	0	3	5	
χ^2 P	75.60 0.00001*				
c- Job Description	Group A		Group B	P	
	No.	%	No.	%	
1. Recognition of Hazards	102	71	47	72	0.540
2. Assessment of Hazards	88	61	-	-	
3. Accessibility of PPE*/ training on use of PPE/PPE obligation	109	58	51	78	0.089
4. House keeping	91	63	-	-	
5. Accidents recording /inspection	89	61	38	58	0.380
6. Training on safe act	66	64	-	-	
7. Apply Engineering control/Assessment of Engineering control Efficiency	61	42	-	-	
8. First Aid availability/performance	81	56	-	-	
9. Inspection of usage/storage of hazardous materials	75	52	-	-	
10. Inspection gas cylinders	65	45	-	-	
11. Inspection of slippery surfaces/stairs	76	54	-	-	
12. Recording of different assessment processes	60	41	45	69	0.103
13. Environmental Impact Assessment	42	31	-	-	
14. Managing confined spaces	48	33	-	-	
15. Maintenance Inspection	91	63	-	-	
16. Prevention of smoking in Hazardous locations	84	58	-	-	
17. To advise employers about safety	-	-	58	89	
18. Machinery layout inspection	-	-	46	71	
19. Legislation inspection	-	-	54	83	
20. Inspect accidents, events and claims	-	-	45	69	

21. Do legal actions	-	-	44	68	
d- Scope of the role of factory inspector [Group A only]	No.	%			
1. Planning and application of OHS*	99	69			
2.Planning and application for Emergency	96	67			
3. Planning and application of fire prevention	103	72			
4.Planning and application of workers training programs	83	58			
5. Planning and application of chemical Environment Hygiene	52	36			
6.Planning and application of Respiratory protection program	49	34			
7. Planning and application of electric shocks prevention	67	47			
8.Planning and application of Environmental Impact Assessment program	43	30			
9. Just to share in application of already planned programs	43	30			
[Group B only]	No	%			
1. Inspect Events	28	43			
2. Inspect accidents	49	75			
3. Inspect claims	47	72			
4. Advise workers and employers	60	92			
5. Inspect coincidenc1 between laws and levels of exposure	46	71			
e-How to evaluate a work environment?	Group A		Group B		
	No.	%	No.	%	
1. Descriptive Evaluation	41	28	28	43	
2. Long Experience	45	31	33	51	
3. Experience of seniors	88	61	48	74	
4. Scientific Experience	63	44	0	0	
5. Instrumentation	57	40	51	78	
χ^2	43.60				
P	0.00001*				
f- Exposure	Group A		Group B	P	
	No.	%	No.	%	
1. Heat	58	40	60	92	0.0100*
2. Noise	99	69	65	100	0.0021*
3. Improper lighting	43	30	54	83	0.0001*
4. Radiation	40	28	41	63	0.0013*
5. Electric shocks	57	40	30	46	0.2900
6. Vibration	34	23	43	66	0.0160*
7. Accidents	11	8	19	29	0.0800
8. Dust	57	40	51	78	0.0170*
9. Gases & vapors	56	39	47	72	0.0220*
10. Corrosive liquids	40	28	36	55	0.0310*
11. Biological	5	3	2	3	0.5900
12. No Exposures	13	9	0	0	0.1030

*OHS: Occupational Health and Safety.

* PPE: Personal Protective Equipment.

g-Types of Measurements	Group A		Group B		P
	No.	%	No.	%	
1. Heat stress	31	22	42	65	0.0210*
2. Noise	46	32	60	92	0.0013*
3. Lighting	35	24	52	80	0.0010*
4. Radiation	11	8	9	14	0.0870
5. Vibration	9	6	9	14	0.2400
6. Dust	19	13	16	25	0.3300
7. Gases & vapors	25	17	15	23	0.4100
8. No measurements	81	56	4	6	0.0020*
h-Laws	Group A		Group B		P
	No.	%	No.	%	
1. Labor law No 12/2003	113	78	59	91	0.1400
2. Environment law 4/1994	51	35	15	23	0.2200
3. Social Insurance 79/1975	43	30	0	0	0.0010*
4. Decision 126/2003 "injuries "	74	51	12	18	0.0210*
5. Decision 134/2003 "committee"	82	57	11	17	0.0120*
6. Decision 211/2003 "TLVs"	73	51	10	15	0.0110*
7. Decision 453/1954 "License"	23	16	52	80	0.0010*
8. No laws have been known	11	8	4	6	0.3200
i-Organization [Group A only]	No.	%			
1. One organization for Safety only	74	51			
2. One organization for safety and another one for environment	16	11			
3. One organization for both Safety and Environment	40	28			
4. No organization(s)	15	10			
j-Awards [Group A only]	No.	%			
1. ISO 14 000	4	3			
2. ISO 14 001	18	13			
3. ISO 18 000	1	1			
4. ISO 18 001	8	6			
5. ISO 9 001	2	1			
6. ISO 9002	5	3			
7. No wards	79	54			
8. Looking for gaining an award	39	27			
k-Tools [Group B only]	No.	%			
1. Instruments for working environment	52	80			
2. Instruments for environment impact assessment	25	38			
3. Notebook/papers	55	85			
4. Means of transportation	44	68			

Table (3) :Distribution of Inspectors According to Their Attitudinal Data.

a- Characters required	Group A		Group B		
	No.	%	No.	%	
1. Honesty	108	75	54	83	
2. Practical Skills	101	70	46	71	
3. Activity	125	87	49	75	
4. Ability to analyze	80	56	46	71	
5. Ability to see accurate details	115	80	57	88	
χ^2					2.60
p					0.62
6- Physical requirements					
i. Very good health	83	58	36	55	
ii. High physical fitness	76	53	27	42	
iii. Ability to turn	61	42	19	29	
iv. Ability to climb	61	42	15	23	
v.Ability for quick movement from one place to another	106	74	29	45	
Vi. No physical requirement	24	17	23	35	
χ^2					16.81
P					0.004*
b-Experiences and skills	Group A		Group B		p
	No.	%	No.	%	
1. Legislative skills	37	57	80	56	0.6500
2. Criticizing listening	19	29	-	-	
3. Decision making	45	69	-	-	
4. Problem solving	48	74	100	69	0.2600
5. Contact skills	22	34	-	-	
6. Management skills	42	65	123	85	0.4100
7. First-Aid skills	19	29	66	46	0.3900
8. OHS* skills	42	65	-	-	
9. Engineering skills	18	28	40	28	0.4700
10. Scientific and technical skills	24	37	-	-	
11. Traditional experience	10	15	-	-	
12. Skills of house keeping	25	38	-	-	
c-Actions	Group A		Group B		P
	No.	%	No.	%	
1. Inform the management	104	72	40	62	0.4100
2. Inform workers to use PPE	99	69	52	80	0.2100
3.Do actions within responsibility	105	73	47	72	0.6500
4.Apply emergence plane directly	79	55	0	0	0.0001*
5.Behave according to hazard expected	4	3	51	78	0.0001*
6. Take no actions	2	1	0	0	0.4500
d-Proper action	Group A		Group B		P
	No.	%	No.	%	
1. More engineering control	50	35	35	54	0.0900
2. More environmental awareness	70	49	42	65	0.1100
3. More occupational awareness	79	55	42	65	0.3200
4. More developed measurements	51	35	37	57	0.2500
5.More financial resource for OHS	53	37	39	60	0.1100
6. More information and data	36	25	35	54	0.0400*

7. More Legal obligations	31	22	24	37	0.4100
8. More co-ordination bet. sectors responsible for OHS	46	32	25	38	0.6500
9. Actions are adequate	50	35	15	23	0.1800
	Group A		Group B		
e-Degree of importance	No.	%	No.	%	
1. Very important	140	97	59	91	
2. Important	2	1	4	6	
3. Relatively important	1	1	2	3	
4. Not important/no answer	2	1	0	0	
X ²					6.430
P					0.092
	Group A		Group B		
f-Degree of satisfaction	No.	%	No.	%	
1. Excellent	37	26	7	11	
2. Very Good	47	32	11	17	
3. Good/accepted	28	19	27	41	
4. Not satisfied/no answer	33	23	20	31	
X ²					18.17
P					0.0004*
g-The cause(s) of un satisfaction	No.		%		
i) Group [A]					
1. Other organizations are not cooperative	12		8		
2. Un awareness of workers about safety	14		10		
3. Our responsibilities are highly loaded in comparable to our budget	3		2		
4. Authority is not sufficient	3		2		
5. Personal protective equipment are not present or valid	11		8		
6. Our salaries are lower than those who work in production sectors	2		1		
7. No quality Assurance for OHS organization	2		1		
8. Training is restricted to members of committees & specialists	3		2		
9. No cause(s)	4		3		
ii) Group [B]	No.		%		
1. Salaries are not adequate	10		15		
2. No means of transport are available	15		23		
3. Lack of instruments for measurement / not valid	9		14		
4. Gap between courses studied in university and job responsibilities	5		8		
5. Employers are not cooperative with us	6		9		
6. We inspect many claims which may be not true	4		6		
7. Lack of knowledge specially for beginners	5		8		
8. Formal affairs are time consuming	3		5		
9. Inspectors are sometimes obligated to ignore enterprises defects	4		6		

10.Exposure to potential hazards	2	3			
11.Have no authority to enforce change	2	3			
12. Laws are not applied and Legal affairs lack follow up	2	3			
h- Satisfaction bet. Groups [A]&[B]	Group A		Group B		p
	No.	%	No.	%	
1. Just an Inspector	82	57	38	58	0.2100
2. Co-operative	86	60	45	69	0.3300
3. Not accurate	1	1	1	2	0.4500
4. Not co-operative	1	1	0	0	0.5600
5. Lack experience	1	1	3	5	0.2900
i- Co-operation bet. Groups [A]&[B]	Group A		Group B		p
	No.	%	No.	%	
1. Highly co-operative	106	73	21	32	
2. Relatively co-operative	26	18	42	65	
3. Not co-operative	5	3	2	3	
4. Not dealing with him/no answer	8	6	0	0	
χ^2	46.20				
p	0.0001*				

*OHS: Occupational Health and safety

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