# EXAMINING THE ROLES OF AGE AND GENDER ON ATTITUDE OF ANAMCO WORKERS TOWARDS OCCUPATIONAL HEALTH HAZARDS

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# Abstract

The study examined the role of age and gender on workers of Anambra Motor Manufacturing Company (ANAMCO), Enugu, Nigeria towards occupational health hazards. Two null hypotheses were tested at 0.05 level of significance. The population for the study consisted of 521 workers of ANAMCO. The instrument used for the study was Attitude of Workers Towards Occupational health Hazards Questionnaire (AWTOHHQ). This was designed by the researcher. Stratified sampling technique was used to draw sample for the study. Mean, standard deviation and student t-test were used for data analysis. Results revealed that the older workers had unfavourable attitude while the younger workers had favourable attitude towards their workplace hazards. Result also showed that both the male and female workers had favourable attitude towards occupational health hazards. There were significant differences in the attitudes of the older and younger workers, male and female workers towards their hazardous workplace. The older workers showed significantly less unfavourable attitude (t = -3.886, df = 475, P = .002) than the younger workers, while the female workers showed more favourable attitude (t = -3.028, df = 475, P = .003) toward occupational health hazards than the males. It was therefore recommended that intervention geared towards improving works' knowledge towards occupational health hazards be adopted such as, workshops, seminars, training, re-training, and conferences.

# Introduction

The deteriorating conditions of workplace health and safety, as well as the emergence of new regulations and international standards regarding industrial establishments have driven organizations to improve their safety performance. This has resulted to several researchers exploring the area of work environment both in the developed and developing countries. Jadab (2012) had contended that studies in this area are aimed at improving occupational safety and health management on construction sites and use of substances for production, particularly to reduce the number of occupational health hazards encountered by workers.

In developed countries, organizations have extensively shifted from a reactive to a proactive approach towards safety (Malek, Adel, Amel & James, 2010). The situation is different in the developing countries for according to Jadab (2012), inspite of a plethora of legislation at national and international levels and despite various safety mechanisms and devices that have been suggested for use to effect safety of workers, workers still perform their duties under an unsafe working conditions. Supporting this observation, the National Policy of safety, Health and Environment at Workplace-NPSHEW (2012) reported that workers in the developing countries such as Nigeria, lack adequate information and knowledge on the hazards associated with the substances and equipment used for production. This situation poses a potential health problem to the workers, creating a genuine interest to protect the workers against the hazards of their jobs since it has been observed that the place of workers is crucial in the process of production (Aluyu & Shehu, 2006).

Hazards refer to all chemicals, or physical conditions that have the potentials to cause damage or harm if not controlled (Jadab, 2012). Occupational health is the protection of the bodies and minds of people from illness resulting from materials, processes, or procedures used in the workplace (Hughes & Ferrett, 2008). It aims at promoting and maintaining at the highest degree of physical, mental, and social wellbeing of workers in all occupations by preventing departures from health, controlling risks, and the adoption of work to people and people to their work (International Labour Organization –ILO, 2001). The concept of occupational health hazard is, therefore, derived from the fact that workers are at special risks of injury, disease and health impairment arising from exposures

to chemicals, or physical conditions that have the potentials to cause damage in the organizational settings (Okwulehie, 1997).

Occupational health hazards have been classified by World Health Organization- WHO (2007) in terms of mechanical hazards; ergonomically poor working conditions; biological hazards; physical factors; social hazards; reproductive hazards and allergenic agents; chemical agents and psychological stress. Some research evidence exists about the prevalence of hazards in Nigeria industries. For instance, Adaoye, Bedibele, Onakpoya and Omotoye (2011) observed that Nigerian workers encounter humidity, repetitive tasks, explosion hazards, and physical workload in the course of production.

Omolulu (1997) found excessive heat, excessive cold noisy environment, harmful dusts and spores toxic chemical exposures, and lighting radiation among Nigerian industries. Bonde and Givercman (2010) in a study of Nigerian work conditions, revealed that workers in Nigerian industries are exposed to thermal radiation, hot noisy environments, presence of dust, fames, oils, grease and other chemicals, improperly designed tools and machinery and poor psycho-social environments.

Studies (Vyas, Das & Mehta, 2011) have shown that exposure to hazards results to varied nature of health complaints such as injury, pain, respiratory symptoms, cancers, eye related problems and skin problems, stress and psychosomatic disorders. Sorock et - al (2004) had reported musculoskeletal discomforts at a higher injury risk. Examining the predisposing factors for hazards encountered in the workplace, NPSHEW (2012) reported that the factors are not only breach of safety norms by workers, or carelessness on the part of workers; sometimes, hazards occur due to the failure of control, which is the responsibility of management. Thus the shift of the focus on the hazards occurrence has been driven by the awareness that organization, managerial and human factors such as attitude and workers demographic factors rather than purely technical failures are prime cause of hazards in the organizational settings.

The present study examined the attitude of workers towards occupational health hazards. To have an attitude towards occupational health hazards means a tendency to have a work role orientation characterized by approval or disapproval concerning hazardous workplace (Ford & Tetrick, 2011). Attitude means the evaluation of other people, events, issues and material things with some degrees of favour or disfavour (Moghaddam, 2009). When a worker has favourable or positive attitude towards occupational health hazards, it means that the worker is comfortable, feeling free and unconcerned about the hazards of his/her workplace. On the other hand, a worker who has unfavourable or negative attitude, feels disturbed, uncomfortable, and is concerned about the hazards of his or her workplace.

The theory of Cognitive Dissonance (CD) postulated by Leon Festinger (1996) explained attitude in relation to workers' hazards encounter in the workplace. The theory posits that attitude predicts behavior and that where attitude and behavior are not related, cognitive dissonance results. Cognitive dissonance refers to an individual's motivation to reduce the discomfort caused by two inconsistent thoughts, feelings and emotions. The tenet of this theory therefore, becomes important to this study because attitude equipped workers with the tendency to make their thoughts consistent in evaluating issues events and materials in their workplace with some degrees of favour or disfavour.

The study examined the demographic variables of age and gender with regard to workers' attitude toward occupational health hazards. This clarified the thoughts, feelings, and emotions of older and younger; male and female workers towards hazards of the workplace. Mital and Ghahramani, 2011) had earlier classified workers' age in terms of younger and older workers. They classified younger workers as those within the age range of 19-45, while older workers are those within the age range of 46-65. This study adapted the above classification. Thus, the younger workers were those within the age range of 20-45, while the older workers were those within the age range of 46-65. This classification was based on the fact that ANAMCO Company employs workers that are up to 20 years and above and retires their workers at the age of 65.

Examining the age of workers in relation to workplace hazards, Vyas, Das, and Mehta (2011) observed that the relative risk factors for hazards occurrence are encountered more among the older workers than the younger workers, indicating that older workers had more favourable attitude towards workplace hazards than the younger workers. In a similar study, Vedovato and Monteiro (2014) result contradicted the above finding by reporting that 95.7 per cent of the younger workers encountered accidents and sustained injuries within a specified period of 5 years, while 35.3 per cent of the older

workers sustained injuries within the period. Cappeletto and Marler (2003) and Marguart (2003) had earlier observed that the older workers who had attended sufficient programmes and had gained enough experiences reported unfavourable attitude towards their workplace hazards more than the younger workers.

Regarding the issue of gender, Vyas, Das and Mehta (2011) and Vedeovaho and Monteiro (2014) found from their respective studies that males had more favourable attitude than females towards occupational health hazards. On the contrary, Keyserlin (2012), Harrison (2012) and Donald and Young (2012) observed from their various studies that females had more favourable attitude towards their workplace hazards than the males. Some studies conducted by researchers, using Nigerian sample, yielded conflicting results. For instant, Aliyu and Shehu (2006) studied the attitude of workers regarding their workplace hazards. The result showed that females had more favourable attitude towards occupational hazards than males. Contradictorily, Adeoye, Bedibele, Onakpoya and Odotoya (2014) observed from a similar study that both Nigerian males and females had favourable attitudes towards their workplace hazards.

Considering the inconsistency in the above reviewed studies and bearing in mind that workers who have favourable attitude towards hazards in their workplace are most likely to encounter hazards in the course of performing their jobs, it becomes necessary that study was carried out in this area. Study in this area helps in improving the attitude of workers towards workplace hazards. The study therefore, examined the role, which is the degree to which age and gender is involved in influencing the attitude of workers of Anambra Motor Manufacturing Company (ANAMCO) towards occupational health hazards. The study examined the attitude of the younger and older; male and female workers towards occupational health hazards. It was hypothesized that there are no statistically significant differences in the attitudes of the younger and older; male and female workers towards (P<.05).

#### Methods

The research design adopted for the study was the descriptive survey design. The study was carried out in Anambra Motor Manufacturing Company (ANAMCO), which situates in Enugu State, Nigeria. ANAMCO assembles cars and fabricates car spare parts and uses some chemicals that are hazardous to health of workers. Hazards associated with the nature of their job include physical hazards, mechanical hazards, ergonomically poor working conditions, psychological stress, social conditions, reproductive hazards and allergenic agents. The workers' exposure to these hazards formed the bases for the choice of the company for the study.

The population for the study consisted of all the 521 workers of ANAMCO, Enugu. Out of this number, 199 of the workers were older workers while 322 of them were younger workers. A total number of 106 of the workers were females, while 415 of them were male workers.

The sample for the study was 261 workers selected by means of stratified sampling technique. Available data on the number of workers per section allowed stratification of sampling proportionately by sections. In other words, workers were selected from the eight sections that make up the company in proportion of 1:2 of the number of workers in each section. The sections are" administrative with 46 workers, mechanical 152, assemblage 142, health unit 62, security 43, bursary 38, catering 18 and laundry 20 workers.

The instrument used for the study was a structured 10-item questionnaire which was designed to measure the attitude of workers regarding occupational hazards. The instrument consisted of two sections. Section A comprised demographic variables of age and gender, while section B comprised 10-item instrument that measured workers' attitude towards occupational hazards. Respondents were requested to indicate their degree of agreement/disagreement with the attitudinal statements, with the response format ranging from Strongly Agree (SA) = 5; Agree (A) = 4; Undecided (U) = 3; Disagree (D) = 2 and Strongly Disagree (SD) = 1, for items 1,3,5,7 and 9, that were positively worded. The other five items (2,4,6,8 and 10) were negatively worded with reverse scores: SA = 1; A = 2; U = 3; D = 4 and SD = 5.

The instrument was validated by three lecturers in University of Nigeria, Nsukka who critically examined the instrument in terms of appropriateness and suitability to the purpose of the study. The face validity of the instrument was determined through the judgement of these three experts. In order to establish the reliability of the instrument, 96 copies of the instrument were

administered to workers of Emenite Nigeria Ltd, Enugu. The data were analyzed using Product Moment Correlation coefficient, which determined the split-half reliability of the instrument. The split-half reliability of .85 was obtained. This was corrected with Spearman-Brown formular, = .92, to estimate the validity of the instrument.

In order to facilitate the distribution of the questionnaire, the researcher raised an introductory letter to the General Manager Personnel unit of the organization. A total number of 261 copies of the questionnaire were distributed to the workers and this was done through the eight sectional heads of the company. The instrument was distributed as follows: administrative 23, mechanical 76, assemblage 71, health unit 30, security 23, bursary 19, catering 9 and laundry 10. The time allotted for the filling of the questionnaire was thirty minutes and these were filled and collected on the spot. A hundred percent return rate was achieved with 221 copies correctly filled. This yielded a return rate of 86.73 percent.

Means, Standard Deviations and Student t-test were used to analyze data on attitude of workers regarding occupational hazards. The research questions were answered using mean and standard deviation, using criterion mean of 3.00. The criterion mean was determined thus 5+4+31+115 2.00

 $=\frac{15}{5}=3.00$ . Following from this, all the mean scores that were within the limits of 3.00 and above indicated favourable attitude while mean scores that were below 3.00 showed unfavourable attitude regarding occupational hazards. The hypotheses were tested using student t-test at .05 level of significance.

# Results

#### Table 1

Difference in the Attitude of Older and Younger, Male and Female Workers regarding Occupational Health Hazards

S/N	Components of Attitude	Older V	Vorkers	Younge	er	Male	41.5	Female	0
		(N = 199	•)	worker	s aa)	(N =	415)	(N = 10)	6)
		<b>X</b> <sub>1</sub>	SD <sub>1</sub>	$\overline{v}$	22)	<b>X</b> <sub>1</sub>	SD <sub>1</sub>	<b>X</b> <sub>2</sub>	$SD_2$
			~-1	A 2	$SD_2$		~-1		
1.	I hate working on vibration machine because of the adverse effect it has on workers	2.16	.917	2.30	.942	3.93	.879	3.18	.884
2.	I like working in this company because the work environment is not stressful to me	2.47	.855	3.92	.972	2.52	1.041	2.77	.986
3.	Chemical hazards make me feel uncomfortable each time I remember going to work	2.03	.977	2.64	.063	3.31	.991	3.67	.639
4.	I feel that the management is doing their best to improve on social relationship among workers in this organization	2.03	.964	2.40	.902	2.61	1.058	2.81	.946
5.	I do not like working in this industry because of the biological hazards prevalent in it	2.99	.888	3.12	.832	3.24	.856	2.91	.943
6.	I enjoy the equipment I work with in this company because they are well maintained and up-to-date.	2.97	.847	2.98	.848	3.35	1.025	3.70	.695
7.	I do not like working in this company because the work environment is too hot for my comfort	3.53	.882	3.59	.833	3.11	.908	2.90	.912
8.	I feel safe weaning the protective devices in my workplace	3.09	1.046	3.27 5	1.00	3.05	1.013	3.42	.882
9.	Some of the materials used for production in this company make me sick	3.08	.879	3.27	.884	2.98	.941	3.85	.850
10	I do not feel that any material used for production in this company can render a person impotent <b>Overall mean</b>	3.19 2. <b>75</b>	1.069	3.28 3.08	.930	2.62 3.07	1.038	3.67 3.29	.927

Table 1 indicated that the older workers reported an overall mean response of 2.75, which falls within the limits of below 3.00, showing that the older workers had unfavourable attitude towards their workplace hazards. On the other hand the younger workers had an overall mean score of 3.08 which falls within the limits of 3.00 and above, indicating that the younger workers had favourable attitude towards occupational health hazards.

Data on gender showed that the male workers had an overall mean response of 3.07, while the female workers had an overall mean response of 3.29. These response fall within the limits of 3.00 and above, indicating that both the male and female ANAMCO workers had favourable attitude towards occupational health hazards.

# Table 2

Summary	of	t-test	on	the	Attitude	of	Older	and	Younger	Workers	Towards	Occupational
Health Ha	zar	ds										

S/N	Components of Attitude	Older workers (N = 199)		Younger workers (N = 322)		t- cal	Df	P. Value		
		$\overline{\mathbf{X}}_{1}$	SD	$\overline{\mathbf{X}}_{2}$	$SD_2$					
1.	I hate working on vibration machine because of the adverse effect it has on workers	2.16	.917	2.30	.942	-2.891	475	.004	S	
2.	I like working in this company because the work environment is not stressful to me	2.47	.853	3.92	.972	-2.127	475	.047	S	
3.	Chemical hazards make me feel uncomfortable each time I remember going to work	2.03	.977	2.64 3	.106	-2.274	475	.014	S	
4.	I feel that the management is doing their best to improve on social relationship among workers in this organization	2.03	.964	2.40	.902	-3.124	475	.002	S	
5.	I do not like working in this industry because of the biological hazards prevalent in it	2.99	.888	3.12	.832	-2.030	475	.043	S	
6.	I enjoy the equipment I work with in this company because they are well maintained and up-to-date.	2.97	.847	2.98	.848	-1.588	475	.113	NS	
7.	I do not like working in this company because the work environment is too hot for my comfort	3.53	.882	3.59	.833	.554	475	.580	NS	
8.	I feel safe weaning the protective devices in my workplace	3.09	1.046	3.27	1.005	-1.496	475	.135	NS	
9.	Some of the materials used for production in this company make me sick	3.08	.879	3.27	.884	1.811	475	.071	NS	
10.	I do not feel that any material used for production in this company can render a person impotent	3.19	1.069	3.28	.930	735	475	.463	Ν	
	Overall mean	2.75		3.08		-3.886	475	.002	S	

NS = Not Significant and S = Significant

Table 2 showed that the younger ANAMCO workers reported significantly more favourable attitude towards occupational health hazards than the older workers (t = -3.886, df = 475, P = .002). Therefore, the null hypothesis of no significant difference in the older and younger workers' attitude towards occupational health hazards was not accepted. The table indicated that while five items of the questionnaire items tested showed no significant differences, there were significant differences in the other five items. There were significant differences (t = -2.891, df = 475, P = .004) on "I hate working on vibration machine"; (t = -3.127, df=475, P = .047) on "I like working in this company

because the work environment is not stressful"; (t = -2.474, df = 475, P = .014) on "chemical hazards make me feel uncomfortable"; (t = -3.124, df=475, P=.002) on "I feel that the management is doing their best to improve on social relationship among workers. Furthermore, there was significant difference (t = -2.030, df = 475, P = .043) on "I do not like working in this industry because of the biological hazards prevalent in it.

Table 3	3
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S/N	<b>Components of Attitude</b>	Male		Femal	e	t- cal	Df	<b>P.</b>	Dec
		$(\mathbf{N} = 4$	15)	(N = )	(N = 106)			Value	
		<b>X</b> <sub>1</sub>	$SD_I$	X <sub>2</sub>	$SD_2$				
1.	I hate working on vibration machine because of the adverse effect it has on workers	3.93	.879	3.18	.884	-1.811	475	.033	S
2.	I like working in this company because the work environment is not stressful to me	2.52	1.041	2.77	.986	-2.103	475	.036	S
3.	Chemical hazards make me feel uncomfortable each time I remember going to work	3.31	.991	3.67	.639	-4.800	475	.000	S
4.	I feel that the management is doing their best to improve on social relationship among workers in this organization	2.61	1.058	2.81	.946	-2.078	475	.038	S
5.	I do not like working in this industry because of the biological hazards prevalent in it	3.24	.856	2.91	.943	-4.313	475	.000	S
6.	I enjoy the equipment I work with in this company because they are well maintained and up-to-date.	3.35	1.025	3.70	.695	-4.420	475	.000	S
7.	I do not like working in this company because the work environment is too hot for my comfort	3.11	.908	2.90	.912	-2.554	475	.011	S
8.	I feel safe weaning the protective devices in my workplace	3.05	1.013	3.42	.882	-4.183	475	.000	S
9.	Some of the materials used for production in this company make me sick	2.98	.941	3.85	.850	-882	475	.378	NS
10.	I do not feel that any material used for production in this company can render a person impotent	2.62	1.038	3.67	.927	-558	475	.577	NS
	Overall mean	3.07		3.29		-3.028	475	.003	S

**NS** = Not Significant and **S** = Significant

Table 3 indicated that the female ANAMCO workers should significantly more favourable attitude towards occupational health hazards than the male workers (t = -3.028, df = 475, P= .003). Therefore, the null hypothesis of no significant difference in the male and female workers' attitude towards occupational health hazards was not accepted as stated. The table revealed that only two items in the response across the questionnaire items tested were not significant. All other items of the questionnaire were significant. There were significant differences (t= 1.811, df 475, p = .033) on "I hate working on vibration machine"; (t = -2.103, df = 475, P = .036) on "I like working in this company because the work environments is not stressful to me", (t = -4.800, df = 475, P = .000) on "I chemical hazards make me feel uncomfortable", (t = -2.078, df = 475, P = .038) on "I feel that the management is doing their best to improve on social relationship among workers"; (t = -4.313, df = 475, P = .000) on "I do not like working in this industry because of the biological hazards prevalent in it"; (t = -4.420, df = 475, P = .000) on "I enjoy the equipment I work with in this company

because they are well maintained", (t = -2.554, df = 475, P = .011) on "I do not like working in this company because the work environment is too hot for my comfort" and (t = -4.183, df = 475, P = .000) on "I feel safe wearing the protective devices in my workplace".

## Discussion

The finding revealed that the older workers had unfavourable attitude while the younger workers had favourable attitude toward their workplace hazards. This finding has debunked the earlier observation by Adeoye, Bedibele and Onakpoya and Omotoya (2011), which showed that Nigerian workers, irrespective of demographic factors, reported favourable attitudes towards their workplace hazards. Similarly; the finding in Table 2 showed that the younger workers showed significantly, more favourable attitude than the older workers is consistent with the earlier results of Cappelletto and Marler (2003) and Marguart (2003), which showed that the older workers, through sufficient involvement in programmes had gained enough experience about the hazards of their jobs, thus they reported unfavourable attitude more than the younger workers. The present finding is at variance with the findings of Vyas, Das and Mehta (2011) and Vedovato and Monteiro (2014), which showed that the older workers encountered more hazards in the workplace than the younger workers as a result of their favourable attitude towards their workplace hazards.

A possible explanation to this result is based on the fact that most of the older workers of ANAMCO have worked in the company for a longer time than the younger workers. As such, they have mastered the hazards of their workplace and may have known or experienced the various health consequences of such hazards. The younger workers who may be relatively new in the job, may not have known much about the health effects of their jobs, hence, their display of favourable attitude towards the dangers of their occupations. In addition, for the fact that the older workers have limited alternative job opportunities due to economic depression, which results in high rate of unemployment, they are more likely to take their jobs seriously. They are also more likely to adopt and apply all available measures to protect themselves from the hazards of their jobs than the younger workers, since according to the theory of Cognitive Dissonance by Leon Festinger (1996), workers' attitudes predict their behaviours.

Regarding the issue of gender, the finding in Table 1 indicated that both male and female ANAMCO workers had favourable attitude towards their workplace hazards. The result has supported the earlier finding by Omolulu (1997) and Bonde (2013), which showed that Nigerian workers encountered varied forms of hazards in their workplace. It then implies that workers favourable attitude to their work environment predispose them to hazards encountered in their jobs. However, the result in Table 3 which showed that the female ANAMCO workers reported significantly more favourable attitude then the male workers. This result is in line with the findings of Keyserlin (2012), Harrison (2012) and Donald and Young (2012). They observed from their various studies that females had more favourable attitude towards their workplace hazards than males. On the other hand, the present result is at variance with the findings of Vyas, Das and Mehta (2011) and vedovato and Monteiro (2114), which reported respectively, that males had more favourable attitude towards their determines.

The reasons for these findings could be that Nigerian workers are not well informed about the hazards of their workplace and as such lack full knowledge of the dangers associated with their work environment. Hence they feel free, less concerned, comfortable and undisturbed about their hazardous work environment. Furthermore, the female workers may have shown significantly more favourable attitude because in ANAMCO Company, females work majorly, as administrative workers. As such, they do not encounter much hazards in the course of performing their duties as the males. The males work as automobile engineers, they are the mechanics that have real encounter with machines, chemicals and other dangerous substances used in assembling cars. Following from this, the males may have higher rate of occupational health hazards encounter compared to the females. For instance, Vyas, Das and Mehta (2011) reported that automobile engineers adopted different working postures and are exposed to poor psychosocial environments, repetitive work and respiratory complaints. The male workers of ANAMCO Company may have experienced some of these health problems and have developed displeasure or less favourable attitude towards their workplace hazards.

## Conclusion

The study examined the role of age and gender on ANAMCO workers' attitude towards occupational health hazards. Findings indicated that the older workers had unfavourable attitudes while the younger workers had favourable attitude towards their workplace hazards. The study also revealed that both the male and female workers had favourable attitude towards their workplace health hazards. The result showed that there were significant differences in the attitudes of the older and younger, male and female workers towards occupational health hazards, indicating that the younger workers had more favourable attitude than the older workers and that the female workers had more favourable attitude than the male workers towards occupational health hazards.

It then implies that the younger, male and female workers of ANAMCO Company are not well informed about the dangers of their occupations. It also means that the entire workers and management of ANAMCO Company require more information about the hazards of their workplace.

## Recommendations

It is therefore, recommended that;

- 1. Intervention geared towards improving workers' knowledge towards occupational health hazards be adopted. These can be done in the form of workshops, seminars, training, re-training and conferences.
- 2. New workers should be given proper orientation regarding the hazardous nature of their workplace. The orientation programme should be designed in such a way that it will help the new workers in developing desirable attitude towards their workplace hazards.
- 3. The management should pay adequate attention to the enforcement of rules and regulations guiding health safety in the workplace. This will help workers in improving their attitudes towards occupational health hazards.

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