Australian Journal of Basic and Applied Sciences, 4(5): 731-734, 2010
ISSN 1991-8178

A Study on Ergonomics Awareness in Nigeria

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Abstract: The aim of the study was to ascertain the level of ergonomics awareness in Nigeria. 1000 questionnaires were distributed and 950 representing 95 percent were responded to and were analyzed using percentages. Of the 950 respondents, 100(10.5%) were in transportation business, 50(5.3%) engaged in manufacturing activities, 200(21%) in the educational sector, same number of 200(21%) were in the medical profession, 150(15.8%) in construction business, 50(5.3%) in communication, 150(15.8%) were in the banking sector and 50 (5.3%) were engaged in petty trading and other sectors of the economy. On the whole, 3.4percent of the respondents were aware of ergonomics signifying that there was very low level awareness of ergonomics in the country. The educational sector and the medical professionals did not fair better as just 10(1%) and 20(2.1%) respectively were aware of the subject called ergonomics. It was concluded that the very low level of ergonomics awareness may be due to the fact that Nigerians were not conversant with the benefits derivable from ergonomics. The Ergonomics Society of Nigeria was therefore charged to organize seminars and conferences to orientate the public on the benefits of ergonomics and the need to make it part of their lives.

Key words:

INTRODUCTION

The International Ergonomics Association (IEA) defines ergonomics as 'the scientific discipline concerned with understanding of the interaction among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance'. Thus, ergonomics attempts to always 'fit the job to the man' having realised the limitations and capabilities of man. The main aim of ergonomics is to reduce the risk of injury not only to make man available always but to also make his job easy for with the ultimate being increases in productivity to the benefits of the organization.

James *et al* (1994) realised this and noted that workers consistently agree that ergonomics design will significantly improve not only work environment but also enable a safer and thus increase productivity. Similarly, Hendric (1996) observed that investment geared towards technical and organizational solutions of ergonomics problems can offer profitable results by means of increase in productivity, reduction in absentee workers, improvement in products quality and reduction in rate of injury.

Ergonomics can contribute both to the health and safety of people and financial gains of the establishment.

Riel and Imbean (1995) justified it that the use of ergonomics is economically wise in any organization. In the same vein, Spilling (1986) studied the influence of workplace design on musculoskeletal problems and showed that ergonomics can be economically justified.

Takala (2005) stated that 2.2 million people die of work-related accidents and diseases annually. Similarly, Leigh *et al* (1999) had estimated that non fatal injuries in Sub-Sahara Africa as 770,000 per annum and fatal injuries of 9,900 per annum. They predicted 9.02 million of injuries per annum. To reduce the predicted rate of injuries, ergonomics has to come into play. However, despite the enormous benefits accruable from the application of ergonomics, there seems to be apathy towards ergonomics from developing industries (Rogan and O' Neill, 1993). However, O'Neill (2000) observed that India, Brazil, South Africa and Thailand though developing countries acknowledge the importance of ergonomics and have indigenous capabilities to apply ergonomics principles and undertake ergonomics projects but noted that India probably disregard office ergonomics may be due to priorities. He also observed that the countries have professional bodies to represent the subject and its practitioners and that these organizations may also help serve the ergonomics needs of other developing countries in their regions.

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Nigeria is also developing country like the named countries and has recently has an ergonomics society. It may therefore be essential to ascertain the level of ergonomics awareness in the country especially if the benefits accruable from ergonomics as a subject on one hand and ergonomics society of Nigeria on the other are taken into consideration.

Methodology:

A total of 1000 questionnaires were distributed for this study while 950 were returned and analyzed using percentages. The questions include those on age, gender, level of education, occupation and ergonomics awareness.

RESULTS AND DISCUSSION

As shown in Table 1, out of a total of 950 respondents, 100(10.5%) engaged in transportation business, 50 (5.3%) were in manufacturing, 200 (21%) in educational sector, 200 (21%) in medical profession, 150 (15.8%) in construction companies, 150 (15.8) in banking sector and 50 (5.3%) were in petty trading and other sectors of the economy.

Of the 100 respondents engaged in transportation business, none of them was conversant with ergonomics as a subject while 1 (0.1%) from 50 respondents in manufacturing were aware of ergonomics. In the education sector, just 10 (1.1%) out of 200 respondents knew of ergonomics and 20 (2.1%) from the same number in the medical profession had heard of ergonomics. For construction business, 1(0.1%) of the 150 respondents was aware of ergonomics while there was none in communication, banking and other sectors of the economy. From Table 2, 350(36.8%) of the respondents had Masters Degree and above, 300(31.6%) had either Bachelors Degree or HND or OND, 250(26.3%) were SSCE holders and 50(5.3%) either had Primary School education or no education at all.

In this group, 20(2.1%) respondents with a minimum of Masters Degree, 12(1.3%) with Bachelors or HND or OND had heard of ergonomics while there was none from the SSCE and Primary School/No education group.

Moreover, 500(52.6%) of the respondents were male while 450(47.4%) were female.

As could be seen in Table 3, 20(2.1%) male respondents and 12(1.3%) knew that ergonomics is a discipline.

In terms of age distribution, 300(31.6%) of the respondents were between 20 and 29 years, 275(28.9%) between 30 and 39years, 300(31.6%) between 40 and 49 years while 75(7.9%) were 50years and above. From Table 4, 3(0.3%) with ages between 20 and 29, 16(1.7%) between 30 and 39 years, 12(1.3%) between 40 and 49 years as well as 1(0.1%) with 50 years and above knew ergonomics as a discipline.

From the foregoing, based on the sampled population, it is evident that ignorance about ergonomics is not limited to profession, gender, educational attainment and age. It is also glaring that there is a very low awareness about ergonomics as a discipline not to talk about the benefits accruable from it. If medical practitioners and teachers of engineering courses are ignorant and thus unappreciative of ergonomics, then the use of ergonomics may suffer greatly.

Table1: Distribution of Ergonomics Awareness and Type of Business Organization

S/N	Type Of Business Organization	Number Of RespondentsN (%)	Number Of Those Aware Of Ergonomics N (%)
1.	Transportation	100 (10.5)	0 (0)
2.	Manufacturing	50 (5.3)	1 (0.1)
3.	Education	200 (21)	10 (1.1)
4.	Medicals	200 (21)	20 (2.1)
5.	Construction	150 (15.8)	1 (0.1)
6.	Communication	50 (5.3)	0 (0)
7.	Banking	150 (15.8)	0 (0)
8.	Others e.g. petty trading, artisans	50 (5.3)	0 (0)
	TOTAL	950 (100)	32 (3.4)

Table 2: Distribution of Ergonomics Awareness and Level of Education Attainment

S/N	Level of Education	Number Of RespondentsN (%)	Number Of Those Aware Of Ergonomics N (%)
1.	Msc/PhD	350 (36.8)	20 (2.1)
2.	Bsc/HND/OND	300 (31.6)	12 (1.3)
3.	SSCE	250 (26.3)	0 (0)
4.	Primary Education/No Education	50 (5.3)	0 (0)
	TOTAL	950 (100)	32 (3.4)

Table 3: Distribution of Ergonomics Awareness according to Gender

S/N	Gender	Number Of RespondentsN (%)	Number Of Those Aware Of Ergonomics N (%)
1.	Male	500 (52.6)	20 (2.1)
2.	Female	450 (47.4)	12 (1.3)
	TOTAL	950 (100)	32 (3.4)

Table 4: Distribution of Ergonomics Awareness according to Age

S/N	Age Range	Number Of RespondentsN (%)	Number Of Those Aware Of Ergonomics N (%)
1.	20-29	300 (31.6)	3 (0.3)
2.	30-39	275 (28.9)	16 (1.7)
3.	40-49	300 (31.6)	12 (1.3)
4.	50 and above	75 (7.9)	1 (0.1)
	TOTAL	950 (100)	32 (3.4)

As noted by Kawakani *et al* (1999), the development of flexible and dynamic ergonomics research and training methods to meet the diversifying needs of the local people will continue to be important. This seems not to be understood at the moment in the country. Thus there should be serious campaign on the benefits of ergonomics and ergonomics should be part of every day's activities.

Perhaps, the ten Safety and Health challenges for the twenty-first century as presented by Hiba(2005) could help in the development of ergonomics in the country. These are:

1. Integrate the concepts of working conditions and working environment into occupational safety and health, not just see these conditions as separate concerns.
2. Build ergonomics into occupational safety and health instead of treating them as separate programs.
3. Promote more active cooperation between workers and employers.
4. Encourage the extension of safety culture in education, in the family and at work.
5. Better reporting and surveillance. Encourage the reporting of accidents and injuries as a method of controlling risk.
6. Improve the quality and scope of inspection. Look at inspection as a method of continuous improvement.
7. Expand ergonomics and safety from large companies to small and micro companies and to informal sector.
8. Communicate the vision and model of a national workplace safety and health safety.
9. Build occupational safety and health values into national education (policy).
10. (Aggregate) convergence occupational health, safety and environmental standards, instead of having standards for different regions.

The efforts of ergonomics practitioners in the country to cover a wider population and workplaces as well as penetrate government circles should not only be strengthened but quickened too. The Ergonomics Society of Nigeria though yet to be federated should spear-head this campaign.

Conclusion:

It is evident from the study that the level of ergonomics awareness in the country is poor. This may be due to the fact that the generality of Nigerians are not conversant with the benefits derivable from ergonomics. Ergonomics practitioners in the country have Herculean task and should intensify efforts in the organization of conferences and seminars as well as publicity in newspapers, television and radio stations across the country on why ergonomics should be part of our daily activities. They should also engineer the promotion of education and training in ergonomics and participate actively in ergonomics related guidelines.

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