

PHYSICAL WORK ENVIRONMENT AND EMPLOYEE PERFORMANCE IN SELECTED BREWING FIRMS IN ANAMBRA STATE, NIGERIA

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Abstract

The seeming more attention being paid to the productive equipment than to the operating personnel and their health propelled this study to examine the nature of relationship that exists between physical working environment and employee performance in selected Brewing Firms in Anambra State. The work was anchored on the human relation theory by Elton Mayo (1930). The work adopted a survey research design. The population of the study was 550 and sample size was 233 arrived at using Taro Yamane formula while the questionnaire was allocated using Bowley's proportion allocation formula. Pearson's Product Moment Correlation Co-efficient was utilized in data analysis. The finding revealed that there is a significant positive relationship existing between ergonomic and job satisfaction in the studied firms. As a result of this, it was recommended that equipment and machineries should as much as possible be made to suit the workers manning them by management of the focused firms, and that the management of the focused firms should put the employee's health into consideration in situating machineries as this will lower the hazard rate and also lower error rate of the workers.

Key Words: Physical Work Environment, employee performance, Ergonomics and Job Satisfaction

Introduction

The vision and mission of an organization largely determine what component of an organization it will rely mostly on. Organizations that provide services rely heavily on the strength of their employee's capabilities, skills, knowledge and abilities to take the firm to a greater height. The organizations studied, Nigeria Breweries Plc and SABMiller Plc belong to product producing sector of the economy and their continued existence depends very much on how well their production machineries perform; how often it breaks down and the quantity and quality of product produced. It is however important to note that these production equipment do not operate themselves, even those that are fully automated and operate as robots still needs people to program them and thus makes employees indispensable part of every organization. Employees are the backbone of any organisations. They are the most precious and important asset among all the asset of any organisation (Ganesh, 2015). Yesufu (2000) views it differently when he state that labour is generally regarded as the most dynamic of all the factors that are employed for the creation of wealth, having the potential to energize and serve as catalyst to all the other resources.

It is easier to influence the performance of production equipment because it performs according to what you instruct it, needing no additional incentives unlike the employees who are complex and need a combination of factors to influence their performance; both physical and psychological factors. Ushie, Agba, Ogaboh and Okorie (2015) posit that human beings are very complex in their psychological make-up and hence, managers cannot influence employees' inner state directly, they can however create work environment that encourages quality performance. Most managers especially in Nigeria are of the view that employee are influenced to perform better through pay; how much they get from the organization. In the view of Onwuka (2002), many managers and supervisors labour under the mistaken impression that the level of employees' performance on the job is proportional to the size of the employees pay package. It is important to note however that some employees may be motivated by money but the effect does not last for long and so needing order kind of motivators. Onwuka (2002) opines that in fact, salary increases and bonuses for performance in many instances have a very limited short term effect. The extra money soon comes to be regarded not as an incentive but as an entitlement.

Employees could be influenced to put in their best through how well their work environment is structured. Committed employees who are highly motivated in terms of conducive work environment contribute their time and energy to the pursuit of organizational goals and are increasingly acknowledged to be the primary asset available to an organization; they provide the intellectual capital that for many organizations has become their most critical asset (Hienja, 2010).

Physical work environment (PWE) is an aspect of work environment. Workplace environment is the sum of the interrelationships that exist between employees and the environment, which they work (Kohun, 2002). Heath (2006) asserts that this environment involves the physical location as well as the immediate surroundings, behavioural procedures, policies, rules, culture, resources, working relationships, work location, all of which influence the ways employees perform their work. PWE as an aspect of work environment has to do with the office layout and design. It constitutes things such as furniture (tables, chairs etc.), machine layout, ventilation and lighting. Others are noise level, protective equipment, workstations, office gadgets, computers and office space.

The way and manner the physical work environment is structured influence how employees in such establishments perform. The physical work environment in the focused firms seems not to be ergonomically structured and could affect employees' performance. The environment where people work, especially in Nigeria is unsafe and unhealthy. Often times we have poorly designed workstations, unsuitable furniture, lack of ventilation, inappropriate lighting, excessive noise, insufficient safety measures in fire emergencies and lack of protective equipment (Ushie, Agba, Ogaboh & Okorie, 2015). Chandrasekar (2011) posited that people working in such environment are prone to occupational disease and it impact on their performance. The focused firms go to a great length in making sure their employee have the requisite skills and knowledge to operate machineries in order to boost performance but little seem to be done in making sure the work station suits the employees and performance could be affected by this act. Akinyele (2010) posits that many enterprises limit their productivity enhancement of employees to the acquisition of skills. The type of work environment in which employees operate determines the way in which such enterprises prosper. He further state that about 80% of productivity problems reside in the work environment of organizations. Conducive work environment ensures the wellbeing of employees which invariably will enable them exert themselves to their roles with all vigour that may translate to higher productivity (Akinyele, 2007).

Statement of the Problem

Equipment are central to the achievement of the goals of productive firms such as Nigeria Breweries and SABMiller Plc, this is possibly the reason they ensure that state of the art equipment are purchased and installed. They do not stop at that but also train their employee on how to operate such equipment for optimum performance. However, it was observed that more attention seems to be paid to the productive equipment than to the operating personnel. They ensure equipment are properly situated to prevent overheating and for proper ventilation. The employees who operate these equipment however seem to be left out of the consideration for proper design to ensure that the equipment suits the person; rather they seem to be driven by the principle of the persons suiting the equipment. Employees have been observed to complain of too much heat in the operating room, poor ventilation and lighting, equipment being too close to each other. This increases the risk of accident in the work place and increases stress level which reduces productive capability of employee. As a result of the seeming disregard for ergonomics in the focused firms, reduced job satisfaction was observed which could have impact on employees' performance and negatively influence organizational overall performance. It is against this backdrop that this study seeks to examine the nature of relationship that exists between PWE and employee performance.

Objectives of the Study

The broad objective of the study is to examine the nature of relationship that exists between PWE and employee performance in selected Brewing Firms in Anambra State. Specifically, the study seeks to determine the nature of relationship that exists between Ergonomics and Job Satisfaction in the selected Brewing Firms in Anambra State.

Research Question

What is the nature of relationship that exists between Ergonomics and Job Satisfaction in the selected Brewing Firms in Anambra State?

Research Hypothesis

H_A: There is a significant relationship existing between Ergonomics and Job Satisfaction in the selected Brewing Firms in Anambra State.

Conceptual Review

Physical Work Environment

Physical work environment (PWE) is a subset of work environment which consist of physical and psychological environment. It will be pertinent to discuss work environment first so that the concept of PWE will be better appreciated. Beiz (2001) posits that work environment involves the physical, geographical locations as well as the immediate surroundings of the work place. Typically, it involves other factors relating to the place of employment such as security, additional perks and benefits of employment. Sims and Kroeck (1994) suggest that work environment factor consists of: decision making, warmth, risk, openness, reward and organizational structure. It can be measured through a variety of factors, namely through organizational structure of centralized / decentralized forms, ways of decision making, openness of system, relationship between subordinate and

supervisor, relation among employee, compensation, reward systems and others. Some researchers and organizational experts have come up with suggestions on the aspects of work environment that are important. The work environment factors, which should be considered are the right colouring, cleanliness, lighting, good ventilation, security and noise at workplace (Timpe, 1999).

The kind of work environment in place in an organization influences the calibre of employees who are going to be attracted, how they will behave, how well they will perform and how long they will stay in the organization. The submission of Sims and Kroeck (1994) aligns with this thought when they explain that a person chooses to work in an organization with a work climate which is well suitable to his/her desires. Podsakoff and McKenzie in Scotter (2000) argue that the creation of a more attractive work environment can improve the contextual performance and employee commitment. This is consistent with the opinion of Domney et al. in Sims and Kroeck (1994) stating that employee perception about the work environment will affect the employee performance, meaning that the provision of a conducive work environment by the company will be able to improve employee performance. Thompson et al. (2003) say that the work climate as measured by the supervisor's care for the welfare of the families of employees is positively related to employee performance. The type of workplace environment in which employees operate determines whether or not such organizations will prosper (Chandrasekhar, 2011).

PWE contextualizes the office layout and design to include components of the tangible workplace environment that comprise spatial layout and functionality of the surroundings (Kohun, 2002). Spatial layout refers to the ways in which machinery, equipment, and furnishings are arranged, the size and shape of those items, and the spatial relationships among them. The spatial layout of furniture was found to influence the amount and nature of conversation between individuals (Becker, 2002). Functionality refers to the ability of the same items to facilitate performance and the accomplishment of goals. How performance is achieved will be affected by how well people fit with their physical workspace and physical work environment (Srivastava, 2008). In a broader perspective, the PWE include but not limited to the comfort level, ventilation, heating, natural lighting and artificial lighting. Mas'udaha, Adiba and Halil(2012) opine that PWE includes many aspects such as chair or office seating, humidity, lighting and working hours. Temessek (2009) posits that the above features assist on the functional and aesthetic side, the décor, and design of the workplace environment that ultimately helps improve the employees experience and necessitate better performance.

Ergonomics

Office ergonomics has been recommended by many studies as one of the key guides to equipping employees at the workplace to help produce best performance. It is the quality of the employee's workplace environment that most impacts on the level of employee's motivation and subsequent performance (Al-Anzi, 2009). How well employees engage with the organization, especially with their immediate environment, influences to a great extent their error rate, level of innovation and collaboration with other employees, absenteeism and, ultimately, how long they stay in the job. International Ergonomics Association (IEA) (2000) defines ergonomics or human factors as the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theories, principles, and methods to design in order to optimize human well-being and overall system performance. Zafir, Durrishah, Mat and Rebi (2007) posited that ergonomics is the science of designing to fit the worker, rather than physically

forcing the workers body to fit the job. It also can be considered as physical and mental capabilities which it limits the worker as he or she interacts with tools, equipment, work methods, tasks and the working environment (Washington State Department of Labour and Industries, 2002).

Ergonomics in the organization promotes healthful workplace. Healthful workplace environment such as a proper office design and appropriate arrangement of furniture may cause higher productivity, higher morale among employees, and less stress outcome. This healthful work environment has connection with ergonomics. The limitation and interaction ensure reducing of work stress, absenteeism, low productivity, and job strain as long as it correctly be provided and used in workplace (Washington State Department of Labour and Industries, 2002).

It has been suggested that organizations should incorporate the elements of ergonomics and follow the Occupational Safety & Health Administration (OSHA) compliant. In applying a healthful working environment, the 12 ergonomics principles as suggested by OSHA should be followed. The principles are:

- i. Keep everything easy to reach.
- ii. Work at proper heights.
- iii. Reduce an excessive force.
- iv. Work in good postures.
- v. Reduce excessive repetition.
- vi. Minimize fatigue.
- vii. Minimize direct pressure.
- viii. Provide adjustability and change posture.
- ix. Provide clearance and access.
- x. Maintain a comfortable environment.
- xi. Enhance clarity and understanding.
- xii. Improve work organization.

Employee Performance

Employees' performance is the most important dependent variables in an industrial and organizational psychology. Some main application need to be applied as to improve performance of employees (Borman, 2004). It is the combined result of effort, ability, and perception of tasks (Platt, 2010). It is imperative for organizational outcomes and success. Many factors influence employee performance; and workplace environment factors stands out as the key determinants of performance. It is the key multi character factor intended to attain outcomes and has a major connection with planned objectives of the organization (Sabir, Iqbal, Rehman, Shah & Yameen, 2012).

A lot of business owners and managers think that employees are only concerned with how fat their account will become at the end of the month and hence determines the satisfaction and job commitment level of employees. Leblebici (2012) opined that many business executives are under the mistaken impression that the level of employee performance on the job is proportional to the size of the employee's compensation package. Although compensation package is one of the extrinsic motivation tools, it has a limited short-term effect on employees' performance. A widely accepted assumption is that better workplace environment motivates employees and produces better results. Onwuka (2002) observed that aside from the job scope itself, one factor that significantly influences

employee's commitment is the work environment. Ali and Zia (2010) noted that a positive work environment makes employees' feel good about coming to work and this provides the motivation to sustain and increase productivity.

An un-conducive environment could be viewed negatively by the employees as Anugwom (2004) opines that un-conducive work environment creates a feeling of un-fulfilment, inhuman treatment and neglect for the workers and with this feeling; they cannot really put in their best. Onogori (2007) asserts that when the worker fail to find his work fulfilling and satisfying, it lead to boredom, reduced efficiency, fatigue, frustration and dependency which are all determinants of not just employee performance but overall organizational performance. Onuoka (2006) asserts that "if a worker is not carried along in terms of good working environment and given all the necessary assurances and incentives to convince him that the days of militarizing the work is over, he will continue to live in fear and unsatisfied". The fear according to him will cause lack of commitment and job satisfaction. It is in support of this statement that Maicibe (2002, p.83) maintains, "if employees are not deprived of what they are supposed to get from their work environment, it prevents them from feeling dissatisfied, possible protest or complains". Ribelin (2003) laments that poor work environment leads to decreased employee performance, absenteeism, turnover, early retirement and job dissatisfaction. Favourable workplace environment guarantees the wellbeing of employees as well as enables them to exert themselves to their roles with all energy that may translate to higher performance (Taiwo, 2010).

Job Satisfaction

Job satisfaction represents one of the most complex areas facing today's managers when it comes to managing employees and it is the degree to which employees feel personally fulfilled and content in their job roles (Ganesh, 2015). Employees have attitudes about many aspects of their jobs, their careers, and their organizations; however, the most focal employee attitude is job satisfaction (Yusuf & Metiboba, 2013). Locke (1969) states that job satisfaction is the appraisal of one's job as attaining or allowing the attainment of one's important job values, providing these values are congruent with or help fulfil one's basic needs. The feeling associated with job satisfaction or dissatisfaction is more likely to reflect an assessment of the employees about the experiences of working at present and the past rather than expectations for the future. Wexley and Yukl (1997) posit that job satisfaction is the way an employee feels about his or her job. Kreitner and Kinicki (2000) explain that the job satisfaction becomes a part of the organizational effectiveness, not only influenced by organizational culture, but also influenced by national culture (values, actions, attitudes, faith, customs, beliefs, language and history). DeCremer (2012) expressed that the quality of work environment has an impact on the employees self- esteem and job satisfaction and hence performance; for workers are the most variable and the least easy to understand and control of all management resources.

Theoretical Framework

This study is based on Human Relations Theory developed by Elton Mayo. The theory believe in the importance of recognizing human beings and their needs as paramount in achieving organizational commitment and high productivity. Human relations theory emphasize the fact that participation aid management in integrating workers with the organization. Both managers and employees can realize goal and attain stronger commitment and satisfaction. The theory asserts that, there are many rewards, which managers expect from participative management. These include conducive work

environment, greater commitment, motivation, manageable workload, greater freedom to manage resources to reach objectives and greater job satisfaction (McGregor, 1960).

This theory is relevant to this study because it talks about building in human elements into the organizational processes and procedures. Ergonomics in organizations is part of building in human factors, arranging and designing the work stations in such a way as to suit the individuals and this will most likely lead to better job satisfaction and greater performance by employees.

Empirical Review

Ushie, Agba, Ogaboh and Okorie (2015) examined the effect of work environment on employees' commitment in agro-based industries in Cross River State, Nigeria. The study drew participants from two major agro industries in the state. One thousand, one hundred and ninety four (1194) respondents were purposively selected for the study. Information was elucidated from participants using four point Likert scale questionnaire. Data obtained was analyzed using Pearson Product Moment Correlation (r). Findings revealed that work environment such as consistent communication flow, manageable workload, availability of electricity, and work place that is free from known dangers are positively associated with employees' commitment, and hence performance. The study recommended among others that management of agro-based industries in Cross River State should establish and promote good work environments in their organizations so as to boost employees' commitment, wellbeing and overall performance and productivity.

Nnamani and Ajagu (2014) studied the effect of environmental factors and organizational performance in Nigeria. A study of Juhel Company Ltd. Emene, Enugu in Enugu Metropolis. The study had a population size of 1,152, out of which a sample size of 297 was selected using Taro Yamane at 5% error and 95% level of confidence. Instrument for data collection was structured questionnaire. The total numbers of 275 copies were returned. Data were analyzed using tables and percentages. Two formulated hypotheses were tested using Pearson's correlation coefficients and z-test statistical tools. The study revealed that there was unsafe and unhealthy work place environment, poor motivation, lack of innovation, high cultural interference and allow organizational interpretation process. Also, the result showed that there is relationship between employees and their work environment and that workplace factor play a positive and significant role on employee performance.

Junaida, Mahadir, Siti and Afidam (2010) investigated whether there is a relationship between the physical environments (comfort level; temperature) with employee productivity in Malaysia. 152 civil servants were selected from four (4) main units in Ministry of Youth and Sports, Putrajaya. Findings of the results showed that physical environment (comfort level, temperature) strongly influences the employee productivity.

Ikonne (2014) investigated the influence of workstation and work posture ergonomics on the job satisfaction of librarians in the Federal and State University libraries in Southern Nigeria. The study adopted survey research design. The total enumeration technique was used to include the 500 librarians from the 37 Federal and State University libraries in Southern Nigeria. Descriptive statistics was used to analyze the data collected. The findings revealed that there was a positive relationship between ergonomics (suitability of workstation and equipment and work posture designs) and job satisfaction. It was, therefore, recommended that ergonomic measures that would involve the set-up of adequate and healthy workstation equipment designs, which would allow the

users to adopt optimal working postures suitable for a greater job satisfaction, be implemented in the Nigerian University libraries.

Ogunyemi, Akinlaja, Adesoye, Abayomi, Rasaan and Omolade (2015) in their study examined the contribution of work environment, organisational culture, to employees' job performance. Ex-post facto research design was adopted. Proportional stratified and simple random sampling techniques were utilized to select 500 participants from three oil companies in River State, Nigeria (Agip = 150, Schlumberger = 185, Nigerian Agip exploration = 165). Two standardized self-report questionnaires were used for data generation. Two hypotheses were raised and tested using multiple regression and t-test statistics. Findings revealed among others that the two predictor variables (work environment and organisational culture) combined and individually, predicted the criterion variable (job performance). Based on the findings of this study, a number of recommendations were made among which were: employers of labour should provide suitable work environment for increased job performance of employees; and make the organizational culture favourable so as to enhance productivity of the work force.

Akinyele (2010) analyzed the impact of work environment on future worker's productivity in Nigeria. Primary data were used for this study that was generated through structured questionnaires with close ended questions. T-test was used to test the research hypotheses. The respondents were randomly chosen from four selected oil and gas industry in Lagos metropolis. The results of T-test indicated that employee productivity problems are within the work environment. Conducive work environment stimulates creativity of workers. Improvement in work environment and bad working conditions contribute to low productivity of employees.

Renne (2015) focused on the relationship between physical environment setting and academician performance in the PHEI (Private Higher Education Institution) in Malaysia. Using a formulated questionnaire, a total of 250 samples aimed and only 183 completed and were gathered among academicians from numerous Private Colleges and Universities in the area of Subang Jaya. Through findings and discussion, the research found that physical environment factors such building aesthetic, furniture arrangement, facilities and ventilation are considered essential, but facilities aiding staff considered important which contributes 41% to employee performance.

Summary of Review of Related Literature

PWE is one of the types of working environment, the order being psychological work environment. PWE is viewed as that part of work environment that deals with the arrangement of office equipment, design of office space, placement of equipment, space in-between equipment, ventilation, noise level and lighting. It has been observed by previous researchers as been one of the most important determinants of employee output and general performance. The application of scientific method and arrangement of equipment and furniture is regarded as ergonomics. It helps in making the equipment fit the worker and not forcing the worker to fit the equipment as was pointed by extant literature. This scientific arrangement of ideas spurs positive performance from employees which is seen as the behaviour of employees that help organizations achieve their performance through better job satisfaction and commitment.

A good number of works have been carried out on the work environment as a whole both in the country and outside the country. There however seem to be dearth of materials that singled out a

particular aspect of work environment and paired it with a particular performance indicator. Ikonne (2014) investigated the influence of workstation and work posture ergonomics on the job satisfaction of librarians in the Federal and State University libraries in Southern Nigeria, which is the same theme with the specific objective of this study. But the choice of the organization is not an equipment intensive outfit and not in Anambra state. This study intends to fill the organizational gap and the gap of place because no works have been specifically carried out in brewing firms in Anambra State to examine ergonomics and job satisfaction.

Research Design

The study adopted Survey Research Design as a result of the intention of the study to examine the nature of relationship that exists between the study variables (ergonomics and job satisfaction and to collect data from a sampled respondents through the use of primary data collection instrument (questionnaire).

Population of the Study

The population of the study consists of employees of the studied organizations. Nigeria Breweries Onitsha has a total of sixty employees (60) while SABMiller Plc Onitsha has a total of four hundred and ninety (490) employees. This makes the population of the study to be five hundred and fifty (550) employees (Human Resource Department, Personnel Record, 2018).

Sample Size and Sampling Technique

Taro Yamani's Statistical formula was adopted in determining the for sample size of the study. The formula applied is given below:

$$n = \frac{N}{1+(Ne)^2}$$

Where n = sample size, N = population size (550), and e = error limit (0.05).

$$n = \frac{560}{1+560(0.05)^2} = \frac{560}{2.4} = 233$$

For distribution of questionnaire in proportion to the population of each of the studied organization, Bowley's proportionate allocation formula was adopted. The formula is given below:

$$nh = \frac{nNh}{N}$$

Where n = total sample size

Nh = Number of items in each stratum in the population

N = population size.

Nigeria breweries Onitsha $60 \times 233/550 = 25$

SABMiller Plc Onitsha $490 \times 233/550 = 208$

A total of 233 copies of questionnaire were distributed to the focused firms in person, 224 was retrieved while 220 copies were utilized for the analysis. Priority was given to machine operators, engineers and their supervisors while distributing the questionnaire because they are the ones who deal more with equipment and machines.

Instrument for Data Collection

A 5 point-Likert structured questionnaire was used in eliciting for data relevant to the study and used for analysis. The structure and points used are: Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1).

Validity of Instrument

With the help the supervisor of the work and some Educational Foundation lecturers who are good in validating instruments, the questionnaire used was vetted for completeness, adequacy (content validity) , simplicity (face validity) and made sure it was personalized. After effecting the corrections, they certified the instrument as valid and fit for the study.

Reliability of the Instrument

Spearman Brown’s Split half reliability technique was adopted to measure the level of internal consistency of the instrument. Any reliability coefficient of .7 and above shows that the instrument is reliable. The result obtained was .904 as shown below and therefore the instrument is regarded as reliable.

Table 1. Reliability Statistics

Cronbach's Alpha	Part 1	Value	.811
		N of Items	5 ^a
	Part 2	Value	.837
		N of Items	5 ^b
Total N of Items			10
Correlation Between Forms			.824
Spearman-Brown Coefficient	Equal Length		.904
	Unequal Length		.904
Guttman Split-Half Coefficient			.879

Source: Field Survey (2017)

Computation: SPSS Ver.20.

Formula adopted was:

$$r_{SB} = \frac{2r_{hh}}{1 + r_{hh}}$$

Where

r_{hh} = Pearson correlation of scores in the two half tests.

Applying the formula, we would have:

$$r_{SB} = \frac{2 \times .824}{1 + .824}$$

$$r_{SB} = \frac{1.648}{1.824}$$

$$r_{SB} = 0.90351$$

$$r_{SB} = 0.904$$

Method of Data Analysis

Correlation analysis was adopted for the study because of its relationship nature and the type adopted was Pearson’s Product Moment Correlation Coefficient. Statistical Package for Social Sciences version 20 (SPSS Ver. 20) was used in running the analysis at 0.05 level of significance. This will guide the decision to be made; if the probability value (p-value) obtained is less than 0.05, the alternate hypothesis should be accepted, otherwise, it should be rejected.

Data Presentation and Analysis

Table 2. Distribution of Responses

S/N	Questionnaire Items	SA	A	UD	D	SD	Mean
Physical Working Condition (Ergonomics)							
1	I was asked to know how high the equipment I operate will be mounted to make it more convenient to me.	-	12	-	167	41	1.92
2	The machineries in the organization are too close to each other making operating them difficult.	55	78	-	67	20	3.37
3	There is usually too much heat in the operating rooms when the machines are working.	131	65	5	11	8	4.36
4	I can see very well while working with machines in the organizations because lighting issues is considered while placing them.	47	43	-	69	61	2.75
5	The equipment I use suits my posture and I can easily adjust.	12	18	-	78	112	1.82
Employee Performance (Job Satisfaction)							
6	My equipment stresses me in operation and makes life difficult for me in the firm.	79	95	-	14	32	3.80
7	My error rate will be reduced if the machine I handle suits me.	103	106	11	-	-	4.42
8	If the machine I operate is adjustable to suit my posture, I will produce more.	89	121	-	9	1	4.31
9	How machines are sighted influences how convenient I am in operating them.	147	73	-	-	-	4.67
10	My productivity will improve if equipment are sighted where there is much ventilation and light.	71	123	14	12	-	4.15

Source: Field Survey, 2018.

Hypothesis Test

Table 3. Correlation Output

		Correlations	
		ERGONO	EMPSAT
ERGONO	Pearson Correlation	1	.921**
	Sig. (2-tailed)		.000
	N	220	220
EMPSAT	Pearson Correlation	.921**	1
	Sig. (2-tailed)	.000	
	N	220	220

** . Correlation is significant at the 0.05 level (2-tailed).

Source: Field Survey, 2018.

Computation: SPSS Ver. 20

Discussion of Findings

From the analysis carried out, it was revealed that there is a significant positive relationship existing between ergonomic and job satisfaction. This goes to show that the way machines and equipment are arranged influences the job satisfaction level of employees. When the machines are arranged in such a way as to suit and give employees comfort, the employees will be more at home with the workstation and equipment and more satisfied with their jobs which will eventually improve their performance. This finding is backed up by prior findings such as Junaida, Mahadir, Siti and Afidam (2010) who investigated whether there is a relationship between the physical environments (comfort level; temperature) with employee productivity in Malaysia and found out that physical environment (comfort level, temperature) strongly influences the employee productivity. Similarly, Ikonne (2014) who investigated the influence of workstation and work posture ergonomics on the job satisfaction of librarians in the Federal and State University libraries in Southern Nigeria also revealed that there was a positive relationship between ergonomics (suitability of workstation and equipment and work posture designs) and job satisfaction. In addition, it was revealed by Akinyele (2010) who analyzed the impact of work environment on future worker's productivity in Nigeria that employee productivity problems are within the work environment and that conducive work environment stimulates creativity of workers.

Summary of Findings

From the table above correlation coefficient obtained was .921 and the probability value was .000. From the decision rule which is to accept the relationship as statistically significant if the p-value is less than .000 (P-value < .05) and reject same if the p-value is greater than .05 (p-value > .05), the research hypothesis is therefore accepted.

Conclusion

Sequel to the findings of the study, it is concluded that physically work environment plays a significant role in determining the performance of employees as it influences their job satisfactions level. This aligns with the dictates of the theory this work was built upon which believe in the

importance of recognizing human beings and their needs as paramount in achieving organizational commitment and high productivity. It also recognizes the importance of employee participation so as to aid in achieving organizational goals.

Recommendations

The study recommends the following:

- i. Equipment and machineries should as much as possible be made to suit the workers manning them by management of the focused firms as this will improve convenience to the workers, reduce stress and improve productivity.
- ii. The management of the focused firms should put the employee's health into consideration in situating machineries as this will lower the hazard and also lower error rate of the workers.
- iii. Employees should be consulted before mounting equipment and adjustments should be built into the design and layout if possible so as to adjust the positioning to suits different categories of workers.

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