

Work Facilities as a Determinant of Occupational Stress and Employee Performance

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Abstract: *The study aimed at assessing the influence of work facilities on occupational stress and employee performance. The study employed Cross-sectional descriptive research design. The target population included 12,805 workers in three selected universities: JKUAT, UON and KU. Cluster sampling was used to select 384 academic, administrative and operative staff from the target population. Questionnaires were used to collect data. The study found out that there was a statistically significant influence of working facilities on Employee performance. The study recommends future study on other universities and attention of the management of public universities towards provision of necessary work facilities to employees.*

Keywords: Workplace Facilities, Performance, Occupational Stress, Public Universities

1. Introduction

Effective human resource management is linked to increased organizational and employee performance (Armstrong, 2005). Provision of employees with the necessary facilities that they need to perform their duties and roles are increasingly being noticed as a source of strength for enhancing employees' performance. Employees cannot operate effectively without adequate work facilities (Chandrasekhar, 2011). Additionally, employees spend fifty percent of their lives within the confinement of the internal environment of their workplaces which deeply influences their mental status, actions, abilities and also their performance (Sundstrom, 1994). It therefore follows that improved performance is assumed to be as a result of better facilities within the workplace environment. Carnevale (1992) contend that better workplace facilities will boost the employees' productivity and finally improve the organizations productivity.

However following the above discussion employees also interpret their feelings, actions and abilities based on their environment. Conducive working environment with the necessary facilities emancipate positive feelings, while poor facilities and working environment elicit negative feelings (Sundstrom, 1994). It is due to this reason that availability of better work facilities or lack thereof is associated with occupational stress. Occupational stress is defined by Kumar (2013) as the harmful physical and emotional responses that can happen when there is a conflict between job demands on the worker and the amount of control a worker has over meeting these demands. According to Bradley (2007) when employees are in control of the facilities they need for their jobs they will perform better since this control of resources necessary for their jobs buffers the effects of stress on the overall functioning of employees.

Stress in University workers is an on-going issue of concern for those involved in education. Numerous studies found that

job stress influences the employees' job satisfaction and their overall performance in their work, because most of the organizations now are more demanding for the better job outcomes (McGrath et al., 2003). Academic staff has a major role to play in achieving the objectives of the institution (Kumar, 2013). The performance of the staff; teaching, non-teaching teachers and also as managers, determines to a large extent, the quality of the student experience in the Universities and has a significant impact on student learning and thereby on the contribution that such institutions can make to the society (Kumar, 2013). Stress of University workers therefore needs to be addressed.

1.1 Statement of the Problem

According to Waswa and Swaleh (2012) minimal attention has been given towards ensuring workers in public universities have been provided with the necessary resources and facilities in their work environment to undertake their duties and avert the perennial strikes that have characterized Kenyan public universities lowering the standards of education in the country. Additionally, Owino et al. (2013) argue that lack of resources and facilities contributes to stressed employees and poor performance. Zhimin and Ramani (2012) advises that these stress factors should be met to enhance conflict resolution within Kenya's public universities.

1.2 Objectives of the Study

The study aimed at assessing the influence of work facilities on occupational stress and employee performance.

2. Literature Review

Most stressors can be found in the work environment and they may include unfavorable working conditions, heavy workloads, and organizational problems, paucity of resources, lack of support, lack of autonomy, and lack of

involvement in decision making. The work environment can also include physical stressors such as task-related noise, crowding, the size of the work place and or the university, safety or youth violence, as well as administrative pressures such as support from managers and role ambiguity (Brown & Uehara, 2008).

Empirical studies indicate that factors like facilities and organizational resources; personal as well as job facilities and resources buffer the negative effects of stress on the performance. Review of studies in the past shows that, there is a relationship between the working facilities and the performance of employees. Bradley (2007) found out that when the employees are in control of the facilities they need for their jobs they will perform better since this control of resources necessary for their jobs buffers the effects of stress on the overall functioning of employees in Australian education institutions. He found that employees, who had more control on their psychological resources, were having better performance as compared to other employees (Bradley, 2007). Work facilities do not only include the physical resources but psychological resources as well. In support of the above findings, Chan (2003) found out that the employee's hardiness has also have buffering effects on the stress in such way that employees who have more psychological hardiness are in more better position to handle stress at work and they can perform well especially their performance is good during tough times, when the job demands are high.

Other employee working facilities and resources such as salaries, empowerment, autonomy, good physical conditions, self-efficacy, recognition, also have effects on job stress and performance. Betoret (2006) studied Spanish secondary school teachers and found that school physical resources and teachers self-efficacy had effects of stress on teachers, in such way that the teachers' performance increased with increase in resources (Betoret, 2006). The performance of employees therefore is expected to increase with the presence of working facilities and vice versa. The working facilities act as instrumental and it boosts performance in such way that the employees will have the strength to handle the job demands and thus minimize the negative effects of stress on the performance (Arnold, et al. 2007). This study therefore hypothesizes that:

H1: Workers facilities stress factors influence the performance of employees in public universities in Kenya

3. Methodology

3.1 Research Design

Saunders, et al. (2003) defines research design as the blue print for the collection, measurement and the analysis of data. Cross-sectional descriptive research design was employed in this study to assess work facilities as a determinant of stress and its influence on the performance of employees in public universities in Kenya. Descriptive research describes data and characteristics about the population or phenomenon being studied (De Vaus, 2001). The descriptive research design was appropriate for this study since the study aimed at

analyzing and describing the work facilities aspect causing stress and their effect on performance. The study was however cross-sectional since the data was collected at one particular time across the selected respondents (Schurink, 2009).

3.2 Target Population

The study targeted the staff of three selected public universities in Kenya. This includes Jomo Kenyatta University of Agriculture and Technology, University of Nairobi, and Kenyatta University. This gave a total target population of 12,805 workers from the three selected public universities. Custer sampling technique was employed to select 384 academic, administrative and operative staff from the three universities. This was necessary so as to ensure that the samples selected from each group are represented in the entire sample, which was selected for the study, in proportion to their numbers in the entire targeted population (Kumar, 2005).

3.3 Data Collection

The study collected both primary and secondary data. Primary data were collected using survey questionnaires, although interviews and observations were also employed where necessary and possible. Secondary data sources included journals, books and articles addressing the objectives of this study.

3.4 Data Analysis and Presentation

Qualitative data obtained from questionnaires was edited/cleaned and classified into classes or groups with common characteristics or themes. The content within the themes was then analyzed guided by the research objectives. Quantitative data was analyzed and interpreted using the Statistical Package for Social Sciences (SPSS version 24). Inferential data analysis techniques such as regression and factor analysis were used to analyze the collected data and assess the inherent relationship between variables.

4. Results and Discussion

4.1 Workplace Facilities as a determinant of Stress

Workplace facilities were evaluated using six survey items on a five point likert scale. Most of the respondents (76%) agreed with the statements that they have all the facilities they require to do their work at their place of work or office. Majority of the respondents (88%) supported the statement that "Every worker in my organization is accorded office space where and when needed". More than two thirds of the respondents (69%) agreed that offices at their place of work/section are enough and comfortable. On the other hand 60% of the respondent supported the assertion that the current facilities available to work with are adequate and enough for our needs. Almost all of the respondents agreed with the statements that "The location of my place of work and offices are well planned in line with our requirements and therefore appropriate-91%" and "The physical working

conditions e.g., ventilation, space, cleanliness, are very good-86%”.

Table 1: Workplace Facilities

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have all the facilities I require to do my work at my place of work or office	1%	3%	20%	15%	61%
Every worker in my organization is accorded office space where and when needed	6%	3%	3%	1%	87%
Offices at my place of work or section are enough and comfortable	6%	2%	22%	12%	57%
The current facilities available for us to work with are adequate and enough for our needs	14%	14%	6%	27%	38%
The location of my place of work and offices are well planned in line with our requirements and therefore appropriate	4%	2%	2%	41%	50%
The physical working conditions e.g., ventilation, space, cleanliness, are very good	2%	8%	4%	43%	43%

To provide a comparative description for the responses across the three universities, the average for each statement were obtained as shown below. Great discrepancies among the respondents from the three universities were not observed.

Table 2: Workplace Facilities across Universities

Variable	Total	University		
		JKUAT	UoN	KU
d1 I have all the facilities I require to do my work at my place of work or office	4.3	4.4	4.2	4.4
d2 Every worker in my organization is accorded office space where and when needed	4.6	4.4	4.6	4.7
d3 Offices at my place of work or section are enough and comfortable	4.1	4.2	4.1	4.2
d4 The current facilities available for us to work with are adequate and enough for our needs	3.6	3.6	3.6	3.6
d5 The location of my place of work and offices are well planned in line with our requirements and therefore appropriate	4.3	4.3	4.3	4.3
d6 The physical working conditions e.g. ventilation, space, cleanliness, are very good	4.2	4.2	4.2	4.2
Average	4.1	4.1	4.0	4.2

Factor analysis Workplace Facilities

Workplace facilities in this study were evaluated using 6 items. The five point likert scale of (6) data items, was used to measure and determine the extent to which Workplace Facilities comprised of the desired outcomes. A correlation was first done on all the data items under Workplace

Facilities and only those that significantly correlated to each other were further reduced into few principal components. Results from correlations showed that “The physical working conditions for example., ventilation, space, cleanliness, are very good –d6” did not correlate with most of other items and was therefore eliminated before running factor analysis.

Table 3: Correlations

	Statistic	d1	d2	d3	d4	d5	d6
d1	Pearson Correlation	1	.299*	.637**	.571**	.619**	.594**
	Sig. (2-tailed)		.033	.000	.000	.000	.000
	N	342	344	343	344	332	344
d2	Pearson Correlation	.299*	1	.637**	.619**	.594**	.299*
	Sig. (2-tailed)	.033		.000	.000	.000	.033
	N	51	50	50	51	50	51
d3	Pearson Correlation	.637**	.637**	1	.612**	.536**	.525**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	341	332	341	342	342	342
d4	Pearson Correlation	.571**	.619**	.612**	1	.607**	.176
	Sig. (2-tailed)	.000	.000	.000		.000	.217
	N	51	51	50	51	51	51
d5	Pearson Correlation	.619**	.594**	.536**	.607**	1	.101
	Sig. (2-tailed)	.000	.000	.000	.000		.332
	N	352	344	353	354	342	342
d6	Pearson Correlation	.594**	.299*	.525**	.176	.101	1
	Sig. (2-tailed)	.000	.033	.000	.217	.332	
	N	341	332	341	342	342	342

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

The next table is used as to test assumptions; essentially, the Kaiser-Meyer-Olking (KMO) statistic should be greater than

0.500 and the Bartlett's test should be significant (e.g. $p < .05$). The Kaiser-Meyer-Olkin of sampling adequacy was above the threshold of 0.5 ($KMO=0.483$) indicating that the sample size was adequate for the variables entered into analysis. The Bartlett's Test of Sphericity was significant ($\chi^2=35.219$, $df=6$, $P=0.002$) showing that factor analysis using principal component was relevant for the data set and there were some relationships between the variables.

The table below shows the eigenvalues (variances of the principal components) associated with each linear component (factor) before extraction, and after extraction. The extraction converged in one iteration with one significant component with Eigenvalues accounting for 57.480% of the variance explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.024	57.480	57.480	4.024	57.480	57.480
2	.997	14.238	71.718			
3	.625	8.928	80.646			
4	.411	5.871	93.138			
5	.219	3.131	100.000			

Being above the threshold of 50% it indicated that the one-component factor model derived fitted the data appropriately. Items loading greater than 0.6 for the component combined to form the one principal component and the variables that clustered into it are shown in table below.

Total Variance Explained

Table 4: Component Matrix

Variable	Component
	1
d1 I have all the facilities I require to do my work at my place of work or office	.803
d2 Every worker in my organization is accorded office space where and when needed	.768
d3 Offices at my place of work or section are enough and comfortable	-.765
d4 The current facilities available for us to work with are adequate and enough for our needs	.607
d5 The location of my place of work and offices are well planned in line with our requirements and therefore appropriate	.602
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

The effect of performance and workplace facilities was examined by calculating the correlations.

Table 5: Correlation between Workplace Facilities and performance

	Not depressed	Don't feel lazy and boredom	Does the best possible job	Enjoy work	Job Commitment	Responsible for actions at work	Motivated, productive and creative	Stress produce poor work	Stress reduces productivity	Employees have high morale	Serves the customers efficiently	Produce accurate work	Efficient service delivery
d1	.011	.060	.077	-.099	.071	.225**	-.086	-.219**	-.278**	-.086	-.295**	-.172**	-.226**
d2	.065	.049	-.048	.060	-.150**	.095	.040	.061	.063	.003	-.154**	-.189**	-.059
d3	.083	.082	.003	.269**	.037	.155**	-.039	-.103	.353**	-.028	-.277**	-.023	-.213**
d4	.069	-.027	.097	-.019	.086	.086	-.005	.000	-.066	-.033	-.012	-.061	-.062
d5	.301**	.044	.094	-.024	.017	.072	-.011	.001	-.007	.002	-.019	-.057	-.089
d6	.128*	.052	-.090	-.101	.053	.090	-.054	-.028	.013	-.112*	-.055	-.039	-.018

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

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

Results showed that lack of depression and effective performance was positively significant at 0.01 level of significance on having all the facilities required to do work at place of work/ office (.301) and significant at 0.05 level of significance on location of place of work and offices well planned in line with our requirements (.128).

Enjoying work was positively and significantly correlated to offices at place of work or section being enough and comfortable (.269). Being committed to jobs was negatively and significantly correlated to every worker in the organization being accorded office space where and when needed (.150). Taking responsibility for actions within the job environment was positively and significantly correlated

to having all the facilities required to do work at place of work or office (.255) and offices at place of work or section being enough and comfortable (.155).

4.2 Relationship between Workplace facilities(X1) and Employee performance(Y)

Linear Regression analysis was employed to predict Employee performance from Workplace facilities. Model summary shows the coefficient of determination (R^2) which tells us the percentage of the variation in Employee performance explained by the model. From the results of the table below, the regression model containing Workplace facilities as the independent variable explains 21.4% of the variation in Employee performance. The size of Durbin

Watson statistic which depends on the number of predictors and number of observation, as conservative rule of thumb, values less than 1 or greater than 3 are definitely cause for

concern. Durbin-Watson value of 2.185 indicates that the model did not suffer significantly from autocorrelation.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.463 ^a	.214	.212	.46425	.214	93.597	1	343	.000	2.185

A. Predictors: (constant), workplace facilities

B. Dependent variable: employee performance

The table below displays ANOVA results that test the significance of the R² for the model. An F statistics of 93.597

with a p-value less than the conventional 5% indicates that the overall model was significant at 95% confidence level.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.173	1	20.173	93.597	.000 ^a
	Residual	73.927	343	.216		
	Total	94.100	344			
A. Predictors: (constant), workplace facilities						
B. Dependent variable: employee performance						

In order to detect whether multicollinearity was a problem to the model, condition index; the variance-inflation factor (VIF); and tolerance of each variable was calculated. VIF values are considered a problem when they go beyond 10, and tolerance values below .10 should be a cause for concern. A condition index over 30 suggests serious

collinearity problems and an index over 15 indicates possible collinearity problems. The data were duly tested for multicollinearity by using Pearson's correlation and conditional index. The Table below, showed no serious problem of multicollinearity.

Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Workplace Facilities
1	1	1.966	1.000	.02	.02
	2	.034	7.571	.98	.98
a. Dependent Variable: employee performance					

Table of coefficients below presents the unstandardized and standardized coefficients of the model, the t statistic for each coefficient and the associated p-values. The predictor

variable had significant positive relationship with Employee performance.

Table7: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta				Tolerance	VIF
1	(Constant)	2.652	.096			27.551	.000		
	Workplace Facilities	.315	.033	.463		9.675	.000	1.000	1.000
a. Dependent Variable: employee performance									

The findings confirm that there is a statistically significant influence of Workplace facilities on Employee performance. This implies that an increase in Workplace facilities leads to an increase in Employee performance as demonstrated by the equation below.

Employee performance = 2.652 + .315 Workplace facilities

The findings from the study affirm that when the employees are subjected to the work facilities that they need to accomplish their duties, they will perform better. A positive improvement of work facilities will lead to improvement in performance. These findings are similar with those of Bradley (2007) who found out that when the employees are in control of the facilities they need for their jobs they will perform better since this control of resources necessary for

their jobs buffers the effects of stress on the overall functioning of employees. Additionally, the results echo Betoret (2006) who studied Spanish secondary school teachers and found that school physical resources and teachers self-efficacy had effects of stress on teachers, in such way that the teachers' performance increased with increase in resources.

5. Conclusion

Based on the results of the study, workplace facilities are a major contributor to occupational stress and consequently affect the performance of employees in public universities. Therefore an increase in the provision of required facilities in the workplace will lead to increased performance of the

employees. Improving performance of employees in public universities and minimizing their exposure to occupational stress therefore calls for provision of workplace facilities and resources such as reasonable workload, adequate office space, equipment and material to do tasks, appropriate company procedures, and enough time to perform duties.

6. Recommendations

It is recommended that Kenya public universities recognize the role of work facilities on occupational stress and the performance of employees in the university. Recognizing these roles will enable the institution develop effective policies to address the factors that might lead to workers stress in the universities.

Stress audits need to be conducted frequently to determine whether stress levels are getting out of control and leading to chronic stress, which affects workers performance negatively. Qualitative data on stress related absences, productivity rates, accidents, staff turnover and staff surveys where employee opinions are sought on stress will not only help to identify what is stressing them, but also provide possible solutions such as redesigning jobs, provision of health and fitness facilities, and undertaking training that can increase self-efficacy and lessen stress among workers in public universities.

This study has some limitations. It confined its focus to three universities only. Hence, future research should examine the effects of occupational stress affecting the performance of employees incorporating most of the universities in Kenya. This study and its findings should be viewed as a starting point for more extensive research related to determinants of occupational stress.

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