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Motivation as a Determinant of Stress and Its Effect on Employee Performance in Public Universities in Kenya

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Abstract: ***This study focused on assessing the influence of motivation on occupational stress and performance of workers in public universities in Kenya. 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 Worker's motivation on Employee performance. The study recommends future study on other universities and attention of the management of public universities towards employee motivation.***

Keywords: Motivation; Performance; Occupational Stress; Determinant.

1. Introduction

In the contemporary dynamic business environment that is steered by globalization, competition is an inevitable truth for any organization; learning institutions included (Vouzas, 2006). It is imperative for every learning institution to continually strive for excellence, competitive advantage and better performance everyday (Kumar, 2013). Learning institutions are mandated by the overall objective of securing the future of the nation by creating and adding knowledge to the available human resources (Kumar, 2013). To achieve this objective learning institutions need to have qualified, efficient, effective and committed employees.

By implication, therefore, learning institutions should make effort to ensure that their human resources are properly managed and are geared towards the success of the institution. However, employee performance is affected by several factors that need to be addressed. Of the factors affecting employee performance stress is rated as one of the critical factors (Nilufar, et al. 2009). Rosania et al.' (2009) defined workers' stress as the experience by a worker of unpleasant emotions, such as tension, frustration, anxiety, anger, and depression, resulting from aspects of work. In recent years, steadily increasing costs and consequences of workers stress has received growing concern. To reduce the negative effects stress has on workers, more attention needs to be placed on this growing epidemic (Nilufar et al. 2009).

High level of stress at work is a major threatening factor to both physical and psychological health of individuals (Dar, et al. 2011) and affects their cognitive processes involving memory, recall of knowledge and attention leading to poor performance of employees (Addae et al. 2008). Ramzan (2012) identified motivation as one of the major cause of stress. Motivation involves the ability to make somebody want to do something especially something that involves hard work (Ramzan, 2012). Therefore lack of motivation creates confusion among the employees on their role within the organisation, exposing them to stress which eventually affects their performance. Motivation gives employees a purpose and the drive to achieve their goal. It helps employees to push or pull from a bad situation, which have negative impact in their lives. Availability of motivation or lack thereof is therefore a determinant of stress and consequently performance (Giga 2011).

1.1 Statement of the problem

Academic staff has a major role to play in achieving the objectives of the institutions (Kumar, 2013). The performance of the staff; teaching, non-teaching and managers, determines to a large extent, the quality of the students experience in the Universities and has a significant effect 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. Motivation has been identified as one of the factors contributing to stress or lack thereof (Giga 2011). This study therefore focusses on assessing motivation as a determinant of stress and its effect on performance of workers in public universities in Kenya.

1.2 Objectives of the study

1. To determine motivational factors causing stress among workers in the public universities
2. To assess the influence of motivation stress factors on the performance of workers in public universities

2. Literature Review

Motivation can come in the form of financial incentives, the opportunity to get involved in company projects, a career path that leads to management and direct involvement from management into the daily tasks (Giga 2011). Effective motivation can create a productive work force, but a lack of motivating factors can leave employees searching for reasons to give their maximum efforts. Motivation of the workers at their jobs therefore demands that effective remuneration programmes are put in place to minimise stress. In light with this discussion, a research in 2006 exposed that 45% organizations loose talented human resources because of unjustified remuneration. According to 71% employees one of the prime reasons of job switching is inadequate pay (White, 2006). When employees think that they are not rewarded according to the efforts they are putting in; it creates stress among them and therefore their work performance decreases. Paying more can give a corporation talented and motivated employees but then it becomes one of the highest operating costs to the firm (Certo, 2003).

The challenge for the universities involved in the present study is to address the perception of salary inequity and ensure that employees feel they are fairly recognized and rewarded for their work. This research will adequately address the question of motivation to clearly establish whether workers in the selected universities are properly motivated and whether lack of motivation could have been the cause of demonstrations and strikes in public universities in the recent past. This study therefore hypothesises that:

H_1: Motivation stress factors have effect on the performance of employees in public universities in Kenya

3. Methodology

3.1 Research Design

Coopers & Schindler (2006) 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 motivation 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 (Lokesh-Koul, 2004). The descriptive research design was appropriate for this study since the study aimed at analysing and describing the motivational 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.

4. Results and Discussions

4.1 Motivation as a determinant of stress

The questionnaire used 10 survey items on a five point likert scale to evaluate motivation. Almost all of the respondents (90%) agreed that they are encouraged to find new and better ways to do their work. More than three quarters (78%) of the respondents agreed that when they put extra effort in their work they can be appreciated. Almost three quarters (73%) of the respondents supported the statement that they are encouraged to take initiative in their work. My organization gives enough recognition and rewards for work well done were supported by 66% of the respondents. More than three quarters of the respondents (79%) agreed that creativity and innovation are valued at their organization. My department often holds social activities for motivation of staff members was agreed upon by 90% of the respondents.

Table 1: Motivation Aspects

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am encouraged to find new and better ways to do my work	8%	2%	0%	41%	49%
When I put extra effort in my work I can be appreciated for this	0%	4%	17%	37%	42%
I am encouraged to take initiative in my work	0%	6%	21%	40%	33%
My organization gives enough recognition and rewards for work well done	4%	10%	18%	33%	34%
Creativity and innovation are valued at my organization	0%	2%	20%	39%	40%

My department often holds social activities for motivation of staff members	0%	0%	10%	31%	59%
It is easy to discuss or share personal problems with my boss or members of the department	0%	6%	21%	40%	33%
We are occasionally taken to trips for purposes of team building and reducing monotony at my department or section	4%	10%	18%	33%	34%
Promotion is based on performance	0%	2%	20%	39%	40%
Appraisals are regular and focused on personal development	8%	14%	17%	49%	12%

Segregation by respondent's University, great discrepancies in responses were not observed.

Table 2: Motivation Aspects Disintegrated by University

	Variable	Total	University		
			JKUAT	UoN	KU
e1	I am encouraged to find new and better ways to do my work	4.2	4.2	4.2	4.2
e2	When I put extra effort in my work I can be appreciated for this	4.2	4.1	4.2	4.2
e3	I am encouraged to take initiative in my work	4.0	3.9	4.0	4.0
e4	My organization gives enough recognition and rewards for work well done	3.8	3.9	3.8	3.8
e5	Creativity and innovation are valued at my organization	4.2	4.3	4.2	4.1
e6	My department often holds social activities for motivation of staff members	4.56	4.5	4.5	4.5
e7	It is easy to discuss or share personal problems with my boss or members of the department	4.0	3.9	4.0	4.0
e8	We are occasionally taken to trips for purposes of team building and reducing monotony at my department or section	3.8	3.9	3.8	3.8
e9	Promotion is based on performance	4.2	4.3	4.2	4.1
e10	Appraisals are regular and focused on personal development	3.4	3.5	3.4	3.4
	Average	**4.0**	**4.1**	**4.0**	**4.0**

Motivation in this study was evaluated using 10 items. The five point likert scale of (10) data items, was used to measure and determine the extent to which Motivation comprised of the desired outcomes. A correlation was first done on all the data items under Motivation and only those that significantly correlated to each other were further reduced into few principal components. Results from correlations showed that "I am encouraged to take initiative in my work –e3", "Creativity and innovation are valued at my organization-e5", "My department often holds social activities for motivation of staff members-e6", "It is easy to discuss or share personal problems with my boss or members of the department-e7" and "Promotion is based on performance-e9" did not correlate with most of other items and were therefore eliminated before running factor analysis.

Table 3: Correlations of Motivation items

	Statistic	e1	e2	e3	e4	e5	e6	e7	e8	e9	e10
e1	Pearson Correlation	1	-.233**	-.165**	-.243**	-.357**	-.181**	-.165**	-.243**	-.357**	.297**
	Sig. (2-tailed)		.000	.002	.000	.000	.001	.002	.000	.000	.000
	N	354	354	354	354	354	354	354	354	354	354
e2	Pearson Correlation	-.233**	1	.468**	.196**	-.011	.661**	.468**	.196**	-.011	-.178**
	Sig. (2-tailed)	.000		.000	.000	.838	.000	.000	.000	.838	.001
	N	354	354	354	354	354	354	354	354	354	354
e3	Pearson Correlation	-.165**	.468**	1	.079	.005	.296**	1.000**	.079	.005	-.156**
	Sig. (2-tailed)	.002	.000		.139	.922	.000	.000	.139	.922	.003
	N	354	354	354	354	354	354	354	354	354	354
e4	Pearson Correlation	-.243**	.196**	.079	1	.178**	.003	.079	1.000**	.178**	-.260**
	Sig. (2-tailed)	.000	.000	.139		.001	.960	.139	.000	.001	.000
	N	354	354	354	354	354	354	354	354	354	354
e5	Pearson Correlation	-.357**	-.011	.005	.178**	1	.092	.005	.178**	1.000**	-.123*
	Sig. (2-tailed)	.000	.838	.922	.001		.083	.922	.001	.000	.021
	N	354	354	354	354	354	354	354	354	354	354

e6	Pearson Correlation	-.181**	.661**	.296**	.003	.092	1	.296**	.003	.092	-.170**
	Sig. (2-tailed)	.001	.000	.000	.960	.083		.000	.960	.083	.001
	N	354	354	354	354	354	354	354	354	354	354
e7	Pearson Correlation	-.165**	.468**	1.000**	.079	.005	.296**	1	.079	.005	-.156**
	Sig. (2-tailed)	.002	.000	.000	.139	.922	.000		.139	.922	.003
	N	354	354	354	354	354	354	354	354	354	354
e8	Pearson Correlation	-.243**	.196**	.079	1.000**	.178**	.003	.079	1	.178**	-.260**
	Sig. (2-tailed)	.000	.000	.139	.000	.001	.960	.139		.001	.000
	N	354	354	354	354	354	354	354	354	354	354
e9	Pearson Correlation	-.357**	-.011	.005	.178**	1.000**	.092	.005	.178**	1	-.123*
	Sig. (2-tailed)	.000	.838	.922	.001	.000	.083	.922	.001		.021
	N	354	354	354	354	354	354	354	354	354	354
e10	Pearson Correlation	.297**	-.178**	-.156**	-.260**	-.123*	-.170**	-.156**	-.260**	-.123*	1
	Sig. (2-tailed)	.000	.001	.003	.000	.021	.001	.003	.000	.021	
	N	354	354	354	354	354	354	354	354	354	354
**. Correlation is significant at the 0.01 level (2-tailed).											
*. Correlation is significant at the 0.05 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=0.666) indicating that the sample size was adequate for the variables entered into analysis. The Bartlett's Test of Sphericity was significant ($\chi 2=699.742$, df=18, P<0.001) showing that factor analysis using principal component was relevant for the data set and there were some relationships between the variables.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.666
Bartlett's Test of Sphericity	Approx. Chi-Square	699.742
	Df	18
	Sig.	.000

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 two iterations with two significant components with Eigenvalues accounting for 69.554% of the variance explained.

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.369	47.374	47.374	2.369	47.374	47.374	1.992	39.836	39.836
2	1.109	22.180	69.554	1.109	22.180	69.554	1.486	29.718	69.554
3	.829	16.581	86.135						
4	.693	13.865	100.000						
5	-9.185E-17	-1.837E-15	100.000						
Extraction Method: Principal Component Analysis.									

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 two principal components and the variables that clustered into them are shown in table below.

Table 4: Rotated Component Matrix

	Component	
Variable	1	2
e1	-.116	.748
e2	.068	-.655
e4	.985	-.166
e8	.985	-.166
e10	-.178	.665
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		

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

Table 5: Correlation between Motivation 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
e1	.443**	.085	.012	.059	-.054	.071	.006	-.065	-.010	-.053	-.173**	-.118*	-.078
e2	.206**	-.032	-.017	.018	-.013	-.059	-.062	-.028	.044	-.007	.118*	.107*	.035
e3	.181**	-.047	-.102	.038	-.029	.001	-.046	-.020	-.009	.022	.094	.055	.109*
e4	-.097	.041	-.059	-.018	-.024	.014	-.001	.098	.047	.014	.016	.023	.065
e5	.314**	-.036	.018	-.007	-.032	-.047	.033	.043	-.084	.005	.032	.010	.030
e6	.278**	-.080	.016	.005	-.052	-.019	-.010	.058	.030	.031	.153**	.089	.013
e7	.181**	-.047	-.102	.038	-.029	.001	-.046	-.020	-.009	.022	.094	.055	.109*
e8	-.097	.041	-.059	-.018	-.024	.014	-.001	.098	.047	.014	.016	.023	.065
e9	-.314**	-.036	.018	-.007	-.032	-.047	.033	.043	-.084	.005	.032	.010	.030
e10	.171**	-.008	-.013	-.078	-.057	.118*	-.110*	-.025	-.042	-.075	-.020	-.032	.022
**. 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 significant at 0.01 level of significance on being encouraged to find new and better ways to do work (.443); being appreciated when one put extra effort at work (.206); being encouraged to take initiative at work (.181) valuing creativity and innovation (.314); department often holding social activities for motivation of staff members (.278); ease of discussing or sharing personal problems with the boss or members of the department (.181); promotion being based on performance (-.314) and appraisals being regular and focused on personal development (.171).

Ability to serve the customers efficiently was significantly correlated to being encouraged to find new and better ways to do work (-.173); being appreciated when one puts extra effort in their work (.118) and department often holding social activities for motivation of staff members (.153). Having efficient service delivery was significantly correlated to being encouraged to take initiative in work (.109) and ease of discussing or sharing personal problems with the boss or members of the department (.109).

4.1 Relationship between Motivation (X) and Employee performance(Y) as a determinant of stress

Linear Regression analysis was employed to predict Employee performance from Worker's motivation. 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 Worker's motivation as the independent variable explains 11.2% 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 1.694 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	Durbin-Watson
1	.334[a]	.112	.109	.48785	1.694
a. Predictors: (Constant), Worker's motivation					
b. Dependent Variable: Employee performance					

The table below displays ANOVA results that test the significance of the R^2 for the model. An F statistics of 44.184 with a p-value less than the conventional 5% indicates that the overall model was significant at 95% confidence level.

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.516	1	10.516	44.184	.000[a]
	Residual	83.777	352	0.238		
	Total	94.293	353			
a. Predictors: (Constant), Worker's motivation						
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 were 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.

Table 8: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Worker's motivation
1	1	1.987	1.000	.01	.01
	2	.013	12.326	.99	.99
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.

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

Employee performance= 2.358 + .277Worker's motivation

Table 9: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.358	.161		14.658	.000		
	Worker's motivation	.277	.042	.334	6.647	.000	1.000	1.000
a. Dependent Variable: Employee performance								

The above findings postulate that lack of motivation among employees may lead to stress that is negatively related to performance. However provision of motivation will come a long way in minimising stress and improving performance of the employees. These results are similar to previous studies which indicated that motivation of employees in an organisation which largely emanates from access to financial rewards, good pay and incentives will reduce stress and improve workers performance. White (2006) found out that when employees think that they are not rewarded according to the efforts they are putting in; it creates stress among them and therefore their work performance decreases. Additionally, Giga (2011) also found out that effective motivation can create a productive work force, but a lack of motivating factors can leave employees searching for reasons to give their maximum effort.

5. Conclusion and Recommendations

5.1 Conclusion

In a university work environment, employees will feel motivated to do their work effectively and efficiently if they are rewarded accordingly and are given an opportunity to participate in decision making. The reward however needs to be fair or at least employees need to perceive the reward to be fair. The stress 'salary not as good as other people doing similar work' is connected to two key expectations that employees have when they begin employment with an organization; that they will be treated fairly and that they will be recognized for the work they do. The results also indicate that when public university workers are able to ascertain that within the organization there are financial incentives, involvement in decision making, and a career path that leads to management, the cases of stress and subsequently poor performance are minimized. Finally, results of the study indicate that while workers in public universities perceive the organizations as offering them motivation by: being appreciated when they put extra effort at work; departments often holding social activities for motivation of staff members; and, promotion being based on performance, motivation among public university workers is still a major source of stress that undermines their performance.

5.2 Recommendations

This study has some limitations. It confined its focus to three universities only. Hence, future research should examine the contributions of motivation to stress and performance of employees incorporating most of the universities in Kenya. The management of public universities should strive to ensure that the employees are motivated to minimize their exposure to occupational stress and consequently enhance their performance.

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