



**EFFECT OF JOB STRESS ON ACADEMIC STAFF PERFORMANCE IN
FEDERAL POLYTECHNIC, NASARAWA, NASARAWA STATE – NIGERIA.**

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Abstract

Academic staff are expected to perform their duties diligently to enhance academic activities in the institution by coming up with something good and unique but this is often not achieved in practice because job stressors like workload, technological changes, time pressure, health condition and low salaries have seriously impacted on performance of academic staff with an alarming increase of economic consequences. The objective of the study is to investigate the impact of job stress on the performance of academic staff in Federal Polytechnic, Nasarawa (FPN). Survey method was used and data was collected using a well structure questionnaire which was analyzed using Descriptive Statistics and Regression Analysis to test the formulated hypotheses with the aid of statistical package for social sciences (SPSS) version 22 for analysis of data and a sample of 220 respondents using Taro Yamane’s simplified formulae. The results showed that workload, technological changes, time pressure, health condition and low salaries are positively related to performance in FPN with statistical significance. The study concluded that job stressors affects academic performance in the institution. In light of these, it was recommended that management of the institution should ensure that job stress is reduce through training, delegation of authority, increase salary and timely payment of allowances and basic aids to curtail the stressor, employ qualify

and professional academic staff to reduce the workload and academic staff should be made aware of any changes on the technology in use and give room for contributions to improve performance also, build recreational centre for relaxation to alleviate depression and anxiety.

Keywords: *Employee, job, performance, stress and stressor.*

Introduction

Stress refers to emotional problems such as anxiety, depression, low self-esteem, anger that interfere with employee performance in an organization. Job stress in an academic institution is one of the universal challenge influencing several academic work around the globe. It is an academic disease that creates emotional disruption either physically or psychologically that jeopardize academic activities of an institution. Indeed, stress is beneficial to the organization if it is not excessive but if it is excessively and employees are struggling to cope with the situation then emotional problems might occur. Employees in any organization are essential assets to their organizations but stress is a common challenge that affects employee performance. Academic activities are among the group of activities that face tremendous challenges due to antecedents of stress, academician perform different job in their institution depending on their department.

Job stress in an academic environment is increasingly becoming an essential issue due to the fact that employees have different opinion about it but academic staff are subjected to high level of stress which can influence their performance. It can be a positive or negative challenge which depends on the employee perception about it and employees see it as a positive challenge if it improves their performance and yield significant satisfaction while, if it cannot yield any significant satisfaction it becomes a negative challenge. Robbins (2001) cited in Ehsan & Ali (2019) asserted that stress is a dynamic condition in which an individual is confronted with an opportunity, constraint or demand related to what the individual desires and for which the outcome is perceived to be both

uncertain and essential. Job stress is an outcome or response to certain stimuli in the environment and it has become more apparent and leads to low morale of employees (Vijayan, 2017).

The quality of services offered in tertiary institutions varies significantly and every institution has a unique role to play towards attainment of the institutional goals. However, academic activities need to be performed judiciously in every learning institution and stressful experiences that transpires in an academic staff life can easily affect the performance. Aguinis (2009) cited in Addai, Amoako & Adu-Gyamfi (2017) asserted that performance is about behaviour or what employees do and not what employees produce or the outcomes of their work. Meneze (2006) cited in Ehsan and Ali (2019) asserted that performance is the employee's ability to produce work or goods and services according to the expected standards set by the employers or beyond the expected standards. Performance in the academic institution has several variables that determine it and if the variables are critically solve it can improve the quality of services in the institution with minimal stress. Consider for example, good and hygiene working environment, working experience, educational qualification, training, recreational centres, recognition, etc. can significantly improve performance of academic activities in the institution.

Institutions of higher learning are expected to come up with something good and unique to attain their goals but job stressors like workload, technological changes, time pressure, health condition and low salaries have significant impact on the performance of academic staff. The Federal Polytechnic, Nasarawa (FPN) has employ several strategies for managing stress such as good working conditions, training, payment of salaries on time, delegation of authority, welfare package among others, despite all these efforts, job stress has seriously impacted on performance of academic staff with an alarming increase of economic consequences. A lot of studies have examined the relationship between job stress and performance of an employee in various organizations. The study by Laiba, Anum, Muhammad & Kashif (2011) and Ayodele (2014) found that stress affects employee productivity negatively in business sector of Pakistan, Vijayan (2017) found that the main cause of low productivity on

employees of Aavin in Coimbatore appears to be stress at workplace while, Aasia, Hadia, & Sabita (2014) found that job stress does not impact employee job performance among taxi drivers in Gombak.

The objective of the study is to investigate the effect of job stress on the performance of academic staff in FPN. Besides, the study seeks to attain the following specific objective which includes:

1. Assess the effect of workload on performance of academic staff in FPN.
2. Examine the technological changes on performance of academic staff in FPN.
3. Determine the effect of depression and anxiety on performance of academic staff in FPN.
4. Ascertain the effect of low self-esteem and anger on performance of academic staff in FPN.
5. Determine the effect of low salaries on performance of academic staff in FPN.

The following hypotheses were developed and tested:

- H₀₁:** Workload has no significant effect on performance of academic staff in FPN.
- H₀₂:** Technological changes has no significant effect on performance of academic staff in FPN.
- H₀₃:** Depression and anxiety has no significant effect on performance of academic staff in FPN.
- H₀₄:** Low self-esteem and anger has no significant effect on performance of academic staff in FPN.
- H₀₅:** Low salaries has no significant effect on performance of academic staff in FPN.

Literature Review

According to Kihara and Mugambi (2018) stress was viewed as psychological and physical reaction to prolong internal environmental conditions in which individual's adaptive capabilities are over extended. Ehsan and Ali (2019) asserted that stress is a universal element and

individual in every walk of life have to face it. Job stress can interfere with academic activities in an institution either negatively or positively due to either external or internal factors. It can affect performance negatively if the external factors such as competitive life style of an employee, changes in technology, government policy, etc. allow to dominate the entire job with a lot of pressure to work but does not come out with any significant outcome. However, performance can be productive if opportunities are created for employees to work and motivate them to come up with something good and unique through reduction of workload, recognizing the output of an employee and good conducive environment for work.

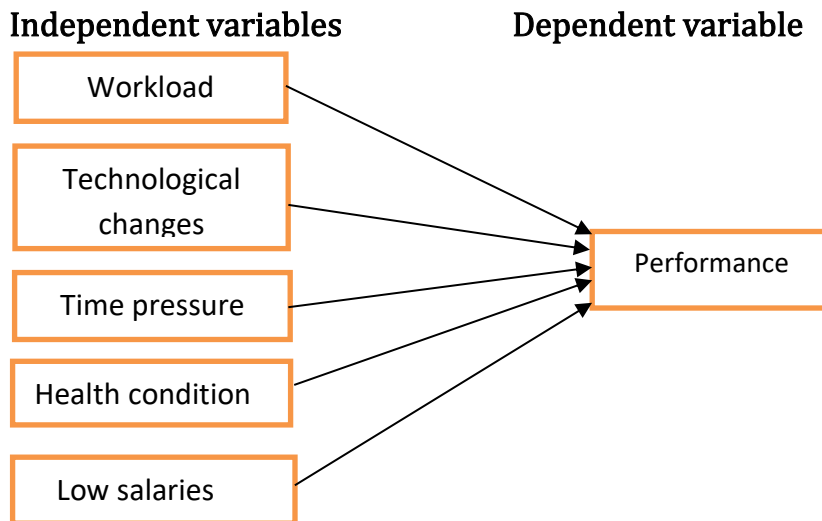


Figure 1: Conceptual framework

Different practices and experiences have resulted in the evolution of different theories and beliefs in order to mitigate job stress in an organization. Employees experience different stress in discharging their responsibilities such as acute stress, traumatic stress and chronic stress. A few related theories underpinnings from which the study is grounded is adopted as theoretical framework and these include Transactional Theory of Work-related Stress, Psychological Job Control Theory and Social-technical System Theory.

The transactional theory of work-related stress laid the foundation for managing stress between an individual and their environment. It asserted that stress is the direct product of a transaction that threaten the general wellbeing of the parties involves in the transaction. Also, it is associated with exposure to particular workplace scenarios. According to Lazarus et al. (2001) cited in Pezaro (2017) it is the appraisal of transaction that offers a causal pathway that may better express the nature of the underlying psychological and physiological mechanisms which underpin the overall process and experience of stress.

The psychological job control theory entailed that job with a high demands and low control will lead to stress. Therefore, an understanding of how an employee carryout organizational tasks with high demand job that require high control and what the job require to enhance performance can reduce stress significantly. Kihara and Mugambi (2018) opined that the theory of job control has the perceptions of job control over work hours and perceived job autonomy. Besides, employees that their job is highly demanding usually experience significant level of stress.

The social-technical system theory described a holistic approach to workplace, it recognizes the interaction between employees and technology in workplace. Also, if number of employees is less than the require responsibilities in the organization then work overload may surface while, if the number of employees is more than the require responsibilities in the organization then high chance of resources to be scrambled may eventually emerge among the employees which can gradually create conflicts in the organization. According to Trist (1981) there are two compulsory and complementary subsystems that assist the organization to operate smoothly. The social and technical subsystems are complementing each other towards reduction of job stress however, the social subsystem involves the employees while technical subsystem involves the technical resources that assist employees to work.

Ehsan and Ali (2019), conducted a research on the impact of work stress on employee productivity with the objective to investigate the impact of work stress on employee productivity of banking staff in Faisalabad, Pakistan. Stratified random sampling technique was used to select fifty

participants. Regression and correlation method was used to analyze the research hypotheses. The study revealed that there is significant relationship between work stress and employee's productivity in banking sector. It was recommended that the supervisors and managers need to explore the causes of the dissatisfaction of employees within the working environment. One major shortcoming with Ehsan and Ali (2019) as observed by this study was the used of stratified random sampling technique to select sample without justification, the policies to manage the stress in each organization cannot be generalized, this alone would not be sufficient and justifiable for a study of this magnitude. Consequently, it may be difficult to generalize these findings.

Kihara and Mugambi (2018), conducted a research on effect of stress management strategies on employees' performance in the public service with the objective to evaluate the influence of stress management strategies on employees' performance. Descriptive analysis and multiple linear regression model was used to study the relationship between stress management strategies and employees' performance with a population of seven hundred thousand respondents and a sample of four hundred. The study discovered that all variables studied indicated a significant effect on employees' performance of public service while, regression model indicated a positive relationship between employees' performance and the factor variables studies of relaxation techniques and counselling services. It was recommended that the management of the organization under study should create awareness to the employees to enable them be aware of utilization of stress management strategies available in the organization that can improve performance. One major shortcoming with Kihara and Mugambi (2018) as observed by this study was the methodology used to obtain the sample was not justified, the policies to manage the stress in each organization cannot be generalized, this alone would not be sufficient and justifiable for a study of this magnitude. Consequently, it may be difficult to generalize these findings.

Bala, Basit & Hassan (2017), conducted a research on impact of job stress on employee performance with the objective to analyze the impact of job stress on employee performance. The study used regression for the

analysis of data with a population of 310 respondents. It was revealed that time pressure and role ambiguity have significant and negative influence on employee performance while workload and lack of motivation do not have any significant influence on employee performance. The study concluded that increasing time pressure and role ambiguity would reduce employee performance in all aspects. Managers and supervisors are strongly recommended to discuss the time allotment and task completion dates and duration of the task with their subordinates to avoid time pressure. One major shortcoming with Bala et al. (2017) as observed by this study was the methodology used to obtain the sample was not justified, the duration was not clearly specified and the policies to manage the stress in each sector cannot be generalized, this alone would not be sufficient and justifiable for a study of this magnitude. Consequently, it may be difficult to generalize these findings.

Addai, Amoako & Adu-Gyamfi (2017), conducted a research on the effect of work stress and its relationship with employee health with the objective to assess the effect of work stress and its relationship with employee health. A descriptive approach was employed with a population of forty employees and a sample of thirty-six using Krejcie and Morgan formula. It was revealed that factors that bring about stress include lack of training to make work easier, work demands that outweigh abilities, working under poor working conditions, the risk factor associated with the work of employees, working under pressure from superior and dissatisfaction with job. The study concluded that can be managed ability to take mind off things, involvement in exercises, employee ability to understand their situation and talking over problems with colleagues at work. It was recommended that Sunyani West NHIS should invest in work stress which in return can pay huge dividends both in terms of reduced stress-related cost and increased job performance. One major shortcoming with Addai et al. (2017) as observed by this study was the methodology used to obtain the sample was not justified, the duration was not clearly specified and the policies of Sunyani West NHIS for managing stress cannot be generalized, this alone would not be sufficient and justifiable for a study of this magnitude. Consequently, it may be difficult to generalize these findings.

Vijayan (2017) conducted a research on impact of job stress on employees' performance in Aavin, Coimbatore with the objective to explore the major factors causing job stress and explains how it affects performance of the employees working using Aavin, Coimbatore. The study was based on quantitative approach with a descriptive research design and a sample of 100 respondents. The formulated hypotheses were tested using t-test, chi-square, correlation and regression analysis with the help of SPSS version 21. It was revealed that stress at workplace is the main cause of low productivity in an organization. In light of these, it was recommended that management should take necessary steps to control the job stress of employees to increase their performance. One major shortcoming with Vijayan (2017) as observed by this study was the methodology used to collect the data was not justified, the policy for managing job stress in Aavin, Coimbatore is not specified. Consequently, it may be difficult to generalize these findings.

Okeke, Echo & Oboreh (2016) conducted a research on effects of stress on employee productivity with the objective to examine the effect of stress on employee productivity in the Nigerian banking industry using five selected banks in Awka metropolis. The study adopted survey research method with a purposive sampling to select 250 employees. The data generated were analyzed using simple percentage and the formulated hypotheses were tested using chi-square statistical technique. It was revealed that workload pressure has significant effect on employee productivity and the study concluded that stress hinders effective performance of the employees. In light of these, it was recommended that remedial measures need to be taken by management to minimize the effect of job stress on permanent basis. One major shortcoming with Okeke et al. (2016) as observed by this study was the methodology used to collect the data cannot be generalized, the duration (time) is not vividly justified while, the organizational policy for managing stress differ and only five banks to represent the entire county is grossly inadequate this alone would not be sufficient and justifiable for a study of this magnitude. Consequently, it may be difficult to generalize these findings.

Ahmed and Ramzan (2013) carried out a study on effects of job stress on employees job performance with the aim of examine the relationship between job stress and job performance on bank employees in Pakistan. The study used a sample of 144 participants and data were obtained through close ended questionnaire. The formulated hypotheses were tested using regression and correlation analysis. The results of the study showed that there is a significant with negative correlation between job stress and job performance and the study concluded that job stress significantly reduces the performance of an individual. This study by Ahmed and Ramzan (2013) did not discuss the proportion and distribution of questionnaires to the different categories of participants nor was the employed distribution justified. The study used 144 participants in the banking sector of Pakistan to represent the entire employees in Pakistan this is grossly inadequate for a study of this magnitude. Consequently, it may be difficult to generalize the findings.

Methodology

This study adopted a survey method. The survey population of this research consists of 487 academic staff of Federal Polytechnic, Nasarawa. The choice of this population was based on the tasks of academic staff in the institution where general activities in the institution require their services. The primary instrument used for the collection of data for this study is the questionnaire which was administered and retrieved the same manner from a sample of 220 respondents.

The study sample was determined by Taro Yamane's simplified formulae for proportion, which is widely accepted in management sciences. The Yamane (1967) formulae is $n = N/1 + Ne^2$. Where: **n** is the calculated sample size, **N** is the population size, and **e** is the acceptable sampling error and the choice of 0.05 level of significance is purely and exclusive decision of the researchers. Thus, $n = \frac{487}{1 + 487(0.05)^2}$ $n = \frac{487}{1 + 487(0.0025)}$ $n = \frac{487}{1 + 1.2175}$ $n = \frac{487}{2.2175}$ $n = 219.6166$ $n = 220$ respondents.

The regression model is:

$$PER = \beta_0 + \beta_1WL + \beta_2TC + \beta_3DA + \beta_4LA + \beta_5LS + \mu_i$$

Whereas:

PER = Performance, WL = Work Load, TC = Technological Changes, DA = Depression and Anxiety, LA = Low self-esteem and Anger, LS = Low Salaries, b_0 = Intercept or Constant, β = Slope of the regression line with respect to the independent variables, μ = error term and i denotes cross-sectional dimension.

Results and Discussion

Table 1 Return Rate of Respondents

<i>Responses</i>	<i>Questionnaire Administered</i>	<i>Questionnaire Not Returned</i>	<i>Questionnaire Returned</i>	<i>Percentage of Total Questionnaire Returned</i>
SBS	36	8	28	15
SAS	35	5	30	16.1
SIT	30	4	26	14
SES	43	5	38	20.4
SET	31	4	27	14.5
STVE	45	8	37	20
Total	220	34	186	100
<i>Source: Field Survey, 2022</i>				

Table 1 displays the response rate on the numbers of questionnaires administered to each section of academic activities in the school whom were the respondents for this study. It reveals that 36 questionnaires were administered to School of Business (SBS), 35 to School of Applied Science (SAS), 30 to School of Information Technology (SIT), 43 to School of Engineering Studies (SES), 31 to School of Environmental Technology (SET) and 45 to School of Technical and Vocational Education (STVE) respectively. Furthermore, 15% of the total questionnaires returned were from SBS, 16.1% were from SAS, 14% were from SIT, 20.4% were from SES while, 14.5% of the respondents were from SET and 20% of the respondents were from STVE. This table also shows that out of a total of 220 questionnaires administered, 186 representing 84.5% were retrieved or returned and that is sufficient enough for the continuation of analysis.

Table 2: Model Summary

Indicator	Coefficient
R	0.976
R ²	0.952
Adjusted R ²	0.950
Std. Error of the Estimate	0.341

The regression results in the above table shows the goodness of fit for the regression between performance and workload, technological changes, depression and anxiety, low self-esteem and anger and low salaries are adequate. The value of R= 0.976 represents simple correlation which shows the relationship between the variables also indicates a high degree of correlation while the value of R² = 0.952 represents the five variables studied and other factors not studied in this work contribute to 4.8%. It shows that holding other factors constant 95.2% of the variances in workload, technological changes, depression and anxiety, low self-esteem and anger and low salaries are explained by the variations in performance of academic staff in FPN. The value of adjusted R² = 0.950 represents the coefficient of determination that explains the variation in the dependent variable due to changes in the independent variables. The value of standard error of estimate which is 0.341 represents the effect of the factors outside this study.

Table 3: Analysis of ANOVA Variance

Indicator	Sum of Squares	Df	Mean Square	F	Sig.
Regression	414.416	5	82.883	711.039	0.000
Residual	20.982	180	0.117		
Total	435.398	185			

The ANOVA results in the above table reveals that the processed data had a significance level of 0.000 which shows that the data is optimal and the model is acceptable this was supported by F statistics of 711.039 and reported probability was less than the conventional probability of 0.05 significance level is a clear indication that workload, technological changes, depression and anxiety, low self-esteem and anger and low salaries influenced performance of academic staff in FPN.

Table 4: Regression Coefficient Results

<i>Variable</i>	<i>Beta</i>	<i>Std. Error</i>	<i>T</i>	<i>Sig.</i>
Constant	0.138	0.094	1.457	0.147
WL	0.145	0.045	3.200	0.002
TC	0.289	0.096	3.012	0.003
DA	-0.191	0.098	-1.953	0.052
LA	0.683	0.075	9.117	0.000
LS	-0.008	0.074	-0.113	0.910

The regression coefficient in the above table indicates that the relationship between performance of academic staff in FPN on workload, technological changes, depression and anxiety, low self-esteem and anger and low salaries as depicted in the regression equation: $PER = 0.138 + 0.145WL + 0.289TC + -0.191DA + 0.683LA + -0.008LS$. It provides the constant value and the beta values for each factor variable studied. Indeed, there was a strong positive relationship between the study variables as indicated by a positive constant value of 0.138. The regression equation indicated a negative relationship between depression and anxiety with a value of -0.191 and low salaries with a value of -0.008 and if one variable decreases the other variable increases and vice versa. Also, the regression equation indicated a positive relationship between workload with a value of 0.145, technological changes with a value of 0.289 and low self-esteem and anger with a value of 0.683 and if one variable increases the other variable increases.

Conclusion and Recommendations

The results and analyses above showed that, workload, technological changes, depression and anxiety, low self-esteem and anger and low salaries were positively related to performance of academic staff in FPN statistical significance. The findings showed that job stress has affected the academic performance in the institution and the general well-being of academic staff. The study concluded that job stressor affects academic performance in the institution.

Based on the findings and conclusion of the study, the following recommendations are made:

1. Management of the institution should ensure that job stress is reduce through training, delegation of authority, increase salary and timely payment of allowances and basic aids to curtail the stressors.

2. Management of the institution should employ qualify and professional academic staff to reduce the workload.
3. Academic staff should be made aware of any changes on the technology in use and give room for contributions to improve performance.
4. Management of the institution should build recreational centre for relaxation and adequately equip it to alleviate the depression and anxiety and encourage academic staff to go for annual leave.
5. Management of the institution should encourage creativity and innovation to reduce low self-esteem and anger through research witting.

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