

Original Research Article

Work Stress and Job Satisfaction among Staff in a New Medical University

ABSTRACT

Background: Services rendered in exchange for reward or payment may be referred to as a job. Different rewards exist for different services; however, some services are associated with varying levels of discomfort, deprivations or denials which on the individual may be perceived as stress. The aim of this study was to evaluate the relationship between job stress and job satisfaction among members of staff in a new medical university in the year 2020/2021.

Materials and Methods: A cross-sectional analytical study was conducted among total population of members of staff in a private medical university, using a pretested questionnaire. Data was analysed using The Statistical Package for Social Sciences (SPSS) version 20.0.

Results: A total of one hundred and twenty-eight (128) respondents were involved in the study. There were 52 (40.6%) lecturers. The cumulative mean score for academic workload, work environment, student-related issues, and research and career development was 10.84. There was unwillingness among a variable number of staff (between 19 (14.8%) and 71 (55.5%)) to comment on job satisfaction. Fewer respondents strongly agreed with positive items of assessment for job satisfaction. A statistically significant inverse difference was found between job stress and job satisfaction.

Conclusion: Although varied degrees of work stress were recorded among the university staff, the cumulative average stress score was high. Fewer respondents strongly agreed with positive items of assessment for job satisfaction, and a few staff were unwilling to provide responses on job satisfaction. Efforts should be intensified to reduce stress among staff with the goal of improving job satisfaction

Keywords: Job Satisfaction, Work Stress, Private University Staff, Port Harcourt, Nigeria

INTRODUCTION

The desire to satisfy human needs, live a good quality life and acquire an improved social status among the comity of friends generally drive humans to acquire skills (soft or hard) for payable services. This opinion is more properly expressed by other researchers in their works. [1,2] Service rendered in anticipation or exchange for a reward or payment is a job. It is often rated in terms of time spent on the job or the value placed on the services by the person who hired. Hence different types of reward exist for different types of services rendered. However, some services are associated with varying levels of physical, social or psychologic discomfort, deprivations, or denials which impact on the individual as stress. For services to be rendered repeatedly or continuously, it therefore has much to do with an individual's ability to endure or tolerate the associated stress of duty for as long as possible with the available reward required to solve personal needs.

In an Asian study, a conflicting report of high satisfaction and high stress was reported among academicians following some managerial reforms.[3] However, in Africa, job stress and low job satisfaction was reported among educators in South Africa.[4] In Zimbabwe, dominant reasons for job dissatisfaction among academic professionals in tertiary institutions were: “high volume of work, inadequate salaries, allowances, loans to facilities for purchase of housing stands and cars”.[5] In Nigeria, a high rate of job dissatisfaction was found among doctors at the University of Benin Teaching Hospital in a study reported in the year 2003, and the main cause of stress was their inability to meet personal needs.[6] Similar work-related stress was reported in the Nigerian civil service by another researcher who recommended improved work conditions for improved job satisfaction.[7] Lecturers in federal universities were known to have higher mean job satisfaction than their counterparts in the state and private universities, and this is partly influenced by the sex of the lecturers, as reported in a Nigerian study.[8] Another study among university librarians found low mean satisfaction especially among female librarians, and a significant positive correlation was found between job stress and job satisfaction.[9]

The need to keep pace with the demands of work, maintain quality to keep afloat in a competitive society, and accreditation in a university environment, impacts considerable on job stress of workers. This job stress may be heightened by the challenges of a new business setting (new university). Also, how satisfied the workers feel in their quest to satisfy their needs within the job environment determine their quality of input, the overall output, and the how long they remain within the job environment. This study was aimed at evaluating the experiences of workers to determine job stress and job satisfaction in a new private medical university in Southern Nigeria.

MATERIALS AND METHODS

Study Area: The study was conducted in Port Harcourt the capital city of Rivers State, in South-South of the Federal Republic of Nigeria. There are two other university medical schools in Port Harcourt – the University of Port Harcourt (UPH) - owned and operated by the Federal Government of Nigeria; and the State-owned Rivers State University (RSU). Port Harcourt is a cosmopolitan city with many economic activities going on among which are multinational petroleum oil-producing and oil-servicing companies, an international airport, and a seaport.

Study Setting: The PAMO University of Medical Sciences (PUMS), a new private medical university licensed by the Federal Government of Nigeria in 2017, was the study setting.

Research Design: A cross-sectional analytical study was carried out.

Study Population: Staff of the PUMS constituted the study population.

Study Instrument: A questionnaire (self-administered) was developed for collection of samples. The items for evaluation of work stress were derived from the self-study form of the National Universities Commission (Nigeria);[10] and that of job satisfaction was evaluated using the scale developed by Brayfield and Rothe.[11]The 18-item scale has five options of strongly agree, agree, undecided, disagree and strongly disagree score 1 to 5. There were nine positive and 9 negative statements

giving a minimum score of 18 and a maximum of 90, with higher score indicating higher job satisfaction and vice versa.

Sampling Method: Total population of members of staff who were reachable and gave consent within the three-month study period (November 2021 to January 2022) were recruited for the study.

Study Variables: Socio-demographic data, evaluation of job stress, and evaluation of staff job satisfaction.

Data Analysis: Data was formed into tables and analysed using The Statistical Package for Social Sciences (SPSS) version 20.0. Work stress was evaluated using four categories [academic workload (5), work environment (2), student-related issue (3), and research and career development (9)]. Each was rated on a scale of 1-5, using average minimum score of 4 and maximum of 20. A cumulative total score of 4.0 - 7.2 = No Stress; 7.3 – 10.4 = Low Stress; 10.5 – 13.6 = Moderate Stress; >13.6 – 16.8 = High Stress; > 16.9 = Very High Stress. A score of <5 = low stress; 5-9 = moderate stress; 10 - 14 = high stress; ≥15 = very high stress. Additionally, stress at work for grouped variables on interpersonal relationship and administrative-related issues was evaluated differently using a scale of 1 – 5 (no stress, low stress, average stress, high stress, and very high stress). A cumulative total score of 4.0 - 7.2 = No Stress; 7.3 – 10.4 = Low Stress; 10.5 – 13.6 = Moderate Stress; >13.6 – 16.8 = High Stress; > 16.9 = Very High Stress.

Validity/Reliability of Instrument: The study instrument was developed, scrutinized by all the authors and pretested before usage. The Cronbach alpha test (in SPSS) was used for the validity of the study instrument, and yielded a score of 0.830.

RESULTS

A 97.0% questionnaire retrieval was achieved and a total of one hundred and twenty-eight (128) respondents were involved in the study.

Table 1: Demographic characteristics (category) of individual respondents

Variables	Number (n = 128)	Percentage (%)
<i>Designation of Staff</i>		
Professor	2	1.6
Associate Professor	2	1.6
Senior Lecturer	7	5.5
Lecturer I	19	14.8
Lecturer II	17	13.3
Assistant Lecturer	12	9.4
Graduate Assistant	4	3.1
Technologist	44	34.4
Clinical Instructor	8	6.3
Scientist	10	7.8
Administration	3	2.3

Table 1 shows the demographic information of the respondents. There were 44 (34.4%) Technologists, 19 (14.8%) Lecturer I, 17 (13.3%) Lecturer II, 12 (9.4%) assistant lecturers, 10 (8.8%) Scientists, and 4(3.2%) in the Professorial cadre.

Table 2: Evaluation for Stress at Work (Academic Workload, Work Environment, Student-related Issues, and Research and Career development)

Variable	Level of stress at work						(Average Total ÷ 128)
	Not Applicable (0)	No stress (1)	Low stress (2)	Average stress (3)	High stress (4)	Very High stress (5)	
	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	
<i>Academic Workload</i>							2.9
Work Demand	0(0.0)	9 (7.0)	41(32.0)	43(33.6)	15(11.7)	20(15.6)	
Delivery of Lecture	1 (0.8)	9 (7.0)	32(25.0)	60 (46.9)	21(16.4)	5 (3.9)	
Invigilation of examination	1 (0.8)	7 (5.5)	24(18.8)	82(64.1)	10(7.8)	4 (3.1)	
Setting of examination questions	2 (1.6)	7 (5.5)	31(24.2)	57(44.5)	24(18.8)	7 (5.5)	
Preparation of examination results	3 (2.3)	5 (3.9)	31 (24.2)	53(41.4)	27(21.1)	9 (7.0)	
<i>Average Sub-Total</i>	0	7.4	63.6	177	77.6	45	
<i>Work Environment</i>							2.47
State of lecturer's office	3 (2.3)	16(12.5)	64(50.0)	32(25.0)	4 (3.1)	9 (7.0)	
Accommodation/facilities	4 (3.1)	10 (7.8)	50(39.1)	36(28.1)	26 (20.3)	2 (1.6)	
<i>Cumulative Average Score</i>	0	13	114	102	60	27.5	
<i>Student-related Issue</i>							2.77
Students' population /Density	1 (1.8)	8 (6.3)	31(24.2)	70(54.7)	15(11.7)	3 (2.3)	
Students' project/thesis supervision	5 (3.9)	8 (6.3)	26(20.3)	69(53.9)	18(14.1)	2 (1.6)	
Students' classroom behaviour	2 (1.6)	8 (6.3)	30(23.4)	66(51.6)	15(11.7)	7 (5.5)	
<i>Cumulative Average Score</i>	0	8	58	205	64	20	
<i>Research and Career development</i>							2.7
Advancement/Promotion criteria	4 (3.1)	6 (4.7)	33(25.8)	56(43.8)	22(17.2)	7 (5.5)	
Linkage to avenue of professional development	4 (3.1)	7 (5.5)	33(25.8)	59(46.1)	21(16.4)	4 (3.1)	
Sourcing of funds for career development	4 (3.1)	8 (6.3)	25(19.5)	68(53.1)	18 (14.1)	5 (3.9)	
Having the required publication for promotion	4 (3.1)	9 (7.0)	25(19.5)	62(48.4)	21(16.4)	7 (5.5)	
Obtaining research /conference incentives	4 (3.1)	5 (3.9)	27 (21.1)	59 (46.1)	25 (19.5)	8 (6.3)	
Sourcing for research funds/grants	4 (3.1)	8 (6.3)	28 (21.9)	61 (47.7)	22 (17.2)	5 (3.9)	
Access to relevant literature	4 (3.1)	22 (17.2)	35 (27.3)	59 (46.1)	6 (4.7)	2 (1.6)	
Publication of finished articles	4 (3.1)	11 (8.6)	47 (36.7)	49 (38.3)	15 (11.7)	2 (1.6)	
Linkage to other professionals in same research field	4 (3.1)	8 (6.3)	53 (41.1)	45 (35.2)	14 (10.9)	4 (3.1)	
<i>Cumulative Average</i>	0	9.33	68	172.67	71.11	24.44	

<i>Score</i>							
<i>Total Cumulative Average Score (÷ 128)</i>	0	37.73	303.6	656.67	272.71	116.9	10.84

Table 2 shows data for evaluation of stress at work (Academic Workload, Work Environment, Student-related Issues, and Research and Career development). On a scale of 1-5 (for the five items), mean score was 10.84 (moderate stress). Academic work demand constituted high stress for 15 (11.7%) respondents and 20 (15.6%) felt very high stress. Delivery of lectures was of average stress for 60 (46.9%) respondents, high stress for 21(16.4%) respondents, and very highly stressed 5 (3.9%). 53(41.4%) were averagely stressed, and 27 (21.1%) highly stressed from preparation of students' examination results. Almost half of the respondents reported average stress on indicators (items) of research and career development and low stress on items of interpersonal relationship.

Table 3: Stress at work for Interpersonal Relationship, and Administrative-Related Issues

<i>Interpersonal Relationship</i>	<i>Scores</i>						<i>Total (÷ 128)</i>
	<i>Not Apply</i>	<i>No Stress</i>	<i>Low Stress</i>	<i>Average Stress</i>	<i>High Stress</i>	<i>Very High Stress</i>	
Relationship with colleagues	0 (0.0)	19 (14.8)	65 (50.8)	27 (21.1)	6 (4.7)	8 (6.3)	
Relationship with non-teaching staff	1 (0.8)	24 (18.8)	57 (44.5)	38 (29.7)	6 (4.7)	2 (1.6)	
Relationship with students	1 (0.8)	31 (24.2)	64 (50.0)	23 (18.0)	8 (6.3)	1 (0.8)	
Relationship with Head of Department	0 (0.0)	20 (15.6)	63 (49.2)	35 (27.3)	5 (3.9)	5 (3.9)	
Relationship with University Management	0 (0.0)	16 (12.5)	36 (28.1)	64 (50.0)	6 (4.7)	6 (4.7)	
Sub-Total Score	0.4	22	57	37.4	6.2	4.4	0.995
<i>Administrative-Related Issues</i>							
Leadership behaviours of university executives	0 (0.0)	13 (10.2)	36 (28.1)	53 (41.1)	19 (14.8)	7 (5.5)	
Administrative behaviours of Departmental Heads	0 (0.0)	14 (10.9)	50 (29.1)	47 (36.7)	12 (9.4)	5 (3.9)	
Participation in institutional administration	1 (0.8)	13 (10.2)	49 (38.3)	50 (39.1)	12 (9.4)	3 (2.3)	
Sub-Total Score	0.3	13.3	45	50	14.3	5	0.999
Average Total score							0.994 = 2

Table 3 shows data for evaluation of stress at work for interpersonal relationship and administrative-related issues. The cumulative total score for interpersonal relationship and administrative-related issues was less than 2. Sixty-five (50.8%) respondents reported low stress in their relationship with their colleagues. Thirty-eight (29.7%) experienced average stress in relationship with non-teaching

staff. Sixty-four (50.0%) respondents had low stress, and 23 (18.0%) in relationship with students. At least about a quarter of respondents had average stress in interpersonal relationship and administrative-related issues. Fewer number of staff experienced high and very high stress.

Table 4: Assessment for Job Satisfaction (n = 128)

Variables	Job Satisfaction		
	Agree	Undecided	Disagree
	Number (%)	Number (%)	Number (%)
Job usually interesting enough to keep one from getting bored	57 (45.3)	32(25.0)	38 (29.7)
Enthusiastic most days about work	51 (39.9)	42 (32.8)	35 (27.4)
Job more interesting than others one could get	26 (20.4)	35 (27.3)	67 (52.4)
Find real enjoyment in the work	48 (37.5)	24 (18.8)	56 (43.7)
Feel happier at this work than other people	31 (24.3)	37 (28.9)	60 (46.9)
Feel fairly well satisfied with my present job	46 (36.0)	19 (14.8)	63 (49.2)
Satisfied with the current job for the time being	56 (43.0)	24 (18.8)	49 (37.3)
Like my job better than the average worker does	41 (32.0)	71 (55.5)	16 (12.5)
Job like hobby	33 (25.8)	52 (40.6)	43 (33.6)
Appears friends are more interested in their jobs	19 (14.8)	63 (49.2)	46 (35.9)
Job has fair (impartial) promotion policy	40 (31.3)	67 (52.3)	21 (16.4)
Enjoy work more than leisure time	17 (13.3)	43 (33.6)	68 (53.2)
Force self to go to work most time	9 (7.0)	46 (35.9)	73 (57.1)
Consider current job to be unpleasant	16 (12.5)	58 (45.3)	54 (42.2)
Disappointed to have taken the job	15 (11.7)	55 (43.0)	58 (45.3)
Job is pretty interesting	70 (54.7)	41 (32.0)	17 (13.3)
Each day of work seems like it will never end	38 (25.0)	56 (43.8)	40 (31.3)
Adequately paid for the job done	28 (21.9)	35 (27.3)	65 (50.8)
Often bored with the job	15 (11.7)	34 (26.6)	79 (61.7)
Definitely dislike the work	12 (9.5)	20 (15.6)	96 (75.0)

Assessment for Job Satisfaction of study respondents is shown in Table 4. Although some respondents were undecided about satisfaction with their job (between 19 (14.8%) and 71 (55.5%)), fewer respondents strongly agreed with positive items of assessment (between 26 (20.4%) and 57 (45.3%). About half of respondents and less (varying from 17 (13.3%) and 70 (54.7%) agreed with these items. Those who disagree were rather more (varying from 16 (12.5%) to 67 (52.4%). Most others were rather undecided.

Table 5: Summary of respondents' level of job stress and job satisfaction

Variables	Frequency	Percentage (%)
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Level of Job Satisfaction

Poorly Satisfied	0	0.0
Averagely Satisfied	57	44.5
Satisfied	65	50.8
Highly Satisfied	6	4.7

Level of Job Stress

Low Stress	25	19.5
Average Stress	86	67.2
High Stress	17	13.3

A summary of respondents' level of job stress and job satisfaction is shown in Table 5. Sixty-five (50.8%) respondents were satisfied with the job and 57 (44.5%) were moderately / averagely satisfied with the job. Twenty-five (19.5%) respondents had low job stress, 67.2% had average stress and 23.3% experience high stress on their job.

Table 6: Relationship between respondents' Job Stress and Job Satisfaction

Stress Level	Level of Job Satisfaction			Total	(X ²)	P-Value
	Averagely Satisfied	Satisfied	Highly Satisfied			
Low Stress	7(28.0%)	14 (56.0%)	4 (16.0%)	25	18.86	0.001
Average Stress	37(43.0%)	48 (55.8%)	1 (1.2%)	86	7	
High Stress	13(76.5%)	3 (17.6%)	1 (5.9%)	17		
Total	57	65	6	128		

The relationship between respondents' level of job stress and job satisfaction is presented in Table 6. There is an inverse difference between job stress level and level of satisfaction, which was statistically significant (P=0.001).

DISCUSSION

Universities are established for knowledge transfer to the next generation in the areas of teaching, research, and community service, and the main drivers – the human resources - of this vision are the well-motivated staff of different categories. The teaching staff of all categories constituted 40.7% of the respondents. The core business of training medical personnel is transacted by the teaching staff, with the aid of other support staff. The demographics in this study with 40.7% teaching staff population is reasonable, however the reasonably limited number of senior teaching staff may not be unconnected with the stage in the development of the medical university, as the students were in their 400 level and early 500 level at the time of this study. This implies that the full complement of staff was yet to be recruited. The other reason for this finding could be that the study focused on the core staff of the university, and excluded staff of the Rivers State University Teaching Hospital (RSUTH), the place for clinical rotations, where the university has a memorandum of understanding (MOU) to support clinical

training. Again, the MOU status and the early clinical stage in training accounted for this discrepancy. The staff of the RSUTH, some of who are full time staff of the RSU, have different experiences from the staff of the private-based PUMS, hence their non-inclusion.

The mean score for stress at work resulting from academic workload, work environment, student-related issues, research and career development was 10.84 implying a moderate stress. Academic workload recorded high and very high stress among 27.3% respondents. There was also high and very high stress experienced by 20.3% of respondents in delivery of lectures. About 20% were highly stressed from preparation of students' examination results, and almost 50% respondents reported average stress for indicators on research and career development. University staff workload has been found to affect their performance in terms of publication, community service and teaching effectiveness. [12] Very few staff experienced high and very high stress in interpersonal relationships. About a quarter had average stress in interpersonal relationship and administrative-related issues. Workload is a known source of stress at work, and this work-related stress could be internal (individual's mindset) or external concerning job insecurity, working hours, control at work, managerial style, overload and underload, as well as work-induced behaviour that is not natural for the employee. [13] Stress-relieving measures in the workplace include sports, music, dancing, hobbies etc. A study carried out at Adekunle Ajasin University in Ondo State South-Eastern Nigeria emphasized the significant relationship between marking of examination scripts (including supervision of research, number of courses allocated) and lecturers' job satisfaction.[14] A similar study carried out in open and distance learning University reported a gap between academic activities and adequate utilisation of time, with consequent increase in workload, necessitating evolution of academic workload model to guide the spread of academic activities.[15]

In this study, a variable percentage - 14.8% to 55.5% - of staff demonstrated unwillingness to report issues of job satisfaction. It is uncertain why this number of staff were undecided on issues of job satisfaction. However, the large percentage surely impacts on the study. It is possible that the workers felt the enquiry was unnecessary; or they were afraid of being isolated for punitive measures; or were so saturated with challenges on job satisfaction that they preferred not to speak – which is rather ominous. Fewer respondents (varying from 1.6% to 18.0%) strongly agreed with positive items of assessment for job satisfaction; those who disagreed and strongly disagreed were between 12.5% and 75%. The explanation for this may partly be the fact that some respondents were undecided. However, this finding is unfavourable for job satisfaction among workers in the institution. It has been reported that sex and university status directly affect job satisfaction.[8] Job satisfaction was found to be low among 361 library staff in the 27 private university libraries, in South-West, Nigeria. [16]

There was an inverse significant difference found between job stress and job satisfaction. Similar finding was observed between supervisory behaviour / job stress and job satisfaction of police personnel in Ekiti State, enough to affect turnover intentions.[17] A study carried out among selected private universities in South-Eastern Nigeria revealed a significant relationship between staff job satisfaction and organizational climate dimensions.[18] However, another study carried out in Western

Nigeria found no significant statistical relationship between employees' job satisfaction and the three dimensions of organizational commitment.[19] This latter study was carried out among staff of the Lagos State University, a State Government-owned institution. The findings in this study call for measures to reduce work stress among staff, as it might affect how long a worker remains in the workforce in a satisfied or dissatisfied state. Job satisfaction is necessary for productivity in any organization and reduces staff attrition which if high negatively affects the image of the organization.

Study Limitation: Although total population of staff was targeted, some members of staff (cleaners, laborers, security staff, and cooks) who were not usually found in offices, or were either not available during the period, or did not give consent were not captured in the study. Additionally, the staff of the RSUTH, some of who were full time staff of the RSU, have experiences that may impart some bias in the study different from the staff of the private-based PUMS, hence their none-inclusion.

CONCLUSION

Although low, moderate, high stress, and very high stress were recorded among staff in varied forms for work demand concerning academic workload, work environment, student-related issues, and career development, the cumulative average stress score of 10.84 implied moderate stress among the workers. Fewer respondents strongly agreed with positive items of assessment for job satisfaction, but some staff were unwilling to provide responses on job satisfaction, and indicated an undecided response.

Recommendations: Efforts should be intensified to reduce stress among staff with the goal of improving job satisfaction since a significant relationship exists between the two. Such measures may include reducing the burden of delivery of lectures by employing more academic staff and others; funding of research and career development – through organizing research methods seminar and research fare; and measures to improve free self-expression among workers.

Ethical Approval: The approval of the Research Ethics Committee of the PAMO University of Medical Sciences was obtained, and confidentiality of information was maintained in the process of data collection.

Consent

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

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