

INFLUENCE OF JOB STRESS ON JOB SATISFACTION AMONG UNIVERSITY STAFF: ANALYTICAL EVIDENCE FROM A PUBLIC UNIVERSITY IN GHANA

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Abstract

This study investigates the influence of role overload, role ambiguity, physical environment, supervisors support and coworkers support on job satisfaction among employees of a public university in Ghana. The researchers used a cross-sectional survey that adopted the convenience sampling technique to select 210 staff of the university. A questionnaire was used to gather the data. Findings indicated that role overload ($\beta = .17$, $p < .05$) and physical environment ($\beta = .13$, $p < .05$) contributed positive but small effect to the variance in the job satisfaction. Finding also reveals that there was a negative with no significant relationship between job satisfaction and co-workers support ($\beta = -.01$, $p = n.s$). Further finding indicates that the overall effect size of the stressors in the variance of job satisfaction was practically small [$R^2 \leq .08$, $F(5, 210) = 4.51$, $p = .001$] and that the job stressors only explained 8% of the variance in job satisfaction. The study suggests that multi-tasking schedules may be responsible for the positive relationship between job stress variables and job satisfaction.

Keywords: Job satisfaction, Job stress, Role overloads, Role ambiguity, Physical environment, Supervisor support

INTRODUCTION

Due to the competitive nature of the work environment, most people in the world are spending most their time for job related working purposes. Job stress may be referred to the body's reaction to a change that requires a physical, mental or emotional adjustment or response to work responsibilities. Stress may come from any situation or thought that makes you feel frustrated, angry, nervous or anxious. Job stress is the harmful physical and emotional response that occurs when there is a poor match between job demands and the capabilities, resources, or needs of the worker (Adeoye, 2002). Job stress is one of the most important workplace health risks for employees in developed and developing countries (Rehman, Irum, Tahir, Ijaz, Noor, Salma, 2012). Stressors are usually associated with interpersonal relationships at work, such as conflicts with the behavior of supervisors, conflicts with colleagues, conflicts with subordinates and conflicts with management policies (Adeoye, 2002).

Statement of the problem

A number of factors contribute to job stress such as role overload, isolation, extensive hours worked, toxic work environment, difficult relationships among co-workers and role ambiguity, harassment and lack of opportunities or motivation to advance in ones skill level (Ofoegbu & Nwandiani, 2006). Idris et al., (2011) reported that the economic implications of work related stress on universities academic work cannot be under estimated as it could lead to lowered productivity, dissatisfaction and poor physical health. Most often, University management emphasizes academic excellence, responsibility, accountability and competitiveness. Academic stress is a cost to a university in terms of absenteeism, tardiness and turnover (Idris et al., 2011). Ahsan et al. (2009) opined that university academic staffs are likely to face more problems in their job as their managements will be setting new goals in order to survive the competition from other universities. This may pose some challenges to the university academic staff leading to job stress that may affect their job satisfaction and even their mental and physical health. Human resource specialists, supervisors and workforce specialists are involved in exploring ways and how job satisfaction can be improved, because job satisfaction has a significant relationship with the performance of the work force, overall productivity and profitability of the organization (Bloch, 2009).

Therefore, the present study seeks to identify the extent to which a particular job stress factor (role overload, role ambiguity physical environment, supervisor support and coworker support) influences job satisfaction in higher academic settings.

Objectives

The general objective of the study was to investigate the influence of job stress on job satisfaction among staff of a public university in Ghana. The specific objectives were:

- To examine the mean ratings of the various job stressors affecting the staff of the university.
- To investigate the relationship between job stressors and job satisfaction among the staff.

LITERATURE REVIEW

Theoretical literature review

The Karasek Job Demand Control (JDC) Model

The ability to make work related decisions in relation to the demands can reduce the stress level, hence increasing the creativity in the worker (Karasek, 1979). The application of the demand-control model by Karasek in the case of the university employer suggests that as the demand of work placed on the junior staff, senior staff and senior members within the university without equivalent control over their work, has a high propensity of aggravating their stress levels at the university.

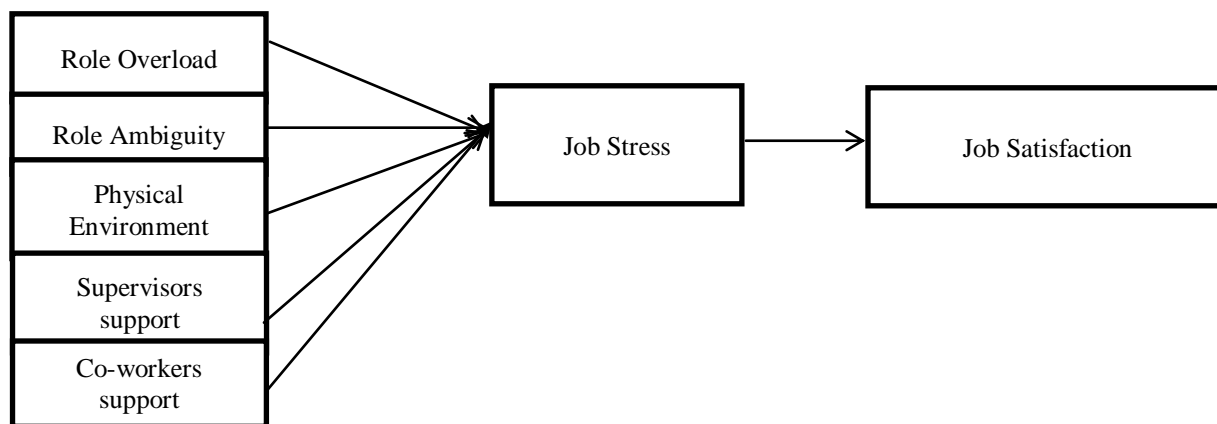
Karasek dynamic model of job strain opines that, when the psychological demand of work is high and the control level is also high, it gets the worker to be very active at his/her job and also boost his/her levels of creativity which makes him/her a master of what he/she does hence reduces the idea of being strained. However, where the psychological demand of work is very high and the control level is low, the stress level increases leading to high risk of psychological and physical illness. In relation to the university employees this exacerbates their anxiety to work that signals negative feedback to management (Karasek, 1979). Occupational stress is predominantly dependent on a person's state of mind and it also involves how the employee perceives his/her relative variation of his/her actual circumstances from their expected circumstances (Nnabuike, Onyeizugbe and Onwuka, 2012).

Rodriguez, Bravo & Peiro (2001) revealed contradictions by other authors that Karasek's model was too simplistic and suggested that the inclusion of factors such as social support and locus of control. Their study further explained that low social support accompanied by high stress conditions can increase job dissatisfaction while employee with high locus of control have relatively lower stress. Their study concluded that high social support and high internal locus control are beneficial to job control as compared to the other conditions.

Conceptualization of Job stressors model on Job Satisfaction

A job stressor can be defined as the pressure experienced by an individual as a result of organizational and job-specific factors followed with demands and constraints that have been placed on them (Kahn, Wolfe, Quinn, & Snoek, 1964). Job stress theory states that organizational factors generate role expectations among role senders, who then transmit these as role pressures to the person. Experienced and prolonged pressure creates symptoms of ill health (Kahn et al., 1964). Job stressors are made up of four (4) related constructs: role overload, role ambiguity, physical environment, and social support (Peiro et al., 2001).

Figure 1: A Schematic diagram on job stress model



Source: Adopted from Ahsan et al. (2009)

Job stress is the independent variable of the present study and it is composed of role overload, role ambiguity, physical environment, supervisor support and coworker support. Gruneburg (1979) reported that job stress is a harmful physical and emotional response that occurs as a result poor match between job demands and capabilities, resources or needs of employee. While the dependent variable is job satisfaction which is seen as any combination of psychological, physical, and environmental circumstances that causes a person to express satisfaction with his/ her job (Hoppock, 1935).

Empirical literature review

Relationship between job satisfaction and job stress

Plethora of studies have been documented on the relationship between job satisfaction and job stress and most frequently investigated variables in organizational behavior (Spector, 1997; Rehman, Irum, Tahir, Ijaz, Noor, Salma, 2012; Bemana, Moradi, Ghasemi, Taghari and Ghayoor, 2013). Bemana et al. (2013) reported a negative relationship between job stress and

job satisfaction. Similarly, most findings have also reported inverse relationships between job stress and job satisfaction (Beehr et al., 1976; Hawe et al., 2000).

Role overload

One of the greatest challenges that university employees usually face is balancing the complex interactions of conflicting demands of work and family responsibilities. Those competing demands usually result in interrole conflict (Love, Tatman and Chapman, 2010). Study findings from Kayastha and Kayastha (2012) reported high occupational stress, heavy workload, strenuous working conditions, poor peer relations, unreasonable group and political pressure among teaching staff. Chan et al. (2000) recounted that teachers were most likely to experience work overload in educational settings. Most study findings have reported inverse relationships between role overload and job satisfaction (Beehr et al., 1976; Hawe et al., 2000; Bemana et al., 2013). However, findings of Iqbal, Ghafoor and Malik (2013) indicated that the relationship between job overload and job satisfaction is significant ($\beta = 0.218$; $p = 0.005$). Their results showed that the direction of the relationship is positive which implies that the workers derive their satisfaction from increased work load.

Role ambiguity

Bashir and Ramay (2010) view role ambiguity as role lacking information concerning duties, powers, authority and to perform one's role. Traditional theory of role stress reveals that job dissatisfaction, absenteeism, and turnover intentions are directly caused by role stress (Malik, Waheed and Malik, 2010; Ling, Bahron and Boroh, 2014). Some research studies have reported negative correlations between role ambiguity and job satisfaction (Rizzo, House, & Lirtzman 1970; Van Sell, Brief, & Schuler 1981; Fisher & Gitelson, 1983; Jackson & Schuler, 1985; Singh 1998). However, results of Ahsan (2009) indicates that the relationship between role ambiguity and job satisfaction is significant with ($\beta = 0.180$; $p = 0.01$). This shows that more complex and rapid contingencies exist in the faculty, which is indicative of a higher possibility of job stress. Interestingly, the study findings of Bemana et al. (2013) suggest that the association between role ambiguity and job satisfaction is not significant ($\beta = 0.07$; $p = 0.31$).

Physical environment

Iqbal and Waseem (2012) opined that stress is not necessarily a negative phenomenon; it is often associated with interaction between humans and their environment. Further implying that the stress itself is affected by a number of stressors. McGinty (2007) reported that stress at the workplace could lead to reduction in productivity, increase in management pressure and make

the workers sick in diverse ways. Stress causes loss of efficiency, increased employee absenteeism and unexplained problems (Marilyn, 2003).

The rapidly changing global environment is increasing the pressure of workforce to deliver outmost output and support the competitiveness of the institution. For university workers to perform better in their job there is a need for employee to perform multiple tasks in the workplace to keep abreast with changing technologies(Quick et al., 1997;Rehman et al., 2012). In relation to job stress and physical environment, scientific studies have shown that some individuals do not show symptoms of disengagement even when exposed to high job demand and long working hours (Schaufeli & Bakker, 2004; Rothmann, 2008). Therefore, institutions of higher education all over the world are often encouraged by this behavioral patterns to underestimate job stress in relation to the environment (Sliskovic and Sersic, 2011; White and Wheatherby, 2005).

Supervisor support

Dyk and Coetzee (2012) opine that Supervisor support includes the recognition and feedback that employees receive from their supervisors. Most research studies have reported the importance of recognition and feedback for retaining valuable employees (Allen, Shore & Griffeth, 2003; Morrow, 2011). Some research studies have demonstrated that a positive relationship exists between job satisfaction and supervision (Peterson, Puia & Suess, 2003; Smucker, Whisenant & Pedersen, 2003; Mafini & Dlodlo, 2013). Robbins (2003) reveals that supervision forms a critical role in relating to job satisfaction. This satisfaction may arise from the supervisors' ability to provide emotional and technical support and guidance on work related duties. This suggests that supervisors contribute to high or low morale of the employees at the work place (Ramsey, 1997). Some study findings have indicated that supervision is a predictor of job satisfaction (Labedo, 2008 cited in Mafina & Dlodlo, 2013). Mafini & Dlodlo (2013) reported a positive and moderate association between supervision and job satisfaction ($r=0.0461$; $p<0.01$). They further revealed that supervision is a statistically significant predictor of job satisfaction ($\beta=0.216$; $t=2.137$; $p<0.01$).

Coworker support

Employees spend majority of their lives at the work place and by extension tend to form interpersonal relationships and friendships at the workplace. Hamilton (2007) reported that people are likely to receive assistance, advice, guidance, recommendations, feedback, or information from work related issues such as performing tasks, competing job demands and handling matters with superiors, coworkers, subordinates, or customers. Findings of Bateman

(2009) revealed that coworkers support is statistically and positively related with job satisfaction ($r = 0.25$, $p < 0.05$) and a negative but non-significant relationship with job stress ($r = -0.11$, $p = n.s$).

Statement of Hypotheses

H1: There will be a significant negative relationship between role overload and job satisfaction

H2: There will be a significant negative relationship between role ambiguity and job satisfaction

H3: There will be a significant positive relationship between physical environment and job satisfaction.

H4: There will be a positive significant relationship between supervisor support and job satisfaction.

H5: There will be a positive significant relationship between co-workers support and job satisfaction.

METHODOLOGY

Research design

The present study adopted the cross-sectional survey design to achieve the study objectives. Study data was collected at one point in time among the staff of the public university (Essiam, 2013 and Gyamfi, 2014).

Sample size and sampling techniques

Convenience sampling techniques was used in gathering data from respondents. A sample size of 210 university staff participated in the study. The sample size was determined as follows:

$$n = \frac{z^2 p (1-p)}{E^2}$$

Where; n = Sample size

z = 1.96 (Essiam, 2013)

Confidence level 95% when the error margin is 5%

E = Margin of error = 5%

$$n = \frac{(1.96)^2 (.5)(1-.5)}{(.05)^2} = 384 \text{ staff}$$

Correction for finite population

$$N = \frac{n}{1 + \frac{n-1}{\text{pop}}}$$

Where; pop = population (443 staff)

N = new sample size

n = sample size (384)

$$N = \frac{384}{1 + \frac{384-1}{443}} = \frac{384}{1 + \frac{383}{443}}$$

$$= \frac{384}{1 + 0.865} = \frac{384}{1.865}$$

$$N = 206 \approx 210 \text{ staff}$$

The sample size of 210 was chosen because other researches have also drawn their sample sizes from such computations (Yousapronpaiboon & Johnson, 2013; Essiam, 2013).

Instruments/Measures

The instrument used for the study had three components. The first part gathered information on the demographic characteristics of the respondents which included gender, age, marital status, educational background and status in the university. The second part dealt with job stress. The job stress variable composed of Role Overload, Role ambiguity, Physical environment and Social support. The social support variable was also consisted of the supervisor support and coworker support. The role overload component was measured by "Job Stress Questionnaire, JSQ" (Caplan et al., 1975 and Sahu & Gole, 2008). The study adopted the measures for role ambiguity (Rizzo, House and Lirtman, 1970); physical environment, supervisor support and coworker support constructs (Theorell & Karesek, 1996). The third part collected data on job satisfaction. Job satisfaction was measured by the Job Descriptive Index (JDI) (Smith et al., 1969).

Reliability

Essiam (2013) and McMillian & Schumacher (2001) opined that pilot survey involving the respondents in the proposed frame must be pretested, once a questionnaire is ready. According to Nunnally (1978), Cronbach's alpha is computed to verify the internal consistency of items used to measure a variable. Cronbach's Alpha (α) results for the reliability analysis of the instrument were as follows: role overload (5 items; $\alpha = .87$), role ambiguity (5 items; $\alpha = .79$), physical support (5 items; $\alpha = .82$), supervisor support (5 items; $\alpha = .76$), coworker support (4

items; $\alpha = .83$) and job satisfaction (10 items, $\alpha = .72$). Reliability coefficients greater than or equal to .5 are considered sufficient for survey studies (Nunnally, 1978).

Data Collection Procedure

Ethical concerns may arise from all kinds of issues investigated by the researcher and the means used to obtain valid and reliable data (Cohen, Mannion and Morrison, 2003). Permission was officially obtained from the human resource department of the university and that participation was entirely voluntary. Questionnaires were administered by hand and picked directly from the respondents at the university (Essiam, 2013).

ANALYSIS & RESULTS

Table 1: Demographic characteristics of Respondent

Demographic Variables	Number (Percentages)
Sex	
Male	130(61.9%)
Female	80(38.1%)
Age	
21-30	29(13.8%)
31-40	52(24.8%)
41-50	52(24.8%)
51-60	48(22.9%)
61 And Above	29(13.8%)
Marital Status	
Single	47(22.4%)
Married	91(43.3%)
Divorced	31(14.8%)
Widow/Widower	41(19.5%)
Positions	
Senior Member	60(28.6%)
Senior Staff	66(31.4%)
Junior Staff	84(40.0%)
Total Respondents (N=210)	

It can be inferred from the table 1 that with respect to responses on sex, 130 (61.9%) respondents were males while 80 (38.1%) were females. In response to age distribution, it was revealed that 13.8% were between 21-30 years, 24.8 %were between 31- 40 years, 24.8% between the ages of 41- 50, 22.9%were between 51- 60 years and 13.8% were between 60 years and above. This clearly indicated that majority of the respondent sampled ranges between

the ages of 31-50 years which indicates a youthful working class. Majority 91(43.3%) of the respondents were married.

In response to their position in the university, 84(40.0%) were junior staff, 66(31.4%) were senior staff and 60(28.6%) were senior members.

Table 2: Types of Stressors identified among Respondents (N = 210)

Variables	Mean \pm SD
Role overload	3.92 \pm .54
Role ambiguity	3.64 \pm .96
Physical environment	3.91 \pm .78
Supervisor support	3.30 \pm .73
Co-workers support	4.28 \pm .57
<i>N = sample size, SD = standard deviation</i>	

In reference to the Likert scale (1= strongly disagree to 5= strongly agree), among the types of stressors, supervisor support (3.30 \pm .73) was rated as the highest stressor (3.30 \pm .73), followed by role ambiguity (3.64 \pm .96), physical environment (3.91 \pm .78) and role overload (3.92 \pm .54). Co-workers support (4.28 \pm .57) was rated least stressor among the stressors under investigations at the university.

Table 3: Inter-correlation of Dependent variable (job satisfaction) with independent variables (job stressors; role overload, role ambiguity, physical environment, supervisor support and co-workers support)

Variables	1	2	3	4	5	6
1. (constant)	-					
2. Role overload	.23***	-				
3. Role ambiguity	.14*	.17**	-			
4. Physical environment	.19**	.30***	.15*	-		
5. Supervisor support	.17**	.05	.11	.05	-	
6. Co-workers support	.09	.09	.14*	.34***	.22**	-

(N=210) * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$, p = significant relationship, * $r \geq .29$ (small practical effect size), ** $r \geq .30$ (medium practical effect size), *** $r \geq .50$ (large practical effect size), p = probability value, r = correlation coefficient, N = sample size

a. Dependent variable: Job satisfaction

Findings from Table 3 revealed that there was small practical relationship between job satisfaction and four of the job stressors variables (Cohen, 1998). These correlations were for Role overload ($r = -.23, p \leq .05$), Role ambiguity ($r = .14, p \leq .05$), Physical environment ($r = .19, p \leq .05$) and Supervisor support ($r = .17, p \leq .05$). Findings also showed that there was no significant correlation between Co-workers support and job satisfaction ($r = .09, p = n.s$).

Table 4: Multiple regression analysis between Job satisfaction and Job stress variables

Variables	<i>B</i>	<i>SE</i> β	β	<i>R</i>	Adjusted R^2	F-value
1. (constant)	1.96	.53	-	.32	.08	4.51
Role overload	.24	.10	.17*			
Role ambiguity	.06	.05	.08			
Physical environment	.12	.07	.13*			
Supervisor support	.16	.07	.15			
Co-workers support	-.01	.10	-.01			

[$F(5, 210) = 4.51, p = .001$], β = Beta, F = frequency, SE = Standard error, R = Correlation coefficient, R^2 = Coefficient of determination, N = sample size ($N=210$), * = $p \leq .05$

a. Dependent variable: Job satisfaction

Table 4 shows that role overload ($\beta = .17, p < .05$) and physical environment ($\beta = .13, p < .05$) contributed positive but small effect to the variance in the job satisfaction. Finding also reveals that there was a negative with no significant relationship between job satisfaction and co-workers support ($\beta = -.01, p = n.s$). Further finding indicates that the overall effect size of the stressors in the variance of job satisfaction was practically small [$R^2 \leq .08, F(5, 210) = 4.51, p = .001$] and that the job stressors only explained 8% of the variance in job satisfaction. Computed analyses of variance also showed that there were significant mean differences between the job satisfaction variable and the job stressors variables [$F(5, 210) = 4.51, p = .001$].

DISCUSSION OF RESULTS

The current study is crammed with the relationship between job stress and job satisfaction among educational workers. This study substantiates the previous studies within the context of the Ghanaian universities system. The conspicuousness of job stress as a research subject matter has been due in part to the enormity of its effects. It is interesting to observe that majority of the literature on job stress and job satisfaction among educational workers have reported an inverse relationship between the variables (Bemana et al., 2000; Beehr et al., 1976; Howe et al., 2000; and Ahsan et al., 2009). Role overload has been linked to the spilling over work into

family and social domain (Sliskovic & Servic, 2011). Due to such circumstances, employees were likely to carry over unfinished tasks at the office to their various homes. This development has the tendency of short changing the quality of life such employee could have spent with his/her family and friends. Study findings indicated that role overload contributed positively but small effect to the variance in job satisfaction ($\beta = 0.17$, $p < 0.05$). This finding was consistent with that of Ghafoor and Malik (2013) and contradicts the findings of Bemana et al., 2000; Beehr et al., 1976; Howe et al., 2000; Ahsan et al., 2009; Iqbal & Waseem, 2012).

Also, findings revealed a positive relationship between role ambiguity and job satisfaction. This may be due to the fact that employees may derive job satisfaction from multi-tasking responsibility schedules. Quick et al. (1997) and Rehman et al. (2012) opined that for university workers to perform better in their job there is a need for staff to perform multiple tasks in the workplace to keep abreast with changing technologies and this may account for the positive relationship. In this view, hypothesis (H1) and (H2) were not supported by the findings of the study. As expected, hypothesis (H3), (H4) and (H5) were supported by findings of the study. Rehman et al. (2012) attempted to provide reasons for the positive relationship between job satisfaction and job stress variables. Among the explanations included economic conditions of the country people which in their view was most important in the determination of job satisfaction and that is why in developing countries job satisfaction result depicts the positive relationship with job stress.

MANAGERIAL IMPLICATIONS

The findings of the study are worthwhile in equipping university administrators to provide a balance between job stress and job satisfaction among their employees. This has the tendency of reducing dysfunctional actions among the employees such as high turnover, industrial action, unsatisfactory work output and absenteeism (Mafini & Dlodlo, 2013). This has a cascading effect on the achievement of the mission of the university.

LIMITATIONS OF THE STUDY

The authors admit that using convenience sampling technique to gather data for the study has its own limitations. In that, the university has peak seasons where workload is overwhelming and down-times where work is slow. The respondents may have completed the questionnaire at a time when work was overwhelming or workload was minimal. The period during which the respondents completed the questionnaire may have played a crucial factor in determining the job stress or job satisfaction of the respondents. Also, there may be possibility that the respondents completed the questionnaire according to social desirability to meet the

expectation of the authors. The findings from the respondents were self-reported results and that the authors could inferred from other additional information such as salary advice slips, recommendation letters, and performance appraisal reports of the employees for a more objective analysis of the variables.

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