



THE IMPACT OF OCCUPATIONAL STRESS ON EMPLOYEE'S PERFORMANCE: A STUDY AT TWIFO OIL PALM PLANTATION LIMITED

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ABSTRACT

Stress has a significant negative impact on employee's physical, emotional, behavioural and economic wellbeing. It has other implications on organizations as a whole as employees are exposed to diseases like hypertension, cardiovascular diseases and depression. Stress leads to increased risk of depression, intentions to quit, turnover, low productivity and in some extreme cases, death. The main objective of the study was to identify the prevalence of occupational stress, causes of stress, its impact on employee performance, and measures Management can put in place to eradicate or minimize work-related stress. The study employed the survey research design, and quantitative approach. The targeted population was only regular workers which constitute (N= 282). Simple random sampling was used to select respondents who provided information for the data collected. The data was analysed using descriptive statistics, correlation and regression models. The major findings were that: employees at Twifo Oil Palm Plantation exhibit more physical and emotional stress. The main causes of stress were found to be: job conditions, interpersonal relations, and career advancement. Due to the impact of stress on job performance, the Management adopts payment of medical bills, provision of counselling services, and establishment of communication channels to manage stress problems. Based on the findings, the study recommended the following: Management should match individual educational, skills, experience, competence, ability and capabilities with the tasks, provide medical assistance, provide extensive counselling services, establish better conditions of service, improve interpersonal relations, fix flexible work schedules, and operate an open - door communication policy for grievance resolutions.

Keywords: *Stress, job performance, stressors, employees, occupation*

INTRODUCTION

Occupational stress is gradually becoming a challenging phenomenon to Management in the day-to-day running of business organisations globally (Vanishree, 2014; Donaldson-Feilder et al, 2011). This is so because employees ought to work hard to outwit competition for survival, to be market leaders, and to owe large customer share, under hardship or volatile environmental conditions which create state of anxiety, tension and emotion (Ahmed, et al., 2011). Bhaga (2010) opines that intensive stress has an effect on the employee's physical and mental health of the worker, which eventually leads to burnout among employees and decreased in performance. Stress is manifested when demands or output expected from an



employee far outweighs the available inputs or resources. The negative impact of occupational stress and burnout on organizational performance is undisputable (Shinde & Anjum, 2014). Occupational stressors contribute to organizational inefficiency, ineffectiveness, job dissatisfaction, intentions to quit, turnover, absenteeism, low productivity, huge medical bills on the organisation, social vices (alcoholism, and drug abuse) and health-related sickness such as hypertension and cardiovascular problems (Ahmed, et al., 2011).

Occupational stress needs much attention from management since it has an untold consequence on employees' health mentally and physically (Rana & Munir, 2011). However, research studies suggest that job satisfaction, commitment and loyalty are key drivers to job performance (Näswall et al., 2015). It has become so imperative to establish the impact of work-related stress and employee's performance (Setar *et al.*, 2015; Husain, 2013). 'Presenteeism' as symptom of stress has a negative impact on performance. "Presenteeism" is the situation where the employee is present at the work place but function below his or her abilities and capabilities. Yang et al. (2016) suggest such situation can be overcome by effective interpersonal relations or support system from the supervisor or co-workers. Its negative effects are: making mistakes, more time spent on tasks, poor quality work, impaired social functioning, burnout, anger, resentment, low morale. (McTernan et al., 2016). Despite the fact that stress is seen to have negative connotations, studies reveal that an acceptable level of stress, in the form of pressure, anxiety, and fear is necessary for motivating the employees (Trivellasa et al., 2013; Nadinloyia et al., 2013).

Problem Statement

Stress has a significant negative impact on employees' physical, emotional and behavioural as well as economic implications to organizations, and the nation as a whole. Stressed workers are prone to diseases like hypertension, cardiovascular disease, depression, etc. with their associated huge medical bills. Also, the employee is more likely to be unhealthy, poorly motivated, less productive and less safe at work" (ILO, 2016). According to IFEBP, the estimated costs to businesses are: \$200 to \$300 billion a year in lost productivity due to illness, \$602 per year in absenteeism, and \$150 billion a year in lost of productivity due to 'Presenteeism'. Occupational stress may cause a loss of talent and an increase of training cost, due to high turnover (Velnampy, 2013). According to the World Health Organisation (WHO, 2016) occupational stress has cost nations huge sums of money. For example, it cost United Kingdom €571 million, Sweden, €2.7 billion, United State \$200 - \$350 billion and, Japan \$232 billion in 2011 (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011; Crompton, 2011) in terms of loss of working hour and sick leave. Again, Roberts et al. (2012) suggest that occupational stress is the cause of approximately 40% of turnover and 50% of workplace absences. The annual cost of occupational stress and its effects in the US is estimated to be over \$60 Billion to employers and \$250–300 Billion to the economy (Roberts et al., 2012). Occupational stress is inevitable, and if not managed well, it leads to increased risk of depression, intentions to quit, turnover, low productivity and death (Addison, & Yankyera, 2015). Despite these negative statistics, even in more advanced countries, there is scanty research work on occupational stress of employees in the oil palm industry, let alone in developing countries like Ghana (Vanishree, 2014). This study, therefore, seeks to close the research gap by determining the main stressors and assess the impact of stress on performance and examine prevailing managerial strategies to handle stress-related problems.

Objectives of the Study



The aim of this study is to investigate the causes of stress and examine its impact on employees' performance at Twifo Oil Palm Plantation. The specific objectives of the study are to identify the occupational stress of employees at Twifo Oil Palm Plantation; to assess main stressors or causes of occupational stress amongst employees of Twifo Oil Palm Plantation; to determine the impact of occupational stress on employees job performance at Twifo Oil Palm Plantation; and finally to identify measures that the Management has put in place to eradicate or minimize work-related stress.

THEORETICAL FRAMEWORK OF STRESS

The World Health Organisation (WHO, 2016) defines stress as “the reaction people may have when presented with demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope.” International Labour organisation (ILO, 2016) defines stress as a negative condition or a positive condition that responds to a stressor and that can have an impact on a person's mental or physical health and wellbeing. And that stress is the harmful physical and emotional response caused by an imbalance between the perceived demands and the perceived resources and abilities of individuals to cope with those demands (ILO, 2016). Dumitrescu (2014) defines stress as a biological and psychological reaction of the body to an aggression. Rehman (2015) suggests that stress is a psychological, physical or emotional reaction, resulting from an individual's response to environmental anxiety, conflicts, pressures and other similar stimuli that intimidate a person's ability to manage. Again, occupational stress is defined as ‘an individual's reaction to the characteristics of the work environment that seem emotionally and physically threatening’ (Arshadi & Damiri, 2013).

Types of Organizational Stress and Causes

Trivellasa et al., (2013) categorised stress into eustress and distress. Eustress represents a positive kind of stress and helps people to prepare their mind and body for whatever is about to occur in the future. Eustress can develop one's energy, creativity or competitive spirit and can offer the strength for achieving performance. Distress occurs when something affects one's routine for a short period of time. It has a negative impact on people and it contains the following categories of stress: acute stress and chronic stress (Trivellasa et al., 2013; Nadinloyia et al., 2013).

Anbazhagan et al., (2013) classified the sources of stress as: external environment, organizational factors, job characteristics, work relationships, domestic factors and personal factors. External environmental stressors may be due to competitiveness, technological changes, family demands and obligations, economic and financial conditions, race, class, ethnic identity, relocation and transfers and political changes. (ILO, 2016; Anbazhagan et al., (2013). Organizational stressors may include organizational policies and strategies, working conditions, job stability, organizational structure, design and culture, management styles and lack of opportunity for personal growth and advancement, physical environment, rewards, job security, time pressure, long work hours, inadequate staffing, exposure to infectious hazardous substances, lack of supervision, inadequate training, working conditions, misuse of power, inadequate decisions, noise (Trivellasa et al., 2013; Anbazhagan et al., 2013; ILO, 2016)

Job characteristics may include content and context, insufficient challenge or excessive job for one person, and degree of autonomy, demands of the job and or expectation of job holder, higher expectations, work overload, job autonomy, role conflict, role ambiguity (Chang, et



al., 2010:3; Trivellasæet et. al., 2013; ILO, 2016). Work relationships may also bring about stress. These may include lack of group cohesiveness, lack of social support at work, interpersonal and inter group conflict (relationship with the supervisors and colleagues (Chang, et al., 2010:3; ILO, 2016). Individual and domestic stressors include individual perceptions of the job, personality type, ability for one to adapt to change, motivation and ones level of tolerance for ambiguity personality traits, career changes pessimism, negative self-talk, achievement of perfectionism, unrealistic job expectations, and lack of assertiveness and low salaries, divorce or separation of marriage, large family and their demands (WHO, 2016; Trivellasæet et. al., 2013).

Symptoms of Occupational stress

According to American Psychological Association, (2016; WHO, 2016) the symptoms of stress can be categorised into: physical, emotional/psychological and behavioural. The signs are summarized in a tabular form as shown in table 1 below:

Table 1: Symptoms of Stress

Physical symptoms	Psychosocial symptoms	Behavioural symptoms
Stress related illnesses: headaches, grinding teeth, high blood pressure, clenched jaws, muscle aches, chest pain, constipation or diarrhoea, Shortness of breath, cardiovascular disorder, indigestion, insomnia increased perspiration, constant fatigue, skin rashes, ulcer, loss of appetite, overeating, marked decline in personal appearance, quick and fiery temper.	Anxiousness, tenseness or nervousness,, irritability, or unhappiness, fear, worry, pessimism, sadness, defensiveness, frequent illness, anger, mood swings, fatigue, hypersensitivity, frustration, apathy, indifference, depression, loss of motivation, slowed thinking or racing thoughts, feelings of helplessness, hopelessness, inability to concentrate on the simplest of routine tasks or duties, over emotional, aggressive in conflict situations, difficulty in remembering and inability to make decisions.	Fidgeting, pacing, restlessness, overeating or loss of appetite, impatience, anger, quickness to argue, procrastination, alcohol and drugs addiction, withdrawal from social activities, neglect of responsibility, poor job performance, poor personal hygiene, change in religious practices, changes in close family relationships, sleeplessness, high turnover rate, work related accidents changes in eating habits, nail biting, foot tapping, knee jiggling, blaming, weeping, absenteeism, lateness, and reduction in individual performance

Sources: (American Psychological Association, 2016; WHO, 2016; Badar, 2011)

The Consequences of Stress

Stress has a negative impact on the individual physiological, physical health, behaviour and the economy of a nation. The consequences of suffering from harmful chronic stress are divided into three categories and these are: *Physiological consequences* which include high blood pressure, heart burns, headaches, nervousness, unhappiness and bad temperedness all these emotions can lead to lack of concentration, indecisiveness and absenteeism. There is also *Physical health* effect including Cardiovascular diseases, high blood pressure, and Type II diabetes, and asthma (Crompton, 2011); increased risk of morbidity and mortality; weakened immune system, headaches and back pain (Addison, & Yankyera, 2015); sleep disturbances, dizziness, fatigue, appetite loss, gastrointestinal problems (Nixon et al., 2011), and occupational accidents (Kim, Min, Min & Park, 2009).

There are other *Behavioural consequences* where individuals get themselves exposed to alcoholism, disrespectful behaviours and restlessness; increased absenteeism and turnover, reduced quality and quantity of work, reduced job satisfaction and moral, poor communication and increased conflict, lack of job satisfaction, organizational commitment,



turnover, and withdrawal behaviours (Crompton, 2011). Finally, we have other *consequences to the organisation and the economy*. Stress affects a country's economy - increasing absenteeism, 'Presenteeism' and health expenses as well as reducing job motivation and productivity (Park, 2007). Occupational stress may cause loss of talent and an increase of training cost due to high turnover (Velnampy and Aravintham, 2013); medical costs, erosion of goodwill, decreased quality, customer satisfaction, productivity, profitability, and efficiency, and increased in recruitment and training costs (Dror & Cole, 2010).

Stress Management Strategies

The main managerial strategies to eradicate or minimize stress are: prevention and elimination of work-related problems, adaptation of coping tools, establishment of communication and feedback, interpersonal skills training, performance planning, role analysis, job enrichment, ecological considerations, provision of medical assistance, counselling services, build stress management techniques to reduce vulnerability, elimination of environmental stressors, granting flexible work schedule and leave days, setting personal priorities, creating positive attitude (Felton et al., 2015; Sweet et al., 2016), change work demands; matching task with ability, knowledge, and capability, provision of constant training to update skills, apply a proper management style; establish a supportive working culture, motivation, provision for avenues for career development and personal advancement (Howard et al., 2014) encourage flexible work schedules; clarifying task assignments, responsibility, authority, and criteria for performance evaluation, granting of autonomy after delegation of power, clarifying goals and decision criteria, and creating better working conditions (Moen et al., 2016; Sweet et al., 2016).

The Demand - Control Theory

Karasek (1979) was the proponent of the demand-control theory. The term demand refers to the requirements of a job, which may include aspects of the environment, the actual task to be performed. Job demands include the physical, social, and organizational elements of the work activity. Control refers to the degree to which the individual has the power to "act upon" the demands presented by the job, perhaps by making decisions, bringing skills or resources to bear on the task, or altering the environment or other aspects of the task demand. Job control includes an employee's ability to control various aspects of his/her job. The DC Model comprises two dimensions: psychological and physical demands at work, and the worker's decision latitude or degree of control over those demands (Karasek, 1979).

According to Karasek (1979), strain occurs when high job demands combine with low opportunity to influence tasks and procedures, resulting in poor employee health and low job satisfaction. Heavy workload in-frequent rest breaks, long working hours and shift work; hectic and routine tasks that have little inherent meaning, do not utilize workers' skills, and provide little sense of control (Nwadiani, 2006). Locus of control and self-efficacy may have a major impact on perceived stressors and resultant stress (Love et al., 2007). Thus, an increase in control is positively correlated with job satisfaction. This model has been very fruitful in predicting job stress and health impairment in occupational health psychology. It is one of the best models for explaining the burnout process. It suggests that high job demands and low control have negative effects on psychological and physiological health. And the work overload predicts emotional exhaustion and depersonalization. However, a high degree of decision latitude predicted both emotional exhaustion and personal accomplishment.



RESEARCH METHODOLOGY

The research design is based on the Positivist School of Thought, since it seeks a generalized pattern based on an objective view of reality (Bhattacharjee, 2012). The study adapts the survey research design, because a survey was used to obtain a description of the targeted population. Descriptive design enhances the mean, standard deviation, correlation and regression to determine the levels of employees stress, the main stressors, and impact of stress on employee's performance. For the Research Approach, the study adopted a quantitative approach. Quantitative research is based on measuring variables in order to obtain scores, usually numerical values that are submitted for statistical analysis, summary and interpretation therefore suggesting that the main purpose of quantitative research is to make the research valid by means of numbers.

Population of the study

The target population comprises of permanent workers of Twifo Oil Palm Plantation. They were made up of (N= 282). It was made up of managerial and non-managerial full-time workers. Part-time worker were excluded since collecting data from them will be cumbersome.

Sample Size Determination

The sample size was determined using the sample size determination formula cited in Bambale (2014) which is illustrated as follows:

N= Population size (282)

P= Proportion of population expected (50%)

B =Acceptable marginal of error (5%)

C = Z statistic with 95% confidence level (1.96)

$$n = \frac{(N)(P)(1 - P)}{(N - 1)\left(\frac{B}{C}\right)^2 + (P)(1 - P)}$$

$$n = \frac{(282)(0.5)(1 - 0.5)}{(282 - 1)\left(\frac{0.05}{1.96}\right)^2 + (0.5)(1 - 0.5)}$$

$$n = \frac{(282)(0.5)(0.5)}{(281) * 0.000651 + (0.5)(0.5)}$$

$$n = \frac{70.5}{0.182 + 0.25} = n = \frac{70.5}{0.432} = 163$$

Sample and Sampling Techniques

Simple random sampling was used to identify the respondents since it gives the possibility for all subset of the population equal opportunity to be selected (Saunders, Lewis & Thornhills, 2009). It is simple to conduct, unbiased, and inferences are most generalizable (Bhattacharjee, 2012). The respondents were selected at random from the sampling frame using the lottery method. The process was random selection without replacement. There were 282 pieces of papers, and 163 bears 'yes' and 'No' on the remaining. It is in view of this, that all those who selected 'yes' were chosen as the participants for the study.



Instrumentation

The study adopted questionnaires as the main instrument for primary data collection. The questionnaire was in five parts: the first part sought demographic information (age, qualification, gender, experience, marital status, etc.) from the respondents. The second part, sought responses on levels of occupational stress, part three was on causes of stress; the fourth part comprises of the impact of stress on performance, and part five comprises of items to identify management strategies to curb stress. The most widely used stress questionnaires are: Weiman (1978) occupational stress scale with a Cronbach alpha coefficient reliability ($\alpha=0.78$) and Job stress survey by Spielberger (2010). Job performance was assessed using Organisational performance scale by Mulki et al (2014) with Cronbach alpha coefficient of ($\alpha=0.81$), performance scale with the accepted reliability ($\alpha=.80$). The questionnaire was constructed on the Likert scale of 1 = Strongly agree, 2 = Agree; 3 = Undecided 4 = Disagree; 5 = Strongly Disagree.

Data Collection

The source of data collection was mainly primary and secondary. Data was collected using a structured questionnaire which was self-administered. It has a high rate of returns and conforms to the quantitative approach to research. The secondary source constitutes: books, newspapers, and extracts from thesis published in high impact journals. The secondary source gives methodological benefits and scientific knowledge (Johnston, 2014).

Data Analysis

The data was analysed using Statistical Package for Social Sciences (SPSS Version 17.0) which generated the need figures for descriptive analysis and the determination of the Correlation Co-efficient of the independent variable variables on the dependent variable. The correlation analysis had the strength of identifying and describing the relationship between variables, allows the researcher an opportunity to investigate variables that would be unethical to manipulate, and record what exists naturally. Multivariate regression analysed was conducted to establish the effect of occupational stress on employee's job performance.

RESULTS AND DISCUSSIONS

Table 2: Descriptive Statistics of Demographic Characteristics

Item	Mean	Standard Deviation	N
Stressors	1.3910	.28950	163
Gender	1.3659	.48314	163
Age	1.7317	.67467	163
Education	2.4573	1.09293	163
Experience	1.8841	1.01763	163
Marital Status	2.3171	1.38686	163

From table 2 gender, age and experience had mean of 1.36, 1.73, and 1.88 were closer to the mean of the stressor (1.39), but education and marital status had mean of 2.45 and 2.31 respectively was slightly higher. However, the mean results were closer to the standard deviation.



Table 3: Regression & Demographic Characteristics (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.649 ^a	.421	.417	.22100	.421	117.702	1	162	.000
2	.660 ^b	.436	.428	.21886	.015	4.191	1	161	.042

Dependent Variable: Stressors

From Table 3, the regression analysis on the demographic characteristics reveals that gender and age are the main predictors of stress of the employees at TOPP. Gender predicted $r^2 = 42.1\%$ and is scientifically significant ($p < .000$) while age predicted 1.5%.

Levels of Stress

From table 4, the findings indicate that mean level of stress for physical, behavioural and emotional stress was 2.07, 1.84, and 1.64. The average mean for the levels of stress is 1.85 as compare to the mean of stress 1.39.

Table 4: Descriptive Statistics of levels of Stress

Variables	Mean	Std. Deviation	N
Stress	1.39	.289	163
Physical Indicators of stress	2.07	.636	163
Emotional Indicators of stress	1.64	.233	163
Behavioural Indicators of stress	1.84	.327	163

Table 5 indicates that physical and emotional symptoms were the indicators of stress at TOPP. Physical indicator contributed 19.3% of the variance of the variables, while emotions contributed 2.8%. The implication is that employees exhibit more physical and emotional stress symptoms than behavioural. The results had statistical significance since $p < .000$ and $F = 38.68$ of physical, and emotions had statistical significance of $p < .000$ and $F = 22.74$

Table 5: Symptoms of Stress (Mode Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.439 ^a	.193	.188	.26091	.193	38.683	1	162	.000
2	.469 ^b	.220	.211	.25722	.028	5.678	1	161	.018

Dependent Variable: Job Performance

The study reveals that the main indicator of the level of stress is manifested in their behaviour. The behavioural indicator of stress is shown by the $R^2 = 74\%$ and physical indicator had contributed 29%, while emotional level indicated 17%. This implies that employee's behaviour like absenteeism; lateness, etc. will affect job performance.



Performance and Stressors

The descriptive statistics indicates job performance (\bar{X} =2.39; SD =.336), Role ambiguity (\bar{X} =1.25; SD =.434); Role conflict (\bar{X} =1.40; SD =.491); Career development and advancement (\bar{X} =1.20; SD=.406); Workload (\bar{X} =1.37; .486); Job condition (\bar{X} =1.60; SD=.490); participation and control (\bar{X} =1.39; 489) and Job content (\bar{X} =1.31; .464)

Table 6: Stressor and Job performance (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.325 ^a	.105	.100	.31895	.105	19.093	1	162	.000	
2	.361 ^b	.131	.120	.31541	.025	4.654	1	161	.032	
3	.394 ^c	.155	.139	.31191	.024	4.630	1	160	.033	1.665

Dependent Variable: Job performance

The impact of the stressors on performance contributed an overall variance of 15.4% regression. From Table 6, it is clear that the main stressors identified in the study which had an influence on performance are: Job Conditions ($R^2=10.5\%$), Interpersonal Relation ($R^2=2.5\%$) and Career Development and Advancement ($R^2=2.4\%$). It is therefore clear from the study that Job Conditions, Interpersonal Relation, and Career Development and Advancement were the main stressors having an influence on job performance.

Major Findings

The most prevalence of occupational stress of employees at Twifo Oil Palm Plantation were physical indicator contributed 19.3% of the variance of the variables, while emotions contributed 2.8%. The implication is that employees exhibit more physical and emotional stress symptoms than behavioural

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The impact of occupational stress on employee’s job performance at Twifo Oil Palm Plantation is that stress contribute only 1.7% to job performance in this study. And the impact of the stressors on job performance contributed an overall variance of 15.4% from the regression analysis. There was a weak positive correlation ($r = 0.13$) between job performance and stress.

The main measures management put in place to eradicate or immunize work-related stress are: payment of life insurance and medical bills, provision of counselling service, establishment of communication channel.

CONCLUSION

Based on the major findings of the study, it can be concluded that employees at Twifo Oil Palm Plantation exhibited more physical symptoms of stress. The main stressors or causes of stress



were the absence of congenial job conditions, lack of interpersonal relations, and lack of opportunities for career development and advancement. Management should therefore create avenues for regular checkups and counselling, improve conditions of work, and create the avenue for career development and advancements for employees.

Recommendations

- i. Management should match individual educational skills, experience, competence, ability and capabilities with the tasks or job and classification of task and responsibilities assigned to reduce emotional stress. They should do this while establishing a proper counselling unit, intermittently conducting training on stress-related symptoms and causes of stress to reduce vulnerability, and establishing a medical center to render medical services instead of employees leaving the organisation to seek medical help at various hospitals.
- ii. Management should establish a congenial atmosphere for working, establish better interpersonal relationship (relationship with superior and co-worker relationship) and social support.
- iii. Since stress has a positive relationship and contributes to the variance of job performance, Management should put measures in place like proper analyses of job content and context before assigning a worker to a task or job, frequent medical checkup, provide flexible work schedules, allow workers to channel their grievances properly, provision of feedback should also be put in place to prevent and eliminate stress-related problems.

Recommendations for Further Studies

Aside the study being useful for the staff and Management of TOPP, it also recommends that many other variables identified in the study should be included and the research should be conducted in different organisations to enhance comparability of the levels of stress and its impact on performance in a different environment.

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