

The Effect of Stress on the Job Satisfaction and Productivity of Construction Professionals in the Ghanaian Construction Industry

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Abstract

The economic conditions prevailing in Ghana currently is making it increasingly difficult than ever for workers to cope with job challenges. Most often stress starts from the house and continues at the workplace and all workers feel the added pressure. This is because most employees experience stress as the demands made on them do not match the resources available to meet their needs, thereby negatively affect productivity. This paper seeks to study professionals in the Ghanaian construction industry and determine if they are undergoing any form of stress. If so, to determine if they are adopting the right strategies to solve their stress challenges. The survey method included a structured questionnaire and semi structured interviews and site visits. Questionnaires were sent to 180 construction professionals selected through simple random sampling as they are knowledgeable and qualified enough as respondents for the study. 115 were returned and used for the analysis. The research findings indicate that 62% of the respondents believe their job satisfaction and productivity will increase if stress is reduced. It is recommended that the workload of the construction professionals must match their abilities and resources whilst unrealistic targets must be avoided. The construction professionals must make effective stress management an ongoing process.

Keywords: Stress, Job satisfaction, Productivity, Construction professionals, Ghana

1.0 Introduction

According to the World Health Organisation (2007) pressure is inevitable due to the hassles of the modern work environment. Pressure perceived as tolerable by an individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However, when that pressure becomes excessive or otherwise unmanageable it may lead to stress. Stress is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilise. As stress increases gradually, job performance also tends to increase, because stress helps a person to gather and use resources to meet job requirements (Akroni, 2011). Some stress are due to factors intrinsic to the job, such as poor physical working conditions, work overload or time pressures (Mills, 2013). According to Sapra and Saxena (2013) stress is not necessarily something bad as it all depends on how it is taken. Akroni (2011) indicated that constructive stress inspires encouragement among employees and helps them to undertake various job challenges. If stress reaches a breaking point, performance becomes zero, and the employee will no longer feels like working for their employer, absenteeism increases, eventually resulting into quitting of a job or getting fired. This supports earlier research findings that stress resulting from work is a major problem and it takes a toll on one's physical and mental well being (Sulsky & Smith, 2005). This leads to a decline in employees' job performance as excessive stress interferes with performance. This is expressed in indecision and inconsistent behaviour on the part of employee. Beyond this threshold further stress can lead to psychological problems which can lead to either a mental breakdown or depression.

1.1 Work-related stress

Work-related stress occurs when there is a mismatch between the demands of the job and the resources and capabilities of the individual worker to meet those demands (Blaug et al., 2012). In this current economic crisis in most countries, it is harder than ever to cope with job challenges. Both the stress we take with us when we go to work and the stress that awaits us on the job are on the increase making employers, managers, and workers all feel the added pressure. While some stress is a normal part of life, excessive stress interferes with productivity. It is therefore important to find ways to keep it under control (Sapra and Saxena, 2013). According to Mills (2013), workplace-related stress is a growing concern in many organisations due to an ever-increasing workload, and a decreasing workforce. Most employees are being asked to do more than ever before in less time for less money. Job security does not exist anymore, and increasingly jobs themselves are hard to come by. Mills (2013) further stated some workplace stress is inevitable, while other sources of workplace stress are avoidable. Stress management in the workplace is about helping employees to cope with stress that cannot be avoided, and about reducing opportunities for employee stress wherever possible. According to Hanson (2013), there are two

schools of thought on the causes of job stress. One theory states that differences in individual characteristics, such as personality and coping style, are best at predicting what will stress one person but not another. The other theory proposes that certain working conditions are inherently stress-inducing, such as fear of job loss, excessive workload, lack of control or clear direction, poor or dangerous physical working conditions, inflexible work hours, and conflicting job expectations. The focus must then be on ways to eliminate or reduce those work conditions that increase job stress.

1.2 Stress and Job Satisfaction

Misfit with organisation, no part in decision making, are reported as main causes of stress as well as no control over work environment, personality traits, lack of relaxation along with vague rules affect employees performance (Meneze 2005). Stress usually affects job satisfaction and results in low organisational performance (Elovainio et al. 2002). This is buttressed by Meneze (2005) who stated that, job stress is considered rising and has become a challenge for most employers. The connection between stress and job performance according to Devi (2012) is very complex. It is affected by the complicatedness of the task being performed, the nature of the specific stressor involved and a wide range of personal and situational factors. According to Sousa-Poza and Sousa-Poza (2000) job satisfaction depends on the balance between work-role inputs such as education, working time, effort and work role outputs such as wages, fringe benefits, status, working conditions, intrinsic aspects of the job. If work-role outputs ('pleasures') increase relative to work-role inputs ('pains'), then job satisfaction will increase. Better managed employees are more cooperative and serve as assets for any organisation and when their stress is ignored by the employer their satisfaction in the job will decrease (Thomson, 2002). This results in low job satisfaction which correlates with contemplation of giving up work due to stress (Dowell and Anthony 2001). There is a negative correlation between job stress and job satisfaction as well as job performance. Employees who have high level of job stress have low job satisfaction which leads to low performance (Kazmi, 2007). Just as high levels of stress impact negatively on job satisfaction, so does it also affect productivity. According to Davis (1979) as cited in Faghihi and Allameh (2012) the reactions of employees are important to the organisation's performance and development or both.

1.3 Effect of Stress: Signs and Symptoms

The signs and symptoms of stress according to Ademola (2005) and Melinda et al (2010) can be categorized into four groups, that is, cognitive, physical, emotional and behavioural. Their research indicated that cognitive signs and symptom associated with stress may also affect the mental scope of individuals at the workplace in many ways including: memory problems, inability to concentrate, poor judgment, being negative, anxiety, constant worry, fearful anticipation and loss of objectivity. The physical signs and symptoms are expressed in physical illness though it can be caused by non-physical problems, so it is important to have a medical doctor treat conditions such as ulcers, compressed disks, or other physical disorders. The physical problems that may result from stress include: aches and pains, diarrhoea or constipation, nausea and dizziness, chest pain and rapid heartbeats, loss of sex drive, frequent colds, sweaty palms, weight gain or loss, weakness, tiredness and chronic fatigue, breathlessness, hyperactivity, muscular tension and teeth grinding or jaw clenching; and the like (Ademola, 2005; Melinda et al, 2010). Emotional symptoms of stress can make someone uncomfortable and can affect one's performance at work. This includes: mood swings, irritability, frustration, agitation, feeling of being overwhelmed, sense of loneliness and isolation, depression, anger and resentment, inability to relax, feeling tensed and on edge and substance abuse (Ademola, 2005, Melinda et al, 2010). The behavior symptoms displayed in stressful situations are mostly antisocial and can cause rapid deterioration of relationships with family, friends, co-workers or even strangers. Some of these include procrastination or neglecting responsibilities, increased arguments, overreaction, domestic or workplace violence, eating disorder, and sleeping too much or too little (Ademola, 2005, Melinda et al, 2010).

1.4 Strategies for Managing Stress

Research in psychology has been able to identify two ways in which people cope with stress. Firstly, a person may decide to suffer or deny the experience of stress. On the other hand, one may decide to face the realities and give solutions to it (Pestogee, 1992). Instead of taking medication to eliminate stress, there are other better ways of avoiding stress and minimising its damaging effects. These include: mental training, physical activity, writing, discussion, rest and relaxation, diet and reduced commitments (Jarvis, 2000). According to Aderinola (2011) the human body is designed to move-just like those of automobiles and if they don't move, they become stiff and rusty. Studies in leisure and physical activities indicated that participation in physical activities has the capacity to reduce stress. (Iso-Ahola and Parks, 1996). According to Ericksen & Brunsgaard (2004) comprehensive work-based leisure-time activities can yield promising health behaviour changes. A study has found that taking long walks can be effective at reducing anxiety and blood pressure (Smith, 2002), while another study indicates that brisk walk of as little as 20 minutes duration can leave people feeling more relaxed, refreshed and energetic for

up to two hours (Ericksen and Brunsgaard, 2004). Other recent findings revealed participation in physical exercises can contribute to positive health not merely the absence of diseases which leads to satisfaction and ability to improve individual's capacity to withstand stress (Gautam et al, 2007). Fletcher and Scott (2010) stated by expressing one's thoughts and sharing them with family members and friends, one can better understand one's feelings. Discussion about observations, thoughts and reactions toward stressors and trauma is of great importance (Pestonjee, 1992). Research by Aderinola (2011) indicated without rest, the body is at a disadvantage and is less able to protect its good health and resist diseases, and if one falls sick, the healing process is more difficult or simply does not take place at all. He further listed the contributions of rest and relaxation as follow: Firstly, it allows the body to renew itself. remove waste products, replenish enzymes and restore energy. Secondly, it aids in the healing of injuries, infections and other assaults on the human body, including stress and emotional traumas. It also strengthens human body immune system, helping to protect one from diseases. Finally, it can increase longevity, as people who regularly sleep seven to eight hours each night will have lower death rates than those whose average are less than seven hours.

2.0 Methodology

The mixed method approach was adopted for this research. The approach involves literature review, questionnaire survey, semi-structured interviews, and case study. According to Yin (2009), such an approach permits researchers to address more complicated research questions and attain higher reliability and validity of the research. Simple random sampling was adopted in the questionnaire survey of the construction professionals as it ensures sample accuracy by selecting the respondents at random while considering all elements in the population. Data gathering was limited to the key stakeholders of the construction industry such as Architects, Structural Engineers, Quantity surveyors and Estate Developers. Questionnaires were sent to stakeholders as they are knowledgeable and qualified enough as respondents for the study. Key informant interviews were conducted with two professionals from each professional group. In order to get detailed information and adapt questioning to the answers of the informants; face-to-face qualitative in-depth interviews were used. Points that arose during the interview were noted. The outcome of the questionnaire survey was mapped against the findings of the site visits and interviews.

The sample size for the study was obtained by using the following formula (Yamane, 1967) as stated:

$$n = \frac{N}{1+N(e)^2}$$

Where n = responses required, e = error limits (0.10) and N = sample population

The survey result was converted and analysed through Statistical Package for Social Science (SPSS) software. Reliability analysis was conducted for the various variables to enhance the reliability of the data. According to Leech et, al. (2011) the purpose of such an analysis is to help check the consistency of the scale of data. Content validity of the research was achieved as the questions included in the study correctly represent the concept to be analysed. Cronbach's alpha test showed a coefficient of 0.855, making the results very reliable as a coefficient of more than 0.70 indicates good reliability.

3 Results and Discussions

3.1 Respondents profile

The area of specification included Architecture (39.1%), Civil Engineering (21.7), Building Technology (21.7) and Real Estate Development (17.5). The respondents of the survey represented construction professionals undertaking works in 2 geographical locations in Ghana, namely Accra and Kumasi. The various professionals have been practicing between 1 - 20 years and over. A total of 18 out of 115 professionals representing 15.8% had been in the Ghanaian construction industry for more than 20 years, 35 representing 30.4 % had 11 – 15 years of work experience and 25 had between 16 -20 year of work experience. 89 of the respondents stated they were part of the project management team of their respective companies, making them knowledgeable and qualified respondents for the study. The study showed that years of experience and the background of the individual respondents had nothing to do with the level of stress being experienced.

Table 1: Respondents profile

AREA OF SPECIALIZATION OF RESPONDENT (115)		
CATEGORIES	SAMPLE SIZE	PERCENTAGE BREAK-UP
Architecture	45	39.1
Civil Engineers	25	21.7
Quantity Surveying	25	21.7
Estate Developers	20	17.5
EXPERIENCE IN THE CONSTRUCTION INDUSTRY(115)		
0-5years	12	10.4
6-10years	25	21.7
11-15years	35	30.4
16-20years	25	21.7
More than 20years	18	15.8
MEMBERSHIP OF PROJECT MANAGEMENT TEAM (115)		
Yes	89	77.4
No	26	22.6

Source: Field Survey (March, 2014)

3.2 Factors that Cause Work Place Stress

Different stressors identified by earlier researchers like Bickford (2005) and Blaug et al. (2007) were used to ascertain the factors that contribute to work related stress in the Ghanaian construction industry. Seven major stressors were presented in a tabular form with a Likert scale ranking format for the respondents to rank in order of importance (Table 2). The Importance index score (with strongly disagree not impacting at all and strongly agree impacting a great deal) was used to rank the variables. (It must be noted that the ranking of stressors and variables are arranged in order of satisfaction. The least ranked stressors or variables are those respondents stated lead to stress in the Ghanaian construction industry). The study indicated that construction professionals were finding it more difficult than ever to cope with job challenges due to both the stress from family as well as work based stress. This supports the assertion by Blaug et al. (2007) that whilst there are many events in the workplace that can contribute to stress, this is not the sole cause as many of the causes may not be directly work-related. Though 75% of respondents agreed stress is a normal part of life, they emphasised excessive stress interferes with their productivity. According to the respondents who have been working in the Ghanaian construction industry for more than 15 years, the level of tolerance among colleagues now is far better than when they entered the construction industry some years back. This is because people have come to understand what stress is. This supports the assertion by Blaug et al. (2007) that as the stress phenomenon has been popularised, less stigma has come to be attached to stress or inability to cope.

According to respondents, the stressor that has the highest tendency of causing stress among construction professionals is "job demands and working conditions" as most respondents do not like the idea of working for long irregular hours as well as having difficulty to meet deadlines. This therefore is the stressor that has the highest tendency of causing stress among construction professional. The second ranked stressor that respondents believe get them stressed up is "participation and control". Sixty seven percent of the respondents disagreed they can choose their own work method or pace or decide when to take a break. They are also not involved in decision making that affects their job. Overall, "Participation and control" was ranked as the 6th stressor respondents are comfortable with, therefore making it the stressor that has the second highest tendency of leading to stress among respondents who are all construction professionals. According to Akrani (2011) a conscious effort must be made to inculcate co-operation, kindness, respect, good manners and discipline among members of an organisation as it create a stress free and productive environment in a workplace. This reinforces earlier studies by Thomson (2006) that most workers stated that their job is a major source of stress in their life due to lack of interpersonal relationship among workers. Fortunately, respondents strongly agreed they get the respect they deserve from colleagues. Therefore "Interpersonal relationship" among construction professionals at the workplace was the stressor most of the respondents are happy with and therefore the last factor they believe will lead to stress. It was therefore ranked first with a mean importance index of 0.865 (Table 2). What respondents are most happy with at the work place is the fact that they are not treated differently because of their race, gender, ethnicity or disability. They also agreed they receive support from my superiors and colleagues. Career development and job security all over the world is one factor that gets many employees stressed up. The fear of the unknown is sometimes unnerving. Sixty five percent of the respondents do not strongly agree they have job security or if they will be with the same employer during the next couple of years. They therefore ranked it the fifth stressor they are happy with thus making it the third stressor that is likely to cause stress among construction professionals. However, 72% of respondents stated it was clear their work sometimes

interferes with their family responsibilities or leisure time and they have to neglect some tasks because they have too much to do under unrealistic time pressures. Though there is the perception that among other professionals that construction professionals in Ghana are rich, on the average the respondents stated their income is not as much as they would have wished for. That notwithstanding they admitted it is enough for them to support their families. The study established most construction professionals find it difficult to accept change especially if they are not part of the process. Though respondent accept they have sufficient opportunities to ask questions about change, they do not readily accept the assertion that staff are consulted about change at work when changes are made. Respondents ranked "change" as the third stressor they believe does not contribute to stress at their workplace.

Table 2. Factors that Cause Work Place Stress

	LI	RANK	Σ LI	RANK
PARTICIPATION AND CONTROL			0.714	6TH
I have enough time to get my job done properly	0.847	5		
I am involved in decision making that affects my job	0.627	16		
I can choose my own work methods, pace, and/or order	0.601	18		
I am given supportive feedback on the work I do	0.782	8		
INTERPERSONAL RELATIONSHIPS			0.934	1ST
I receive support from my superiors and colleagues	0.898	2		
I am not treated differently, due to race/gender/ethnicity/disability	0.969	1		
CAREER DEVELOPMENT AND JOB SECURITY			0.708	5TH
I have good job security	0.713	11		
In the next couple of years I will be with my current employer	0.702	12		
JOB DEMANDS AND WORKING CONDITIONS			0.704	7TH
I work long irregular hours	0.642	15		
I have achievable deadlines	0.627	16		
I have to work very intensively and very fast	0.842	6		
ROLE			0.870	2ND
I am clear with what is expected of me at work	0.864	4		
I know how to go about getting my job done	0.876	3		
CHANGE			0.746	3RD
Staff are consulted about change at work	0.685	13		
I have sufficient opportunities to ask questions about change	0.806	7		
INCOME			0.720	4TH
My income is sufficient to support myself and my family	0.731	10		
My pay depends mostly upon how well I do my job	0.674	14		
My work does not interfere with family responsibilities or leisure	0.754	9		

Source: Field Survey (March, 2014)

3.3 Effect of Stress on Construction professionals Job Satisfaction

According to Sapra and Saxena (2013) stress is not necessarily something bad as it all depends on how it is taken. However if uncontrolled, stress can lead to inapt and disparaging behaviours. The second objective of the study was therefore to determine the effect of stress on the job satisfaction among construction professionals in the Ghanaian construction industry. The response from the importance index ranking (Table 3) indicted that the highest ranked effects most construction professionals associated with their stress are; having difficulty relaxing or getting to sleep naturally (0.846), having tension or migraine headache (0.792) and feeling pressured and finding it difficult to concentrate during their work days (0.684). Though not all these effects are directly work based, such stress induced reactions end up affecting the construction professionals. This buttresses similar research by Sapra and Saxena (2013) that while some stress is a normal part of life; excessive stress interferes with productivity and reduces physical and emotional health. It is therefore important to find ways to keep it under control. Respondents stated that the effect they do not exhibit when under stress include taking pills, medicine, alcohol or other drugs to relax (0.542); and eating, drinking and smoking in response to stress (0.412).

Table 3: Behaviour When Stressed Up

BEHAVIOUR WHEN STRESSED UP	LI	RANK
I feel tense, anxious and low in energy.	0.637	4th
I eat/drink/smoke in response to tension.	0.412	6th
I have tension or migraine headaches, or pain in the neck or shoulders.	0.792	2nd
I have difficulty relaxing or getting to sleep naturally	0.846	1st
I feel pressured and find it difficult to concentrate on what I'm doing	0.684	3rd
I take pills, medicine, alcohol or other drugs to relax.	0.542	5th

Source: Field Survey (March, 2014)

As part of the second objective, factors which when implemented can help the construction professional overcome stressful situations was assessed. In order to determine whether the satisfaction was due either to intrinsic or extrinsic factors, a combination of variables comprising of both intrinsic and extrinsic factors identified by earlier researchers such as Rose (2003) were presented in a tabular form with a Likert scale ranking format for the respondents to rank in order of significance. Ranking analysis (with Least significant not impacting at all and Extremely significant impacting a great deal) was used in ranking the variables in Table 4.

According to respondents of the study, "better planning" at the workplace can help construction professionals overcome stressful situations and therefore help the respondents overcome stress. This implies that with the right planning, respondents expected an increase in their productivity as they will give out their outmost best. It was ranked as the first factor which can help the construction professionals overcome stressful situations with an importance index of 0.763. The study also indicated respondents believe the level of stress they are experiencing will greatly reduced if they had all the information they needed on certain important issues that pertains to their work. Due to this, they ranked "more and better information" as the second factor that will help reduce their level of stress with an importance index of 0.732.

The study further indicated that one major factor that can help reduce stress is when employees have clearer responsibilities and know what is expected of them. Respondents rated this factor as the third most significant factor which can help them overcome stressful situations with an importance index ranking of 0.780. The respondents believe to an extent their income is sufficient to support themselves and their family. In spite of that, they rated the need for increase in their salary and bonuses as the fourth factor that will help them achieve job satisfaction and in so doing reduce their stress level. This buttressed the assertion by Judge & Church (2000) that when employees are asked to evaluate different facets of their job such as supervision, pay, promotion opportunities, co-workers, and so forth, the nature of the work itself generally emerges as the most important job facet. This is because employees are not only desirous of pay to the exclusion of other job attributes.

Table 4: Factors Which Can Help the Construction Professionals Overcome Stressful Situations

VARIABLES	IMPORTANCE INDEX	RANKING
More freedom and authority	0.670	7th
More and better information	0.832	2nd
Clearer responsibilities	0.804	3rd
Additional manpower	0.695	6th
Better planning	0.863	1st
Increase in salary and bonuses	0.780	4th
Stress management programmes	0.760	5th

Source: Field Survey (March, 2014)

According to Mills (2013) stress management in the workplace is important as it helps employees to cope with stress that cannot be avoided. Respondents of the study believe that some level of workplace stress is inevitable as every workplace has a degree of stress attached to it. They therefore believe in the need for well planned stress management strategies or programmes and as such rated it 5th with an importance index of 0.760. Though many worker believe that with additional workforce the workload on individual workers will reduce, respondents do not believe it is a strong enough point to give them stress and affect their job satisfaction. Most of the respondents are happy about the degree of freedom and authority they are enjoying and therefore per their responses do not really see the need for it to be improved drastically. Respondents rated it last on a scale of 1 to 7 with an importance index of 0.670. This support (Sapra and Saxena, 2013) statement that there is the need for a certain degree of freedom at the workplace to keep stress levels at the barest minimum. This notwithstanding, the level of stress they are experiencing will reduce if they were given more authority in terms of decision making on certain important issues that pertains to their work.

4 Conclusion and Recommendation

According to Akrani (2011) stress leads to a decline in employees' job performance as excessive stress interferes with performance. This supports the assertion that excessive stress interferes with productivity. Stress must

therefore be kept under control (Sapra and Saxena, 2013). Forty two respondents stated with a reduction in their stress level, their productivity level could increase by up to 25%. 44 respondents indicated their productivity can increase by between 30% and 45%. 29 more believed 46% to 60% was an ideal percentage of increase in productivity that can be achieved. The most important finding is that none of them stated their productivity will decline or not increase at all with a reduction in their stress level.

The research indicated that the stressor that the respondents believe has less impact on them is the issue of their "interpersonal relationship" at the workplace. Respondents are happy they are not treated differently, because of their race, gender, ethnicity or disability. They also like the fact that they receive support from my superiors and colleagues. The study indicated most construction professionals state stress had a negative effect on their job satisfaction. The highest ranked effects of stress were "having trouble getting to sleep naturally", "having tension or migraine headache" and "feeling pressured during their work days". To help address these, construction professionals must voice out their stress challenges and the pressures of their work. The signs of stress must also be taken seriously. The employer also need to ensure construction professionals have the skills, training and resources they need, so they will be able to work in a relaxed atmosphere and not feel too pressured. To prevent stress, varying working conditions and flexibility in the work environment can be used for employees under work pressure. It is also important for construction professionals to seek medical help the moment they feel the effects of stress. This is because if not checked, it will have a negative effect on their job satisfaction and productivity.

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