



Research Article

Volume-01|Issue-01|2021

An Investigation of the Causes of Stress in the Central Business District of Accra, Ghana

Paul Adjei Onyina*¹, Augustine Antwi Boasiako², Kofi Nyarko Gyimah³, & Isaac Yeboah⁴

¹Department of Management Studies, Pentecost University, Kaneshie-Accra, Ghana

²Department of Economics, Marketing and Services, Kaneshie- Pentecost University, Accra, Ghana

³Department. of Accounting and Finance, Pentecost University, Kaneshie- Accra, Ghana

⁴College of Foundation and Professional Studies, Pentecost University, Kaneshie- Accra, Ghana

Article History

Received: 01.10.2021

Accepted: 20.10.2021

Published: 02.11.2021

Citation

Onyina, P. A., Boasiako, A. A., Gyimah, K. N., & Yeboah, I. (2021). An Investigation of the Causes of Stress in the Central Business District of Accra, Ghana. *Indiana Journal of Economics and Business Management*, 1(1), 8-18.

Abstract: This study investigates the causes of stress among people in Accra at the central business district. Research assistants interviewed 300 respondents randomly to solicit information for analysis. Some of the responses were used to construct stress indicators as dichotomous variables and independent variables to run *logit* regression to find their effects on stress. These dependent variables were grouped into categories namely work content, personal relationship, internal and external factors. A regression was run using stress as dependent variable to determine how each independent variable is related to stress. The study found that factors such as heavy traffic on the way home, poor relationship with customers or clients among others are more likely to cause stress in people. It is recommended that steps be taken by city authorities to take measures to reduce density of traffic during peak hours, employers take measure to improve work and working environment, and people themselves must try as much as possible to avoid conflicts when on line of duties.

Keywords: Stress, environment, workload, causes and people.

JEL Classification: Z10; Z19

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0).

INTRODUCTION

The level of competition of the contemporary working environment has led most employees and employers to ignore the stressor that affects their job and life. Selye (1936) was the doyen and first to write on stress as several physical and psychological responses to bad circumstances or influences. On their part, Ganster & Loghan (2005) wrote on stress as a stimulus-response to the worker's needs and abilities. Beehr & Newman (1979) also wrote about work-related stress or tension in the workplace as a situation in which job-related conditions interact with the worker to change his or her physical or psychological state to cause the worker to digress from normal function (Mathew, 2001). Researchers discussed organizational culture as an influencer of stress formation because sources of stress can rely on it on the way things are done in the organizations' culture (Chang & Lu, 2007). It is important to note that not all stressors in the workplace are bad because it has been shown that a certain amount of job stress improves productivity and effectiveness while working (Larson, 2004).

The current investigation offers insights into what causes stress among workers using Accra, the capital of Ghana as a case study because of concentration of work and people. What can cause

stress for someone may not apply to others because of physical and psychological differences that they are working. Stress is manifested in people's behaviour and the way they act at their workplace and private environment. The main causes of stress at the workplace, if it persists for long, can lead to a lot of medical problems which create a strain on our health system and end up with under productivity. That is the reason why Selye (1939) saw it as necessary in human life because it is within our environment, and we cannot avoid it. However, the right measures can be put in place to reduce the amount of stress to tame most of the environmental tension in the system. The government can come in with road policies to develop a country, likewise changing our working tools to conform to modern technology to avoid or reduce stress.

Even though the work place may be a major cause of stress as stated by Blank *et al.* (2018), some studies have summarized sources of stress on employees as low motivation, poor working environment, the time and job pressure measured by others, relationships between employees, dispute and uncertain positions, poor working conditions and self-respect, insufficient support of employees, families and friends (see Detert *et al.*, 2006). Besides, employees being late to work because of personal preparation,

traffic congestion and other unfortunate happen as well as their failure of accomplishing tasks on time may cause stress (Adams, 2001; & Joseph, 2000). Organizations need to study and manage rationalistically sources of stress to workers who have a significant responsibility to turn the organization's fortunes around. While stress in organizations has been determined with numerous studies, the number of researchers have that have been studied in different societies are limited (Kyriacou, 2001).

In the first place, the environment can hit a worker with intense and competing demands to adjust their days forcibly (see Blank *et al.*, 2018; & Marois *et al.*, 2018). Examples of environmental stressors include weather, noise, crowding, pollution, traffic, unsafe environment, and substandard house, and crime. Secondly, people can experience multiple stressors arising from the demands of the different social role they occupy both at home and workplace. The demands in such cases are expected from leaders such as parent, spouse, caregiver, employees and employers. Some examples of social stressors include deadlines, financial issues, work interviews, meetings, challenging disputes over your time and a loved one's lack of focus, divorce, co-parenting and single parenting. Physiologically, situation and circumstances affecting us at home and the workplace can be experienced as stressors. Examples of physiological stressors include rapid growth of adolescence, menopause, illness, ageing, giving birth, accidents, lack of exercise, poor nutrition, and sleeplessness that can create disturbances for us. Lastly, there is stress arising from thought. The thought is the way a person's brains makes the interpretation of issues and consider them as stressful, difficult, painful and difficult to get rid of or pleasant issues. Thus, these are seen as sources of stress. Taking a looking at this study, it investigates the causes of stress on people from the central business district in Accra. As indicated in the data, cross-sections of the people from different walks of life were interviewed. A significant contribution of this paper to the literature is identification of stress beyond the workplace. Thus, the journal to the house after work can increase the stress of a worker. The rest of the paper is organized as follows.

The literature review is presented on causes of stress in the next section, as found in the literature are discussed with a framework provided by the study. This is followed by the methodology used in the study. Here, the data and how it was obtained are presented. Then, data analysis follows with a discussion of the findings. The final segment deals with concluding remarks.

LITERATURE REVIEW AND METHODOLOGY

Stress is either identified as a reaction or as a life-stimulus. The sense of stress is with particular changes encountered by the human biological system

under an abnormal situation of life, which the human consciousness finds it difficult to accommodate. The term stress is old as the creation of man. Its exact date is not known but is believed to come from Latin word "*Stringere*" affliction, strain, hardship or beyond human capacity or capability, is the body's nonspecific response to a demand placed on it (Selye, 1939). The stressful events from home to workplaces can be an acute, chronic, remitting and continuous regular form that affects human psychology. Stress is a general term used to describe the pressure people face in life (Jepson & Forrest, 2006; Baltaş, 2002; Jeyaraj, 2013; Nagra, 2013; & Hopkins, 2014) either from home or workplace environment.

In more than ten years, it was estimated that some 91.5 million working days are lost each year through stress-related illness (Smith, 2000), in 2017/2018 it was 15.4m working days (H.S.E., 2018). Adverse effects include reduced efficiency, decreased capacity to perform, dampened initiative and a reduced interest in working increased rigidity of thought, a lack of concern for the organization and colleagues, and a loss of responsibility (Fairbrother & Warn, 2003). Work-related stress research has identified workplace and home stress as the fundamental cause of stress among individuals (Rana *et al.*, 2011).

Researchers cannot be adequate for us to understand employees stress without identifying their significant causes. Among the common reasons of priority identified by researchers and writers include work overload, time restraints, inconsiderate superiors at home and workplaces, working conditions and its environment, relationships and ties with colleagues, inadequate of resources and the physical demands of employees (see Alghaswyneh, 2012; Bamber, 2006; Chan *et al.*, 2010; & Gebrekirstos, 2015). However, Mathew (2001) had identified the environment, social stressors, physiological and thoughts as the leading causes stress.

Oginni *et al.* (2013) indicated that stress is a feature that goes with the working environment and how to get work done, how to relate to others and be open to change that is often unpleasant as they know how the transition will be, how to supervise and how to exert control in the community. They identified the following as triggers of work-related stress: nature of work itself and its environment, position in the organization, poor teamwork within the organization, feelings about job or career knowledge (lack of job security, over-promotion or under-promotion) and support gave one at work. According to Lambert *et al.* (2009), workload of workers had risen over the years and that they are working most hours in a week, thereby affecting their productivity. They said that most employees operate as a 'multi-track operation' where they have to do many things at once. Such multi-track practices lead to overlapping positions where staff feels

torn and pulled by the need to fill the multiple roles; which is causing much stress, all due to job demands, which refers to factors of a job that require continuous physical and psychological skills to complete at a cost (Bakker & Demerouti, 2007). Three job demands have received particular focus in prior research: high workload (Bakker *et al.*, 2004, 2010; Jourdain & Chênevert, 2007; Petitta & Vecchione, 2011; Schmidt & Diestel, 2013; & Van Doorn & Hülsheger, 2015), time pressure (Rijk *et al.*, 1998; van der Doef *et al.*, 2000; & Blank *et al.*, 2018), and work-family conflict (Bakker *et al.*, 2004, 2008; Demerouti *et al.*, 2004; & Jourdain & Chênevert, 2007). Consequently, task difficulty increases, and work enthusiasm declines, increasing the likelihood of absence (Hakanen *et al.*, 2006; & Xanthopoulou *et al.*, 2007).

Cooper *et al.* (2001) outlined the causes of stress that included administrative policies and how to design tactics to combat them to achieve competitive advantage (reduction and competitive pressure, merit pay programs and the use of modern technology, scheduling of job changes and adherence to bureaucratic rules); organizational structure and design (centralization and formalization, line-staff conflicts because of their role and status, specialization and no opportunity for upgrading themselves, a role that not open and conflict, restrictive, the untrusting culture within management); organizational processes (strict controls and punitive evaluation structures, just downward coordination and centralized decision-making, poor performance reviews, lack of decision-making involvement); working environments (crowded field of operation, noise, heat or cold and contaminated air, physical or mental pressure, hazardous chemicals or radiation).

The conceptual framework indicates that there are factors at the workplace, including work content, internal and external factors, personal relationship and work conditions (complex issues) that lead to stress buildup. When employees' experiences stress at the workplace, it influences the performance in productivity.

Work content (work load) is described as a variety of requirements, including quantitative, qualitative, mental, and physical tasks at workplaces (Cooper *et al.*, 2001) subject to the conditions of workers, which it may lead to stress depending on the individual physical and psychological makeup (see Hodgetts *et al.*, 2015). Many researchers believe that too much heavy workloads in the workforce today trigger pressure to increase (Belal, 2009). Workload has long been recognized as a critical motivating factor or, a contributing factor to the stress cycle (Chen *et al.*, 2016). There are many forms of adverse outcomes associated with the workload. These include anxiety, fatigue, headache, gastrointestinal and stress, and other associated problems (see Ganster *et al.*, 2013).

Workload represents one's work level or complexity that can involve any aspect of the job (Bowling & Kirkendall, 2012). The workload can also be described as the total amount of work that individuals must complete within a given period (Hodgetts *et al.*, 2015; & Morris *et al.*, 2007) for an organization to enjoy productivity to have the edge over its competitors care must be taken not to task our employees to much. Other studies have shown that periods of high workload can cause tiredness (Matthews & Desmond, 2002) and not manage properly can cause stress.

Internal and external factors are seen as a worker stressed and tiredness that could set in after several hours worked that may affect the productivity of an extra hour per worker (Pencavel, 2015). Apart from what is above, there is road traffic menace which keeps on intensifying and aggravating the woes of workers to and from work. Traffic congestion can be seen either through economic development or from low urban life planning on the two main sides (Kiunsi, 2013). Marois *et al.* (2019) found stress among police officers undertaking traffic control operations in Canada. The fundamental causes can be summarized as unplanned cities, poor discipline, road accidents, lack of alternative routes to and from work, including out dated road management (see Remi *et al.*, 2009; Mahmud *et al.*, 2012; Andoh, 2014; & Debnath *et al.*, 2014).

Congested roads have been ranked among the nine infrastructure sector weaknesses. They are: inadequate pedestrian facilities on highways, choked highways during peak hours, flooding due to low buildings or the lack of drainage, inadequate internet facilities, sewer leaks, lack of sufficient portable water, stable cooking energy and lack of uninterrupted telephone service are all stress ingredients (Jones *et al.*, 2014; & Marois *et al.*, 2019). It is now reported that traffic for the past 25 years, poor internet has increased Texas Transportation Institute (T.T.I.), 2011, Mobility Report) and even worse than in Sao Paulo in Brazil (Mahendra, 2009) where one can spend two to three hours in traffic. Roads, choked roads during peak hours, flooding due to poor construction or lack of drains, poor internet.(Abane, 1993; Armah *et al.*, 2010; & Andoh, 2014), Accra, Kumasi, Takoradi, Cape Coast and other major cities in Ghana are not spared of this global menace affecting developed and developing countries. This will help us in managing traffic from where workers stay and back from work and this put them under this serious stress condition, all this happen because of the causes of traffic congestions. These factors listed above are perceived as causes; thus when there is more load (work content), internal and external factors (which affect a person's work on daily basis), personal relationship of a worker with others, and complex issues can all lead to stress build up. In fact when these factors are experienced by a worker, then stress may be the next thing that comes up and may affect the worker adversely.

Data for the study were collected randomly in Accra from a cross-section of the people in the central business district (CBD) by four research assistants for two weeks. Table 1 (on next page) shows the demographic characteristics of the cross-section of the people interviewed. In all, 300 people were interviewed. However, some of them did not answer some questions; in such cases, total respondents will be less than 300.

For reliability of the respondents, Cornbrash's alpha was 0.912, since this is over 0.600; it means our

reliability of the respondents is high. The respondents were made up of 54.9 male against 45.1 female. In terms of age groups, the highest group was between 19 – 29 years (61 per cent), followed by the 30 – 39 years, and made up of 33 per cent. These two categories formed 94 per cent of our respondents. Regards to education, the respondents ranged from JSS/MSLC graduates to PhD holders. There were four different marital statuses. The occupation cut across nine sectors, with health being the least, 2 per cent.

Table 1: Demographic Characteristics of the Respondents

Gender	Frequency	Percentage (%)	Marital Status	Frequency	Percentage (%)
Male	162	54.9	Single	184	62.1
Female	133	45.1	Married	97	32.8
Total	295	100	Separated	10	3.4
Age Group (Years)			Widow/widower	5	1.7
19 – 29	170	61.0	Total	296	100
30 – 39	92	33.0	Occupation		
40 – 49	12	4.3	Bank	44	14.9
Over 50	5	1.7	Oil Company	25	8.5
Total	279	100.0	Schools	35	11.8
Education			Trading	56	18.9
JHS/MSLC	10	3.4	Food	18	6.1
SHS/SSS	112	38.4	Production	38	12.8
DIP/TECH	87	29.8	Services	39	13.2
Bachelor	73	25.0	Technology	35	11.8
Masters	6	2.1	Health	6	2.0
PhD	4	1.4			
Total	292	100	Total	296	100.0

Note: Figures have been rounded up to enhance calculations.

Dependent and Independent Variables

To determine the causes of stress-dependent variable, some of the questions were reduced to dichotomous variables and used to run logit regression to see how the dependent variable is affected by the

independent variables. The descriptions of the variables are discussed below. The independent variables; work content, internal and external factors, personal reaction, complex issues are considered as causes of stress among the respondents.

Table 2: Description of the Variables

Variable	Description	Max	Min	Mean	Std dev.
STRESS	Have stress (yes-1, 0 otherwise)	1	0	1.97	0.757
SEX	Gender (male- 1, female -0)	1	0	1.451	0.494
AGE	Age	19	62	29.101	6.402
MAR	Marital status	1	0	1.446	0.646
EDU	Education	1	4	2.830	0.883
CLATE	Close late causes stress (yes-1, 0 otherwise)	1	0	0.595	0.492
HTRAN	Huge transaction causes stress (yes-1, 0 otherwise)	1	0	0.873	0.333
FTRAN	Foreign transaction causes stress (yes-1, 0 otherwise)	1	0	0.647	0.479
PNTWK	Poor network causes stress (yes-1, 0 otherwise)	1	0	0.495	0.501
POUT	Power outage causes stress (yes-1, 0 otherwise)	1	0	0.639	0.481
MFCOM	Computer malfunction causes stress (yes-1, 0 otherwise)	1	0	0.631	0.483
POFFEQ	Poor office equipment causes stress (yes-1, 0 otherwise)	1	0	0.31	0.483
MCUT	Many customers causes stress (yes-1, 0 otherwise)	1	0	0.643	0.480
PWKEN	Poor working environment causes stress (yes-1, 0 otherwise)	1	0	0.645	0.479
HTRAFF	Heavy traffic after closing causes stress (yes-1, 0 otherwise)	1	0	0.580	0.494
CCONG	Car congestion causes stress (yes-1, 0 otherwise)	1	0	0.642	0.480
ACC	Accident on way home causes stress (yes-1, 0 otherwise)	1	0	0.650	0.478
PRSTAF	Poor staff relationship causes stress (yes-1, 0 otherwise)	1	0	0.610	0.489
PRCUST	Poor customer relationship causes stress (yes-1, 0 otherwise)	1	0	0.613	0.488

CONF	Conflict causes stress (yes-1, 0 otherwise)	1	0	0.602	0.490
WABM	Ambiguous work causes stress (yes-1, 0 otherwise)	1	0	0.488	0.501
WNCLE	Work not clear causes stress (yes-1, 0 otherwise)	1	0	0.627	0.484
NWELL	Not well clear causes stress (yes-1, 0 otherwise)	1	0	0.620	0.486
SSHOUT	Supervisor shouts clear causes stress (yes-1, 0 otherwise)	1	0	0.523	0.500
CBD	Supervisor communicates clear causes stress (yes-1, 0 otherwise)	1	0	0.667	0.472
MWKLD	Too much workload clear causes stress (yes-1, 0 otherwise)	1	0	0.633	0.483

Specification of the Model

The study uses the *logit* model, which adopts logistic distribution to investigate the data to run a regression. Some of the responses were reduced to dichotomous variables to develop stress indicators. The robustness of the logit regression can be found in Amemiya (1981); Long (1997); Hosmer & Lemeshow (2000) & Cramer (2007). For example, Hosmer & Lemeshow (2000) gave two benefits of the logit model. Thus, not only is it extraordinarily flexible, but also it offers the investigator an accurate significant understanding. Here, the independent variables could be discrete or normal scale. Furthermore, selected independent variables can be discrete or normal scale, whilst others may be continuous. The dichotomous random variables are represented as "1" if stress is experienced and "0" otherwise (see Amemiya, 1981). The logit model used is

$$L = \text{Log} \left\{ \frac{\pi}{1-\pi} \right\} = \alpha + \beta_1\chi_1 + \beta_2\chi_2 + \dots + \beta_k\chi_k \quad (1)$$

Where Log odds represent a linear function of the covariates, χ s are outcome variables, π denote the

probability of success at covariates level χ , β s are coefficients to be estimated κ is the number of observation.

The equation gives the relationship between the regression coefficient and the odds (OR) ratio: $OR = e^{\beta_1}$, where e is the exponent.

RESULTS AND DISCUSSIONS

The work content as a stressor was investigated. Here it was considered that once the workload is too much, it can lead to stress for the worker. In this case, the person usually closes very late because of numerous tasks. Hence, respondents were asked to indicate whether closing late as a result of the workload they do bring about stress or otherwise. The result is portrayed in Table 3. It suggests that a staff that closes late is a result of too much workload is 1.67 times more likely to experience stress. Nonetheless, it is not significant.

Table 3: Regression results of work content causing stress

Independent Variables	Dependent variable: STRESS		
	Odds ratio*	95% Confidence Interval	
SEX	.4300687 (.658)	.021447	8.624008
AGE	.9199162 .0919328	(0.9998, 1.0008)	
EDU	.4210948 .3081267	.1003534	1.766963
CLATE	1.66901 2.516721	.0868803	32.06242

Log likelihood = -8.9162446

*Standard errors are given between parentheses. Statistical significance ($p < 0.05$) is shown when one falls outside the confidence intervals.

Next, the analysis presents internal factors as stress indicator; a good internal working condition is expected to make the worker lively. This was linked to external factors since the two are interdependent. In

contrast, bad internal issues may be a recipe to cause stress. Just as we saw from the previous result, sex, age, marital status, and education are not factors that cause stress. Factors in this category are when a supervisor shouts at a staff or apprentice and when a supervisor communicates badly to a subordinate. The regression results are depicted in the table below.

Table 4: Regression results of internal factors that cause stress

Independent Variables	Dependent variable: STRESS		
	Odds ratio*	95% Confidence Interval	
SEX	1.101887 (.4249667)	.5174314	2.346505
AGE	.9555499 (.0352255)	.8889444	1.027146
MAR	1.893134 (.8284406)	.8029591	4.463438
EDU	.8624844 (.1817331)	.5706837	1.303488
SHOUT	.6852952 (.4110042)	(.2115298 2.220158)	
SCBDL	11.02675 (6.747499)	3.323376	36.58605
MWKLD	2.118913 1.177642	(.7129112 6.297827)	

Log likelihood = -92.810803

*Standard errors are given between parentheses. Statistical significance ($p < 0.05$) is shown when one falls outside the confidence intervals.

From the table, whereas sex and marital status are positively related to stress, age and education level are negatively related to stress. However, all four variables are not significant. Central to this study, a supervisor shouting at a subordinate is negatively related to stress and not significant. Rather when a supervisor communicates badly to a subordinate, it is 11.02 more likely to cause stress to the junior worker, and it is a significant variable that can cause stress. Thus, if as a result of the work one does lead to closing late, it can cause stress. Thus, here work content or load is a stress indicator. However, gender, age and level of education so far as the work content is concerned, are not causes of stress. Though not significant, it is similar to Oginni *et al.* (2013); & Lambert *et al.* (2009) who found that workload is a major cause of stress. Again, the findings tend to confirm Hodgetts *et al.* (2015) who

found that as a result of work contents, the performance of the worker is affected.

External factors were also considered here because they can affect the psyche of a worker on the line of duty. Thus, before or after working vigorously, the external factors encountered on the way from or to home may cause stress. Two factors were considered here. One is a heavy traffic jam on the road, and the other is car congested at a point. It is important to distinguish between the two. Heavy traffic jam is when there is high density such that the vehicles hardly move. The car congestion at a point refers to a situation where there is a problem such as construction work, broken-down vehicle or an accident and has caused a smaller portion of the road to be congested. The regression result is portrayed in Table 5. On the demographic characteristics, whereas sex, age, and educational level were all negatively related to stress, marital status is positively related to stress; however, none is significant.

Table 5: Regression results of external factors causing stress

Independent Variables	Dependent variable: STRESS			
	Odds ratio*		95% Confidence Interval	
SEX	.9423991	(.3795838)	(.4279411	2.075323)
AGE	.9400618	(.0360673)	(.8719637	1.013478)
MAR	1.712725	(.7815263)	(.7002928	4.18886)
EDU	.8285121	(.1832916)	(.5370165	1.278233)
HTRAF	6.819788	(3.530187)	(2.472612	18.80987)
CCONG	2.946503	(1.33535)	(1.212115	7.162588)

Log Likelihood = -83.809928

*Standard errors are given between parentheses. Statistical significance ($p < 0.05$) is shown when one falls outside the confidence intervals.

The result suggests that people who encounter heavy traffic jam on the way are 6.82 more likely to experience stress than those who do not encounter heavy traffic on the way home. Again, people who meet car congestion at a point on the way to or from home are 2.95 times more likely to experience stress than people who go home after work and do not meet congested vehicles at a point, on the way. Both factors are all significant. This suggests that irrespective of the age, gender, education level and marital status, once a person on the way home encounters heavy traffic or congested cars are more likely to have stress. These were the focus of studies such as Armah *et al.* (2010); & Andoh (2014) on Ghana. The findings on congested roads causing stress is similar to Debnath *et al.* (2014.) who found that accidents on the road do cause stress among commuters.. Also, it is in line with Marois *et al.* (2019) who found that even the traffic police officers do experience stress when the road becomes congested.

Furthermore, the study also attempted to find out whether a person's reaction to issues experience stress or otherwise. Two factors were considered here; poor relationship with customer and conflict of interest in the course of duty. From the regression result in Table 6 below, none of the demographic characteristics is significant, though sex and marital status were positively related to stress; age and education are negatively related to stress. More importantly, to this study, a poor relationship with a client is 3.64 times more likely to cause stress in a person than someone with no poor relationship with clients. This finding is significant since the confidence intervals fall outside 1. Also, the result suggests that persons with a conflict of interest on the line of duty are 6.17 times more likely to have stress than those without conflicts of interest on the line of duty. The above findings conform to the findings of Cooper & Rothmann (2013); & Skaalvik & Skaalvik (2015). The former found that when there exist line-staff conflict among worker of the same organization, there is bound to be a lot of stress. The later found that there is stress on the staff when there is conflict related to teammates at the workplace. Poor relationship with clients causing stress may likely be

liken to Hernando *et al.* (2016) who found that stress was linked to the respiratory rate.

Table 6: Regression results of personal reactions bringing stress

Independent Variable	Dependent variable: STRESS			
	Odds ratio*	95% Confidence Interval		
SEX	1.026749 (.4066372)	(.4724449	2.231398)	
AGE	.9370075 (.0346862)	(.8714315	1.007518)	
MAR	2.158149 (.9402432)	(.9188349	5.069036)	
EDU	.8151839 (.1759852)	(.5339428	1.244562)	
PRCUST	3.364776 (1.935441)	(1.089782	10.38898)	
CONFL	6.168062 (3.746952)	(1.87527	20.28774)	

Log likelihood = -85.207744

*Standard errors are given between parentheses. Statistical significance ($p < 0.05$) is shown when one falls outside the confidence intervals.

The last category of factors considered were complex issues that can cause stress. Factors classified in this cohort were poor working environment from the entire (different from the work environment), and not feeling well but go to work. Poor working environment refers to the location of the business entity such as a noisy environment. The results are portrayed in Table 7 below. Like in the previous results, all the demographic variables are not significant since the confidence

intervals include 1; it is the only marital status that is positively related to stress. The analysis suggests that people that work in a poor working environment are 2.60 times more likely to experience stress, and those who do not feel well but go to work are 2.62 more likely to have stress than their counterparts who feel well and come to the workplace. All the two factors are significant in causing stress in a person. This is in line with both Marios *et al.* (2018, 2019) who in both studies found that the nature of the working environment do cause stress among workers and even among pedestrians along the road.

Table 7: Regression Results of Complex Issues That Cause Stress.

Independent Variables	Dependent variable: STRESS			
	Odds ratio*	95% Confidence Interval		
SEX	.9517295 .3609927	(.4525341	2.001593)	
AGE	.9609095 (.0340338)	(.896467	1.029984)	
MAR	1.813109 (.7708162)	(.7880399	4.17157)	
EDU	.8505029 (.1736246)	(.5700443	1.268946)	
PWKENV	2.604549 (1.151764)	(1.094764	6.196473)	
NTWELL	2.617329 (1.1811)	(1.080796	6.338302)	

Log likelihood = -98.2218

*Standard errors are given between parentheses. Statistical significance ($p < 0.05$) is shown when one falls outside the confidence intervals.

more likely to experience stress from the workplace. It is important to note that, contrary to expectation, sex, age, marriage and education of the respondents were not causes of stress.

CONCLUSION

The study investigated the causes of stress among workers in Accra. After the interviews were conducted using a cross-section of the people in the C.D.A. The people involved were from different facets in life as the Research Assistants meet them randomly on their enumeration activities. From the data analysis, the study found that work content, internal and external factors, personal relationship between a worker and teammates or others around, the location of the office or shop. Other indicators used as stress indicators include heavy traffic density on the way to work or from home and car congestion along the way from the house to the house. The analysis found that all the variables of interest were mostly causes of the stress of people. So these variables are the stress indicators in that, their existence at the work environment means the worker is

The study has unravel a probably unnoticed cause of stress from people and must be seriously looked at. For example, if as a result of heavy traffic density is on the way from the house to the workplace, a worker can easily be exposed to stress, then, it is important to take, measures to reduce the heavy traffic density on the road by providing more alternative roads, and making available more reliable public transport system and also steps be taken by city authorities to take measures to reduce the density of traffic during peak hours. However, the car congestion along the road as a result of an accident may be beyond the control of the city authorities. Probably, more education on the need for safety road all the time could be mounted. The study also found that factors such as a poor relationship with customers or clients, among others are more likely to cause stress in people. It is recommended that

employers take measure to improve work and working environment, and people themselves must try as much as possible to avoid conflicts when on the line of duties.

Acknowledgement

We wish to acknowledge Dr. Charles Buabeng-Andoh for his comments that helped to put the paper into its current stage.

REFERENCES

1. Abane, M. (1993). Tackling traffic congestion in Accra, Ghana: A road user's perspective. *Journal of Advanced Transportation*, 27(2), 193-06.
2. Adams, E. (2001). A proposed causal model of vocational teacher stress. *Journal of Vocational Education and Training*, 53(2), 223-246.
3. Alghaswyneh, S. A. (2012). *Teacher stress among Tawjihi teachers in Jordan and their adopted coping strategies to reduce stress* (Doctoral dissertation, University of Huddersfield).
4. Amemiya, T. (1981). Qualitative response models: A survey. *Journal of economic literature*, 19(4), 1483-1536.
5. Andoh, A. k (2014) *Managing road traffic congestion in the Cape coast metropolis, Ghana* (Unpublished Masters Dissertation, University of Cape Coast).
6. Armah, F. A., Yawson, D. O., & Pappoe, A. A. (2010). A systems dynamics approach to explore traffic congestion and air pollution link in the city of Accra, Ghana. *Sustainability*, 2(1), 252-265.
7. Aworemi, J. R., Abdul-Azeez, I. A., Oyedokun, A. J., & Adewoye, J. O. (2009). A study of the causes, effects and ameliorative measures of road traffic congestion in Lagos Metropolis. *European Journal of Social Sciences*, 11(1), 119-128.
8. Babin, B. J., & Boles, J. S. (1996). The effects of perceived co-worker involvement and supervisor support on service provider role stress, performance and job satisfaction. *Journal of retailing*, 72(1), 57-75.
9. Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of managerial psychology*, 22, 309-28.
10. Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 43(1), 83-104.
11. Bakker, A. B., Van Emmerik, H., & Van Riet, P. (2008). How job demands, resources, and burnout predict objective performance: A constructive replication. *Anxiety, Stress, & Coping*, 21(3), 309-324.
12. Bakker, A. B., Van Veldhoven, M., & Xanthopoulou, D. (2010). Beyond the demand-control model. *Journal of Personnel Psychology*, 9, 1-16.
13. Baltas, Z. (2002). *Stress in ways of coping with stress* (21st ed.). Istanbul: Remzi Bookstore.
14. Bamber, M. R. (2006). *CBT for occupational stress in health professionals: Introducing a schema-focused approach*. Routledge/Taylor & Francis Group.
15. Barhem, B., Younies, H., & Muhamad, R. (2009). Religiosity and work stress coping behavior of Muslim employees. *Education, Business and Society: Contemporary Middle Eastern Issues*, 2(2), 123 - 137.
16. Bedeian, A. G., & Armenakis, A. A. (1981). A path-analytic study of the consequences of role conflict and ambiguity. *Academy of management journal*, 24(2), 417-424.
17. Beehr, T. A., & Newman, J. E. (1978). Job stress, employee health, and organizational effectiveness: A facet analysis, model, and literature review 1. *Personnel psychology*, 31(4), 665-699.
18. Blank, C., Gatterer, K., Leichtfried, V., Pollhammer, D., Mair-Raggautz, M., Duschek, S., ... & Schobersberger, W. (2018). Short vacation improves stress-level and well-being in German-speaking middle-managers—A randomized controlled trial. *International journal of environmental research and public health*, 15(1), 130.
19. Bowling, N. A., & Kirkendall, C. (2012). Workload: A review of potential causes, consequences, and interventions. *Contemporary occupational health psychology: Global perspectives on research and practice*, 2, 221-238.
20. Brown, Z. A., & Uehara, D. L. (2008). *Coping with teacher stress: A research synthesis for Pacific education*. Retrieved from <http://www.prel.org/>
21. Carmeli, A., & Gefen, D. (2005). The relationship between work commitment models and employee withdrawal intentions. *Journal of Managerial Psychology*, 20(2), 63-86. <https://doi.org/10.1108/02683940510579731>
22. Chang, K., & Lu, L. (2007). Characteristics of organizational culture, stressors and wellbeing: The case of Taiwanese organizations. *Journal of Managerial Psychology*, 22, 549-568.
23. Chen, C. C., Petrick, J. F., & Shahvali, M. (2016). Tourism experiences as a stress

- reliever: Examining the effects of tourism recovery experiences on life satisfaction. *Journal of Travel Research*, 55(2), 150-160.
24. Chen, P. Y., & Spector, P. E. (1992). Relationships of work stressors with aggression, withdrawal, theft and substance use: An exploratory study. *Journal of occupational and organizational psychology*, 65(3), 177-184.
 25. Cho, J. E., Choi, H. C., & Lee, W. J. (2014). An empirical investigation of the relationship between role stressors, emotional exhaustion and turnover intention in the airline industry. *Asia Pacific Journal of Tourism Research*, 19(9), 1023-1043.
 26. Cooper, A. J., Stirling, S., Dawe, S., Pugnaghi, G., & Corr, P. J. (2017). The reinforcement sensitivity theory of personality in children: A new questionnaire. *Personality and Individual Differences*, 115, 65-69. <https://doi.org/10.1016/j.paid.2016.06.028>
 27. Cooper, C. L., Dewe, P., & O'Driscoll, M. P. (2001). *Organizational stress: A review and critique of theory, research, and applications*. CA: Sage.
 28. Cramer, J. S. (2007). Robustness of logit analysis: Unobserved heterogeneity and misspecified disturbances. *Oxford Bulletin of Economics and Statistics*, 69(4), 545-555.
 29. De Rijk, A. E., Blanc, P. M. L., Schaufeli, W. B., & De Jonge, J. (1998). Active coping and need for control as moderators of the job demand-control model: Effects on burnout. *Journal of Occupational and Organizational Psychology*, 71(1), 1-18.
 30. Debnath, A. K., Blackman, R., & Haworth, N. (2014). Towards making informed decisions on selecting promising work zone safety treatments. *Road & Transport Research: A Journal of Australian and New Zealand Research and Practice*, 23(4), 41-53
 31. Demerouti, E., Geurts, S. A., Bakker, A. B., & Euwema, M. (2004). The impact of shiftwork on work-home conflict, job attitudes and health. *Ergonomics*, 47(9), 987-1002.
 32. Detert, R. A., Derosia, C., Caravella, T., & Duquette, R. D. (2006). Reducing Stress and Enhancing the General Well-Being of Teachers Using T'ai Chi Chih® Movements. *Californian Journal of Health Promotion*, 4(1), 162-173.
 33. Fairbrother, K., & Warn, J. (2003). Workplace dimensions, stress and job satisfaction. *Journal of managerial psychology*, 18(1), 21. <https://doi.org/10.1108/02683940310459565>
 34. Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of management*, 39(5), 1085-1122.
 35. Gebrekirstos, H. A. (2015). Occupational stress among secondary school teachers and their coping strategies: The case of central zone of tigray region. *International Journal of Academic Research in Education and Review*, 3(6), 143-157.
 36. Gianella, C., & Lagarde, P. (1999). *Productivity of hours in the aggregate production function: An evaluation on a panel of French firms from the manufacturing sector*. Tech. rep., Insee
 37. Haga, S., Shinoda, H., & Kokubun, M. (2002). Effects of task difficulty and time-on-task on mental workload. *Japanese Psychological Research*, 44(3), 134-143.
 38. Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of school psychology*, 43(6), 495-513.
 39. Hernando, A., Lazaro, J., Gil, E., Arza, A., Garzón, J. M., Lopez-Anton, R., ... & Bailón, R. (2016). Inclusion of respiratory frequency information in heart rate variability analysis for stress assessment. *IEEE journal of biomedical and health informatics*, 20(4), 1016-1025.
 40. Hodgetts, H. M., Tremblay, S., Vallières, B. R., & Vachon, F. (2015). Decision support and vulnerability to interruption in a dynamic multitasking environment. *International Journal of Human-Computer Studies*, 79, 106-117. <https://doi.org/10.1016/j.ijhcs.2015.01.009>.
 41. Hoedemaeker, M. (2002). Summary Description of Workload Indicators: WP1 Workload Measures. *Leeds, UK: University of Leeds*.
 42. Hopkins, M. L. (2014). *The sources of work stress and coping resources for high school teachers in the Gauteng Province within different career stages* (Doctoral dissertation).
 43. Hosmer, D., & Lemeshow, S. (2000). *Applied Logistic Regression*, New York, John Wiley and Sons.
 44. Hussein, H., Malika, K. (2011). *Sources of Professional Stress for Algerian Teachers*. Faculty of Humanities, Department of Psychology, Jazira.
 45. Jepson, E., & Forrest, S. (2006). Individual contributory factors in teacher stress: The role of achievement striving and occupational commitment. *British Journal of Educational Psychology*, 76(1), 183-197.
 46. Jeyaraj, S. S. (2013). Occupational stress among the teachers of the higher secondary schools in Madurai District, Tamil Nadu. *IOSR Journal of Business and Management*, 7(5), 63-79.

47. Jones, H., Moura, F., & Domingos, T. (2014). Transport infrastructure project evaluation using cost-benefit analysis. *Procedia-Social and Behavioral Sciences*, 111, 400-409.
48. Joseph, R. (2000) *Stress-free teaching: A practical guide to tackling stress in teaching, lecturing and tutoring*. London: Kogan Page Publishing
49. Jourdain, G., & Chênevert, D. (2007) *Burnout among nursing staff and intention to leave the*
50. Karatepe, O. M., Yavas, U., Babakus, E., & Avci, T. (2006). Does gender moderate the effects of role stress in frontline service jobs?. *Journal of Business Research*, 59(10-11), 1087-1093.
51. Kiunsi, R. B. (2013). A review of traffic congestion in Dar es Salaam city from the physical planning perspective. *Journal of Sustainable Development*, 6(2), 94.
52. Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational review*, 53(1), 27-35.
53. Lambert, R. G., McCarthy, C., O'Donnell, M., & Wang, C. (2009). Measuring elementary teacher stress and coping in the classroom: Validity evidence for the classroom appraisal of resources and demands. *Psychology in the Schools*, 46(10), 973-988. <http://dx.doi.org/10.1002/pits.20438>
54. Larson, N. C. (2004). Parenting stress among adolescent mothers in the transition to adulthood. *Child and Adolescent Social Work Journal*, 21(5), 457-476.
55. Logan, M. S., & Ganster, D. C. (2005). An experimental evaluation of a control intervention to alleviate job-related stress. *Journal of Management*, 31(1), 90-107.
56. Long, J. S. (1997). *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, California: Sage Publications.
57. Low, G. S., Cravens, D. W., Grant, K., & Moncrief, W. C. (2001). Antecedents and consequences of salesperson burnout. *European Journal of Marketing*, 35(5-6), 587-611.
58. Mahendra, A. (2008). Vehicle restrictions in four Latin American cities: is congestion pricing possible?. *Transport Reviews*, 28(1), 105-133.
59. Mahmud, K., Gope, K., & Chowdhury, S. M. R. (2012) 'Possible causes & solutions of traffic jam and their impact on the economy of Dhaka City', *Journal of Management and Sustainability*, 2(2), pp. 112-135.
60. Marois, A., Cloutier, M. S., Saunier, N., Godillon, S., Lafond, D., & Vachon, F. (2019). Safety, stress and work zone complexity: a field study on police officers performing on-foot traffic control. *Transportation research interdisciplinary perspectives*, 1, 100018.
61. Marois, A., Lafond, D., Gagnon, J.-F., Vachon, F., & Cloutier, M.-S. (2018). Predicting Stress among Pedestrian Traffic Workers Using Physiological and Situational Measures. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 62(1), 1262-1266. <https://doi.org/10.1177/1541931218621290>.
62. Matthews, G., & Desmond, P. A. (2002). Task-induced fatigue states and simulated driving performance. *The Quarterly Journal of Experimental Psychology: Section A*, 55(2), 659-686.
63. Mensah, J., Annan, J., & Andoh-Baidoo, F. (2014). Assessing the Impact of Vehicular Traffic on Energy Demand in the Accra Metropolis. *Journal of Management Policy & Practice*, 15(4), 127-135
64. Morris, R., MacNeela, P., Scott, A., Treacy, P., & Hyde, A. (2007). Reconsidering the conceptualization of nursing workload: literature review. *Journal of advanced Nursing*, 57(5), 463-471.
65. Nagra, V. (2013). Occupational Stress among Teacher Educations. *Global Online Electronic International Interdisciplinary Research Journal*, 2, 12-23.
66. Pencavel, J. (2015). The productivity of working hours. *The Economic Journal*, 125(589), 2052-2076.
67. Petitta, L., & Vecchione, M. (2011). Job burnout, absenteeism, and extra role behaviors. *Journal of Workplace Behavioral Health*, 26(2), 97-121.
68. Jourdain, G., & Chênevert, D. (2007). Burnout among nursing staff and intention to leave the profession: validation of the job demands-resource model in hospitals in Québec. In *Conference Proceedings of the ASAC*, Ottawa, ON.
69. Randall, J., & Procter, S. (2008). Ambiguity and ambivalence: Senior managers' accounts of organizational change in a restructured government department. *Journal of Organizational Change Management*, 21(6), 686-700.
70. Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). 'Role conflict and ambiguity in complex organizations'. *Administrative Science Quarterly*, 15, 150-163.
71. Schmidt, K. H., & Diestel, S. (2013). Job demands and personal resources in their relations to indicators of job strain among nurses for older people. *Journal of Advanced Nursing*, 69(10), 2185-2195.
72. Selye, H. (1936). A syndrome produced by diverse nocuous agents. *Nature*, 138(3479), 32-32.
73. Skaalvik, E. M., & Skaalvik, S. (2015). Job Satisfaction, Stress and Coping Strategies in

- the Teaching Profession-What Do Teachers Say?. *International education studies*, 8(3), 181-192.
74. Smith, R. H. (2000). Assimilative and contrastive emotional reactions to upward and downward social comparisons, In J. Suls & L. Wheeler (Eds.). *Handbook of social comparison: Theory and research* (pp.173 - 200). New York: Plenum.
75. Syed Ismail, S. I., Abdullah, M. M., Khan, N., & Hong, Y. H. (2014). An investigation on level, sources of occupational stress and coping strategies among civil engineers in Malaysia's construction industry. *Australian Journal of Basic Applied and Sciences*, 8(17), 257-264.
76. Texas Transport Institute (TTI). (2011). *The keys to estimating mobility in urban areas: Applying definitions and measures that everybody understands*. TTI's 2011 Urban Mobility Report Powered by INRIX Traffic Data
77. van der Doef, M., Maes, S., & Diekstra, R. (2000). An examination of the job demand-control-support model with various occupational strain indicators. *Anxiety, Stress and Coping*, 13(2), 165-185.
78. van Doorn, R. R., & Hülshager, U. R. (2015). What makes employees resilient to job demands? The role of core self-evaluations in the relationship between job demands and strain reactions. *European Journal of Work and Organizational Psychology*, 24(1), 76-87.
79. Walsh, G. (2011). Unfriendly customers as a social stressor—An indirect antecedent of service employees' quitting intention. *European Management Journal*, 29(1), 67-78.
80. Xanthopoulou, D., Bakker, A. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. (2007). 'When do job demands particularly predict burnout? The moderating role of job resources'. *Journal of managerial psychology*, 22, 766–86.
81. Young, M. S., & Stanton, N. A. (2007). What's skill got to do with it? Vehicle automation and driver mental workload. *Ergonomics*, 50(8), 1324-1339.