

# Do Demographic Characteristics of Individuals Associate with their Job Stress Levels? Perspectives from the University of Cape Coast, Ghana.

By

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## Abstract

This study aims to examine the association between individual demographic characteristics with their job stress levels. The study utilized descriptive research design and employed the quantitative approach. The target population comprised employees of the University of Cape Coast, Ghana. Using the convenient sampling approach, 223 employees were selected for the study and data collection was done through a survey questionnaire. The Pearson Chi-Square test was used to test for the association between the study variables. The findings suggested that sex and marital status of respondents have significant association with their job stress levels. However, the study did not find any significant association between levels of job stress and respondents' age and levels of education.

## Introduction

The work environment, over the past few years, has been characterized by various levels of stress. Organisations are faced with internal and external pressures, both of which can cause stress. Stress is an integral part of an organisation's life and is required up to a point to drive the achievement of organisational goals (Sapara & Neeti, 2013). Job stress occurs when employees attempt to cope with their responsibilities, duties and other forms of pressures related with their jobs, but encounter difficulties, apprehensions and uncertainties to manage them. Stress emanates as a result of the imbalance between job requirement and the employees' ability to cope (Singh & Dubey, 2011)

According to the Transactional theory of stress, not all individuals who are subjected to particular stressors experience or react to them in the same way. Whether or not certain stressors affect individuals will depend on their physiological, psychological and social disposition. Empirical studies have revealed that individual demographic characteristics can determine the way they respond to job stress (Cope, 2003; Hunnur & Bagali, 2014; Tandon, Muhaur, & Gupta, 2014). As determined by

Lazarus (2000) responses to stimuli will not have the same stressful implications for all individuals. Certain demographic characteristics such as age, sex, level of education and experiences, can lead to variations in stressful reactions.

## Objective of the Study

The study set out to examine the association between individual demographic characteristics and their job stress levels.

## Research Questions

1. What is the association between age and job stress level?
2. What is the association between sex and job stress levels?
3. What is the association between marital status and job stress levels?
4. What is the association between level of education and job stress?

## Literature Review

### Age

Age has consistently been observed as a significant factor of job stress. A number of academic studies have examined the link between age as a demographic variable and job stress. In a literature review on the correlation between demographic variables with job stress and coping strategies of pre-school educators, Okeke, Adu, Drake and Duku (2014) identified a significant correlation between age and job stress. They found that employees between the ages of 40-50 have higher levels of job stress as compared to those with less than 40 years and more than 50 years. This finding was confirmed by Affum-Osei, Agyekum, Addo and Asante (2014). Their study revealed that 60.3 percent of staff between the ages of 40 and 50 years experienced higher levels of job stress.

In examining the influence of demographic variables on stress among police personnel in Bangalore with a sample of 225, Hunnur and Bagali (2014) established that staff between the ages of 41-50 experienced more job stress than those between the ages of 20-30 and 51-60. Moreover, Tandon et al. (2014) found that the mean score of 30-40 years and 41-50 years was higher in terms of job stress experiences than the ages of 51-60. Griffiths, Knight and Mahudin (2009) reporting on the association between aging, work-related stress and health confirmed that older workers between the ages of 51-60 have lower levels of job stress because they may have left jobs they considered stressful or they may have greater control over their work lives, and may be better supported, more experienced and adaptable to the work environment.

However, Aftab and Khatoon (2013) observed that younger staff members between the ages of 22-32 reported having higher levels of job stress compared to older staff members. They concluded that this was due to lack of experience and great anxiety on the part of younger staff members as they begin their career. Aftab and Khatoon's findings supported the findings of Vokic and Bogdanic (2005). Vokic and Bogdanic conducted a survey in Croatia to investigate the individual differences and job stress with a sample population of 900.

Their findings revealed that employees who were less than 30 years old experienced the highest levels of job stress. The major explanation they gave to their finding was that, older employees have often reached a stage where career development is not a major concern to them so the job characteristics that pose as stressors to younger employees are not stressors to older employees who are grounded in their career.

### Sex

It has been confirmed that sex differences play an important role in the manner in which individuals would express themselves as far as workplace stress is concerned (Bashir, Khan, Rehman, Qureshi, & Khan, 2013). Munir and Mehmood (2013) suggest that women's participation in the labour force has increased over the last two decades and it has become critical for organisations to understand the sex differences that exist with regards to workplace stress for business success. While Vanagas and Bihari-Axelsson (2013), believe that men exhibit higher levels of job stress than their women counterparts, studies on sex differences have consistently reported that women generally have high levels of job stress. Griffiths et al. (2009) postulate that the differences in job stress among men and women may be as a result of hormonal changes in women as they approach menopause. They emphasized that women who are going through the menopausal changeover more often report stressful experiences.

Bickford (2005) suggests that predominately women are reported to be negatively affected by workplace stress more than men because of the principal role played by women in the provision of family care. It is well established that the total workload of women who are employed full-time is higher than their male counterpart, particularly where they have family responsibilities. Cohen and Janicki-Deverts (2009) contend that women suffer prejudice and discrimination in organisations, especially those who occupy senior positions both as a result of organisational policies and from their colleagues at work, this makes them susceptible to workplace stress.

Cope (2003) reports that men are four times more likely to die of stress-related illness, five times

more likely to die of alcohol-related diseases and have an average life expectancy of eight years shorter than women. However, a report by the American Institute of Stress (2011) indicates that women have higher levels of stress than men. According to Vanagas and Bihari-Axelsson (2013), this may be as a result of different cultural expectations of men and women, with women being more likely to admit negative feelings and lack of confidence. In analyzing gender differences in stress among university teachers in Gomal University, Pakistan, with a study population of 250, Bashir et al. (2013) used an independent sample t-test to identify such differences. They found significant differences between men and women with respect to job stress.

### **Marital Status**

According to Bickford (2005) marital status has no significant influence on job stress. Additionally, Abirami (2012) reports that being married is not a stress causing factor as it is established that married people tend to get social as well as family support and this makes them both happy and successful in their professions and career lives. However, empirical studies have revealed a significant association between job stress and marital status (Nagina, 2009; Nagaraju & Nandini, 2013; Osmany & Khan, 2013). Garima and Kiran (2014) claim that married people are more stressed than their unmarried group. Their impact analysis on 180 employees in the police department in Lucknow revealed that married people are required to make a lot of social adjustments in addition to their job responsibilities and this causes more stress and anxiety to them which negatively affects their mental health and development.

In a similar study, Nagra and Arora (2013) reported a higher mean score for married people in terms of levels of job stress than their unmarried counterparts. This finding indicates that married employees are more stressed than unmarried employees. They suggested that this result may be due to the dual responsibilities of job and family since married workers have to devote extra time and effort to take care of their family, children, spouses, in-laws and other domestic routines, together with their organisational roles. Consequently, married employees are not able to socialize and build peer

relations and thus face conflict both at work and home, which increase their stress levels.

However, in examining the influence of sex, marital status and tenure of service on job stress of health workers in Nigeria, Olatunji and Mokuolu (2014) found that unmarried people were the most affected with respect to job stress. The researchers explained that unmarried people lack social support and other social network resources, which make them unhappy and vulnerable to stress. The study also identified that of all the sub-groups, divorced and widowed employees were the most stressed, followed by the separated. They suggested that the loss associated with losing a loved one in death or divorce was a bad experience, hence culminating into stressful experiences in addition to other social and work demands.

### **Level of Education**

The level of education of employees has usually been linked with their job stress levels. Cope (2003) observes a positive association between the level of education and income also has psychological and physical effects on stress. When employees are well-educated and adequately trained, they become well-equipped to handle technical responsibilities associated with their tasks and this gives them maximum control. As suggested by the Job-Demand-Control Theory, employees who have adequate control over their jobs exhibit less stressful experiences. Aftab and Khatoon (2013) also establish that employees with lower levels of educational qualifications report higher levels of occupational stress than employees with higher levels of education. They explained that this may be due to the fact that employees with lower levels of education mostly have challenges in understanding the organisational policies and roles and have difficulties in performing certain job tasks which pose as stressors to them.

However, in a descriptive study with a sample population of 130 employees in Iran, Rahmani, Khodaei, Mahmudkhani, Moslemi, and Ghara-gozlou (2013) employed a Cooper's standard questionnaire for stress in the work environment to examine the relationship between stress and demographic variables. It was discovered that the level of education had a positive association

with job stress. This finding presupposes that as the level of education of employees increases, job stress also increases. Kula (2011), however, suggests that these findings are not consistent with the common findings that the higher one's educational attainment, the lower the stress levels. Rahmani et al. (2013) opine that this may be as a result of the complex roles and expectations assigned to those employees with higher educational qualifications, such as managerial roles which usually encompass a high degree of thinking and problem solving throughout the entire organisation.

### Research Method

The study adopted a descriptive design to determine the association between individual demographic characteristics and job stress levels. The target population comprised staff at the College of Distance Education, University of Cape Coast, Ghana. A sample size of 223 was drawn from the target population, using the convenient sampling approach. However, 171 questionnaires were returned, representing an 80% response rate. Data was collected through a survey with the use of a questionnaire. The questionnaire mainly contained job stress inventory items. The job stress inventory had 20 items with a 6-point interval.

The Job Stress Inventory (JSI) was adopted to measure the stress levels of respondents. The interval of the scores was 0 to 120. While the minimum stress score was 18, the maximum was 82. The stress levels of the respondents were categorized into low, moderate, high, very high and danger using 0 – 40, 41 – 60, 61 – 80, 81 – 100 and 101 – 120 respectively based on the JSI criteria.

The scores are interpreted such that the higher the score, the greater the perceived level of stressors. A Cronbach's Alpha reliability coefficient of 0.816 was yielded from the reliability test. The main statistical methods used in the study were descriptive statistics and Pearson Chi-Square analytical techniques.

### Analysis of Demographic Characteristics of Respondents

Table 1. *Age Distribution of Respondents*

Age	Frequency	Percent
21 – 30	49	8.6
31 – 40	78	45.6
41 - 50	33	19.3
51 - 60	11	6.5
Total	171	100

Source: Survey data, (2018)

Table 2. *Sex Distribution of Respondents*

Sex	Frequency	Percent
Male	95	55.6
Female	76	44.4
<b>Total</b>	<b>171</b>	<b>100.0</b>

Source: Survey data, (2018)

Table 3. *Marital Status Respondents*

Marital status	Frequency	Percent
Married	106	62.0
Single	60	35.1
Separated	5	2.9
<b>Total</b>	<b>171</b>	<b>100.0</b>

Source: Survey data, (2018)

Table 4. *Level of Education of Respondents*

Education Level	Frequency	Percent
Secondary	21	12.3
Diploma	9	5.3
1 <sup>st</sup> Degree	14	43.3
Masters	51	29.8
PhD	5	2.9
Technical	11	6.4
Total	171	100

Source: Survey data, (2018)

Using the Job Stress Inventory criteria, the levels of job stress of respondents were determined. Table 5 illustrates the job stress levels of respondents.

Table 5. *Job Stress Levels of Respondents*

Job Stress level	Frequency	Percent
Low	27	15.8
Moderate	104	60.8
High	39	22.8
Very high	1	0.6
<b>Total</b>	<b>171</b>	<b>100.0</b>

Source: Survey data, (2018)

### Analysis of Demographic Characteristics and Job Stress Levels

The study analysed the stress levels of the sub-groups in the samples. The discussion was structured around age, sex, marital status and level of education. As part of the analyses of job stress levels and demographic characteristics of respondents, the study explored the stress levels of the different age categories in the sample. The findings in Table 6 show that half of the 78 respondents with moderate stress level were in the 31 – 40 age category. Also worthy of note is that 40.7 percent of the lowly stressed respondents were in the 20 – 30 age category, and 11 percent each were in the 41 -50 and 51 - 60 age groups. A Pearson Chi-Square test was employed to determine the association between age groups and job stress levels at 5% alpha level. The test was however, not significant ( $\chi^2 = 7.465$ , p-value = 0.28). The rest of the details on job stress levels among the different age groups are presented in Table 6. For ease of analysis, the highly stressed and very highly stressed were merged into highly stressed.

Table 6. *Job Stress Levels and Age Groups*

Age groups	Level of Job stress				Percent		
	Low	Moderate	High	Total	% of low	% of moderate	% of high
20 – 30	11	28	10	49	40.7	26.9	5.8
31 – 40	10	52	16	78	37.0	50.0	40.0
41 – 50	3	18	12	33	11.1	17.3	30.0
51 – 60	3	6	2	11	11.1	5.8	5.5
<b>Total</b>	<b>27</b>	<b>104</b>	<b>40</b>	<b>171</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Survey data, (2018)

Okeke et al. (2014) had found a significant relationship between age and job stress and identified a higher job stress levels for the age bracket of 40-50 years. The findings of Affum-Osei et al. (2014) also confirm this. The results of this study failed to confirm these findings. It was also inconsistent with the findings of Hunnur and Begali (2014) who found that people within the ages of 41-50 are mostly found to have high job stress levels. However, the findings were consistent with that of Tandon et al. (2014) and Griffiths et al. (2009), who discovered that job stress levels were low with the ages of 20-30 and 51-60 years.

Table 7. *Job Stress Levels of Males and Females*

Sex	Level of stress			Total	Percent		
	Low	Moderate	High		% of low	% of moderate	% of high
Male	11	66	18	95	40.7	63.5	45.0
Female	16	38	22	76	59.3	36.5	55.0
<b>Total</b>	<b>27</b>	<b>104</b>	<b>40</b>	<b>171</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Survey data, (2018)

As depicted in Table 7, 55.0 percent out of the 40 highly stressed respondents were females, the rest (45.0%) were males. It also became evident that 59.3 percent of the 27 lowly stressed respondents were females. This suggests that the females were either lowly stressed or highly stressed while the majority (63.5%) of the moderately stressed respondents were males. A Pearson's chi-square was computed to determine the significance of the association between sex and job stress level. At 5% alpha level the association between sex and job stress levels was significant ( $\chi^2 = 6.838$ , p-value = 0.033). The effect size of the association was tested using the Crammer's V statistic. A Crammer's V coefficient of 0.196 with a p-value of 0.033 indicates a weak significant association between sex and job stress levels. This finding is similar to that of Bickford (2005), whose findings suggested that women are predominantly reported to be more negatively affected by workplace stress than men because of the principal role played by women in the provision of family care in addition to workplace responsibilities.

The result is also consistent with a report by the American Institute of Stress (2011) which suggests that females are reported to have higher job stress levels than males. Cohen and Janicki-Deverts

(2009) explain that women suffer prejudice and discrimination in organisations, especially those who occupy senior positions as a result of organisational policies and their colleagues, which make them vulnerable to workplace stress. However, the finding was inconsistent with Vanagas and Bihiri-Axelson (2013) who found that males in Africa exhibit higher job stress levels than females because males predominantly occupy high positions in organisations which come along with greater responsibilities, decision making and problem solving.

The next issue examined was job stress levels of the different categories of marital status. Findings from the study showed that out of the 27 whose job stress level was low 63.0 percent of them were married, the rest (37.0%) were single. Among the 104 moderately stressed respondents, 58.7 percent of them were married while 70 percent of the highly stressed respondents were also married (Table 8). These distributions reflect the marital status of the respondents, about 62 percent of them were married.

Table 8. *Stress Levels Among Categories of Marital Status*

Marital status	Level of stress			Total	Percent		
	Low	Moderate	High		% of low	% of moderate	% of high
Married	17	61	28	106	63.0	58.7	70.0
Single	10	39	21	60	37.0	37.5	27.5
Separated	-	4	1	5	-	2.5	2.5
<b>Total</b>	<b>27</b>	<b>104</b>	<b>40</b>	<b>171</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Survey data, (2018)

From the distribution on Table 8, those who were found to have high levels of job stress were the married people (70%), as against a percentage of 27.5 who were unmarried. This suggests that married people at the College are found to be more stressed than their unmarried counterparts as those married are expected to perform dual roles involving organisational and domestic responsibilities. This finding confirms that of Nagra and Arora (2013), who reported a higher mean score for married people in terms of levels of job stress. They explained that their findings may be due to the dual responsibilities of job and family since married workers have to devote extra time and effort to take care of their families, children, spouses, in-

laws and other domestic routines, in addition to job responsibilities. Consequently, married employees are not able to socialize and build peer relations and thus face conflicts at both work and home, which increase their job stress levels.

This finding complements the results of Garima and Kiran (2014), whose finding suggests that married people are required to make a lot of social adjustments in addition to their job responsibilities and this causes more stress and anxiety to them which negatively affects their health and development. However, the finding of this study did not support the results of Abirami (2012), and Olatunji and Mokuolu (2014). Abirami observed that being married is not a stress-causing factor as it is established that married people tend to get social as well as family support and this makes them both happy and successful in their professions and career lives and thus less stressed. Further, Olatunji and Mokuolu (2014) found that unmarried people were the most affected with respect to job stress as they lack social support and other social network resources, which make them unhappy and vulnerable to stress.

The level of education of employees has been linked with their job stress levels. The Job-Demand-Control Theory postulates that, people with higher education exhibit low stressful conditions because the theory believes that people with higher levels of education have greater control over their jobs. To ascertain this assertion, this study explored the relationship between job stress levels and levels of respondents' education. Evidence from Table 9 shows that 51.9 percent of lowly stressed respondents were 1<sup>st</sup> Degree holders. It also became evident that none of the lowly stressed respondents was a Ph.D. or a diploma holder. Apart from these peculiar cases, the preponderance of the rest of the distributions did not suggest any significant association between job stress level and the educational level of respondents ( $\chi^2 = 11.425$ , p-value = .325). The rest of the distributions of educational level by job stress level are captured in Table 9.

Table 9. *Distribution of Job Stress Levels and Educational Level*

Educational level	Level of stress			Percent			
	Low	Moderate	High	Total	% of low	% of moderate	% of high
Secondary	5	12	4	21	18.5	11.5	10.0
Diploma	-	7	2	9	-	6.7	5.0
1 <sup>st</sup> Degree	14	41	19	74	51.9	31.5	47.5
Masters	4	34	13	51	14.8	32.7	32.5
Ph.D.	-	4	1	5	-	3.8	2.5
Technical	4	6	1	11	14.8	5.8	2.5
<b>Total</b>	<b>27</b>	<b>104</b>	<b>40</b>	<b>171</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Survey data, (2018)

The findings on the association between job stress level and educational level as presented in Table 9, did not confirm those of Kula (2011), Rahmani et al. (2013), and Aftab and Khatoon (2013). Aftab and Khatoon established that people with low levels of education are normally associated with high levels of job stress. Kula (2011) on the other hand discovered that people with higher education are the most stressed in an organisation and this finding was confirmed by Rahmani et al. (2013). They explained that people with higher educational levels normally occupy managerial roles in organisations, which usually encompass a high degree of responsibility, thinking through the entire organisation and problem solving. The inconsistencies in the findings can be explained as the respondents with higher degrees sampled were academics who did not hold any managerial positions.

## Conclusion

Most empirical studies have found significant association between job stress levels and the demographic characteristics of individuals. Notwithstanding, this study only found significant association between job stress levels and sex and marital status of respondents. The study did not find any significant association between job stress levels and age and educational levels of respondents, thus the Transactional Theory of stress was not confirmed in this study. Moreover, females were found to have higher job stress levels than males. Finally, married people were more stressed than those who were not married.

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