

## **JOB DEMAND, AGE AND GENDER AS PREDICTORS OF OCCUPATIONAL HEALTH**

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### **ABSTRACT**

There is dearth in literature as far as the issue of occupational health is concerned especially outside the Western culture, like Nigeria as this study aimed at enlightening individual employee, organizations and the society at large about the significance of occupational health and its implications on the individual and the society. So, the study investigated job demand, age and gender as predictors of occupational health. The study adopted a cross-sectional survey design in which four hundred and twenty eight (428) employees participated in the study, comprising 218 males and 209 females from both private and public organisations in Ondo state. The age range was between 20-57 years with a mean age of 19.35 and SD of 3.63. Perceived Work Demand Scale was used to measure Job demand, while Occupation Health Scale was used to measure occupational health. Pearson Product Moment Correlation and Multiple Regression were employed to analyze the data. The findings from the study showed that significant relationship existed between job demand and occupational health. But age and gender had no significant relationship with occupational health. In addition the result of the multiple regressions revealed that only Job demand significantly predicted occupational health, but the three jointly significantly predicted occupational health. The implication of this is that occupational health of employees is being affected majorly by the level of their work demand. The study was discussed in line with the existing literatures and recommendations were made.

**Keywords:** Job Demand, age, gender, occupational health, employee.

### **INTRODUCTION**

A lot of researches had been done on occupational stress but little has been done on occupational health outside the Western culture. So, this study aims at investigating the predicting pattern of job demand, age and gender on occupational health. Health may be considered an important aspect of life that exerts its influence on other segments of life, because, without good health, an individual may not be able to perform and achieve his/her goals and aspirations in life. It is a healthy person that thinks about going to school or be an apprentice, engages in public or private jobs, being able to fulfill his/her role as an employee in a particular organisation. When an employee's health is failing, both the employee and the employer suffer the consequence resulting from such employee's inability to perform tasks assigned to him/her in the workplace. In fact, International Organisation of Labour (2009) reported that job demand is one of the most recognized concepts that affect the health of

employees and this could result to other consequences like lack of motivation for life, low level of productivity and insecurity of job, which automatically affects the production level of the organisation (Gutierrez, 2002).

Health is not concerned only with the absence of disease or infirmity, but with complete physical, mental and social well – being of an individual (WHO, 2008). Occupational health refers to the care of the total health of employees, which includes preventive health care, health promotion, curative health care, first aid, rehabilitation and compensation, where appropriate, as well as strategies for employees to recuperate as quick as possible from any health problem and return to work (WHO, 2008). Therefore, occupational health may be defined as all-round well-being of employees in relation to their jobs as well as measures taking to prevent injuries and diseases within the workplace. This suggests that as much as possible and of utmost importance, the management of any organisation should be concerned about the healthy status of their employees in order to get the best from them and avoid the stress and costs that employees' absenteeism and turnover could incur on the organisation.

ILO/WHO (2000) also define occupational health as a means of promoting and maintaining the highest level of physical, mental and social well-being of employees in all professions by preventing health problems, controlling risks and the adjustment of employees to their jobs and jobs to employee. This implies that the organisation should not only be concerned about what they can get from their employees, but should also be concerned about how to maintain and promote their health, knowing fully well, that healthy employees increases productivity and reduces employees turn-over. Researches reveal that employees in the United States and other developed countries experience work stress (job demand) as a serious challenge, so that about \$150 billion is being paid annually on occupational stress (occupational health problem), which do result to employees absenteeism, low productivity and low performance (Spector, Cooper, Sanchez, O'Driscoll, Sparks & Bermin, 2002). This suggests that for any organisation to avoid absenteeism on the part of employees, increase or boost production and experience high level of performance, the health of employees must be given proper attention. It has also been reported that jobs that require human interaction and relation could be more demanding as argued by Keighobadi (2006) argued that those jobs that involve interaction with other people could be more demanding and banking sector could not be left out in this.

In spite of the various research findings that employees' occupational health could be enhanced by promoting health programs in the workplace (e.g Smith, 2005), many organisations still pay little or no attention to occupational health problems of employees and how to reduce or alleviate it, even though most of the time, employee's health problem may be perceived as being connected to the workplace. Lu (2006) reported that poor physical health was as a result of overtime work, lack of job autonomy, poor quality of work, and exposure to hazards. The implication of this is that occupational health problem of employees mostly come from poor organisational climate of their workplace. This corroborated the work of Araki, Muto, and Asakura (1999), which found that overtime work was positively related to increased need for mental health management. A number of factors could affect the occupational health of employees from the workplace. These factors may include stress, unconducive work environment, too much responsibilities to attend to at the same time, non-flexible work-hours, perceived organisational injustice, poor or uncooperative leaders in the workplace, poor organisational support, e.t.c. Van der Hulst (2003) found that long working hours are associated with health problems such as cardiovascular disease, diabetes and fatigue. Moreover, availability of time factor as emphasized by Allen and Armstrong (2006)

is a necessary determinant in promoting health of employees by engaging in activities that could enhance their health status. Knowing fully well that time is a finite resource, whereas job and family demands are not and are always competing for time (Normaguchi & Bianchi, 2004).

Some studies have even established this that employees whose job demands consumes most of their time gave up health enhancing activities in order to meet time target for the completion of certain tasks assigned to them in the office (Backett & Davison, 1995; Brown & Trost, 2003; Normaguchi & Bianchi, 2004). In addition, the perception of organisational justice or fairness in treating the employees may also affect employees' occupational health. Studies have shown that organisational justice has influence on occupational health of employees (Elovainio, Kivimaki, & Vahtera, 2002; Kivimaki, Elovainio, Vahtera, & Ferrie, 2003; Tepper, 2001). From the study conducted by Elovainio et al, (2002), it was found that employees' absenteeism as a result of sickness was significantly higher for those reporting low perceived justice than those that perceived high justice at work. This suggests that when an employee perception of organisational justice is low or high, it affects the spirit with which he/she works. If the perception of organisational justice is high, the employee tends to be healthy and any sickness that might want to attack such individual can easily be overcome, but if the perception is low, such employee's morale will be low and any little attack on the occupational health of such employee will easily bring him/her down. Apart from the physical sicknesses, the psychological state of an individual employee may be an important determinant in enhancing the occupational health of employees. This is because; a psychologically composed employee has the tendency to perform better than a psychologically disturbed employee. Psychological imbalance disturbance may result in lack of concentration, indecisiveness, depression and low productivity.

Moreover, supportive supervisors and flexible working time had been established to have positive effects on perception of control which is associated with lower levels of depression, somatic complaints and blood cholesterol (Thomas, & Ganster, 1995). In the same vein, poor leadership has also been found to have impact on employee's occupational health (Kelloway, Sivanathan, Francis, & Barling, 2005). Another factor that could affect employee's health from work place is general harassment or sexual harassment which was found to be related to increased strange diseases (Rospenda, Richman, Ehmke, & Zlatoper, 2005). All these variables constitute job demand for employee which may exert negative influence on the occupational health of employees if not managed properly.

Fox, Dwyer,. & Ganster, (1993) defined job demand as factors that cause psychological stress in the workplace. While Jones and Fletcher (1996) describe it as the level of stimuli the workplace triggered in employees to perform some tasks and this most times has been perceived to bring about negative consequences especially when it demands extra effort that is beyond the usual way and method of accomplishing certain tasks (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). According to van der Doef & Maes (1999), job demands can further be described as work stressors which are often perceived in terms of time pressure, role overload or other role conflicts. De Jonge and Dormann (2003) in addition defined job demands as sections of the job that demands more physical, psychological or emotional effort or input. Demands from job may not only be negative some of the time, but it can also have positive impact depending on the circumstances in which its being applied (Warr, 1987). This implies that there are demands that could have positive impact, but this may depend on the individual resources that are available to buffer the effect of the demand on one's health.

Ballavia and Frone (2005) has established that demands that result from workplace can have negative influence on the health of the employees and van der Doef and Maes (1999) have even demonstrated that job demands had a strong link with the health of employees. Role ambiguity (lack of adequate knowledge of duties and roles to be performed in job assigned) and role conflict (conflict between the demand of a job and the needed skill to perform a particular assignment) have also been identified by Bersamin (2006) as part of the stressors that could increase the level of job demands, which may invariably affect occupational health of employees if not overcome. Rahman (2013) reported that stress, as a result of job demand affects performance of employees and the health and well-being of employees, in which long working hours and workloads were found to be the most recognized stressors, which still establish the fact that lack of sufficient time for exercise may not help their occupational health. Job demands as a result of stress could result in disorderliness in the functioning of the body systems as the systems try to adjust to changes imposed on it by job demands (Newstrom, 2010). This issue of stress had further been confirmed by Beh and Loo (2012), who reported that heavy workload, routine work and poor working condition trigger stress in the workplace which may result to occupational health problem if not managed properly

The commonest examples of psychological disorder are burnout, depression and psychosomatic disorder and some of the behavioural changes that could occur in a person under stress as a result of job demands are frequent absenteeism from work, turnover intention, addiction to alcohol and smoking, sleep disorder and other chronic diseases like hypertension and heart diseases (Croon, Sluiter, Blonk, Broersen & Frings-Dresen, 2004; Owolabi, Owolabi, Olaolorun & Olofin, 2012), although the age of these employees may be an important factor to consider, if they are to overcome occupational health problem.

Age deals with the number of years a person has lived or spent on the earth surface and this may be grouped into young age, middle age and old age. All these categories of age could be seeing in the work domain and their exposure to occupational health problem may vary. Vanagas, Bihari-Axelsson and Vanagiene (2004) reported that the effect of job strain, which may result into occupational health problem, is most pronounced among the middle age group. Apart from the contribution of age, gender in addition may be a crucial factor influencing occupational health. Moreover, the study carried out by Zwart, Broersen, Frings-Dresen and Dijk (1997) reported that the male employees between the age of 40-49 experienced highest level of occupational health problem like back, neck, upper and lower limbs.

Gender which has to do with being male or female has surfaced in many research studies may be as a result of its sensitive nature. In some studies (e.g. Middleton, Gunnell, Whitley, Dorling & Frankel, 2001; Wall, Jackson, Mullarkey, & Parker, 1996; Burke, 2002) reported that women were found to be prone to occupational health problems like mental illness, depression anxiety and other psycho-somatic problems, while men experience more heart problem as occupational health problem resulting from the performance of their duties in the workplace (Burke, 2002). In addition, Akintayo (2006) reported that women scored higher in work-family conflict than men, which may make them more susceptible to occupational health problems than men. On the contrary, no significant difference found between male and female employees working overtime according to the study conducted by Hulst, Veldhoven and Beckers (2006). The study between working women and housewives revealed that working women experienced higher life of life demand than the housewives but received more social support to cope. Also, stress level was generally high for both groups reporting symptoms like somatization, depression and anxiety (Chen & Lin, 1992). In addition,

Adebayo and Osagu (2013) revealed a significant effect of gender on burnout and that female workers were more prone to burnout than their male counterparts.

### Hypotheses

1. There will be a significant positive relationship between job demand, gender, age and occupational health.
2. Job demand, gender and age will significantly independently and jointly predict occupational health.

### Method

#### Design

This study adopted a cross-sectional survey design. It investigated the extent to which job age and gender predicted occupational health of employees in Ondo State. The independent variables were job demand, age and gender, while the dependent variable was occupational health.

#### Research Setting and Participants

Private employees from banking sector and public employees from government organisations residing in Ondo state participated in the study. Four hundred and twenty eight (428) employees participated in the study, comprising 218 males and 209 females from both private and public organisations in Ondo state. The participants include, 146 medical officers, 164 security officers and 118 bank employees and 68 had “O” Level certificate, 131 had NCE/HND certificate, 170 had HND/First degree and 59 had postgraduate degrees. 323 were married, 59 widows, 22 divorced, 18 separated and 6 singles were involved. The age range was between 20-57 years with a mean age of 19.35 and SD of 3.63. The length of service was ranged between less than a year to 23 years.

#### Instrument

**Perceived Work Demand Scale:** This scale was used to measure job demand and it was developed by Boyar, Carr, Mosley and Carson (2007). It contains five items measuring how the employees perceived the demands placed on them by their works in their various organizations. It is rated on a 5-point Likert-type scale with responses ranging from strongly disagree (1) to strongly agree (5). Sample items include: “My job requires all of my attention”. The procedural scale has a reliability coefficient of .83 Cronbach alphas, but the researcher obtained a reliability coefficient of .79. The highest score on this scale is 25, while the lowest score is 5.

**Occupational Health Questionnaire:** This was used to measure occupational health of employees. It was an adapted scale from general health questionnaire developed by Goldberg, Areias & Spitaels (1978). It contains nine items measuring psychological well-being of an individual in relation to their work. It is rated on a 4-point scale with responses ranging from much less than usual (1) to much more than usual (4). Sample item includes: “Feeling recently that you couldn’t overcome your difficulties?” Goldberg et al., (1978) general health questionnaire has a reliability coefficient ranging from .78 to .95 Cronbach’s alpha, but the researcher obtained a reliability coefficient of .68 and participant score ranges between 36 and 9.

#### Procedure

After necessary permission had been obtained from the relevant authorities of the organizations used, the questionnaire attached to an introduction letter explaining briefly the purpose of the research and assuring them of the confidentiality of their responses, the



questionnaires were distributed to them. Some were able to complete it as fast as possible, while some were retrieved at a later date. It took the researcher two months to gather in the data.

### Statistical Techniques

Pearson Product Moment Correlation was employed to test for relationship among the study variables and ANOVA was employed to test the independent and joint influence of the three variables on occupational health.

### Result

**Table 1:** Showing the relationship among study variables

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. <i>Job Demand</i>	19.35	3.63	1			
2. <i>Gender</i>	1.49	.50	-.21**	1		
3. <i>Age</i>	35.44	7.98	-.02	-.12*	1	
4. <i>Occupational Health</i>	13.26	3.94	.15**	.03	-.03	1

\*\*  $p < 0.01$ , \* $p < 0.05$ ,  $N=428$

The result in table 1 shows that job demand had significant relationship with occupational health [ $r(426) = .15$ ,  $p < .01$ ]. The table also revealed that age did not significantly correlate with occupational health [ $r(426) = -.03$ ,  $p < .01$ ]. Lastly, the table indicated that gender had no significant relationship with occupational health [ $r(426) = .03$ ,  $p > .01$ ].

**Table 2:** Showing the Multiple Regression on Occupational Health

<i>Predictors</i>	$\beta$	<i>t</i>	<i>R</i>	$R^2$	<i>df</i>	<i>F</i>
Job Demand	.17	3.345**	.167	.028	3, 414	3.95**
Gender	.07	1.335				
Age	-.01	-.210				

\*\*  $p < .01$

From the table 2 above, job demand significantly predicted occupational health ( $\beta = .17$ ,  $p < .01$ ). On the contrary, gender did not predict occupational health ( $\beta = .07$ ,  $p > .01$ ), and likewise age did not significantly predict occupational health ( $\beta = -.01$ ,  $p > .01$ ). Lastly from table 2 above, the three variables significantly predicted occupational health of employees ( $R^2 = .03$ ,  $F(3,414) = 3.95$ ,  $p < .01$ ).

### DISCUSSION AND CONCLUSION

This study examined job demand, age and gender as predictors of occupational health among three service occupation in Ondo state, Nigeria.

Hypothesis one which stated that significant relationship would exist between job demand and occupational health was confirmed by the result of the analysis in table 1. This confirmed the argument by the International Organization of Labour (2009), that job demand is one of the most recognized concepts that affects occupational health of employees. This study also supported Lu (2006), who reported that poor physical health was as a result of overtime work, lack of job autonomy, poor quality of work and exposure to hazards, which

are characteristics of job demand. In addition, the study carried out by Araki et al, (1999), reported that overtime work was positively related to increased need for mental management. The implication of these findings is that job demand is an important determinant of occupational health status of employees.

As part of hypothesis 1, gender was not significant in its relationship with occupational health and this negates the hypothesis. This study supported the report of Hulst et al (2006) that there was no significant difference between male and female employees doing overtime work. This finding contradicted the study conducted by Middleton et al, (2001); Wall et al (1999) and Burke (2002), which reported that women were found to be more susceptible to occupational health problems like mental illness, depression and other psychosomatic problems, while men experience more heart problem as a result of occupational health problem resulting from the performance of their duties in the workplace. This also negates the work of Adebayo and Osagu (2013), who revealed a significant effect of gender on burnout, which may result in occupational health problem and that female workers were more prone to burnout than their male counterparts.

Furthermore on hypothesis 1, age according to the result of the analysis in table 1, age was not significant in its relationship with occupational health. This therefore negates the hypothesis. This finding contradicted the work of Vanagras et al (2004), who revealed that job strain effect was more pronounced among the middle age group. Also, the report of Zwart et al (1997) that the male employees between the age of 40-49 experienced highest level of occupational health problem like back, neck, upper and lower limbs. The reason for this mixed result may be a function of type of occupation in which individual employee engaged in, which may serve as determinant of the level of hazard they may be exposed to in their workplace.

Hypothesis 2 which stated that job demand, gender and age would significantly independently and jointly predict occupational health was partially confirmed by the analysis in table 2. Job demand significantly predicted occupational health, while gender and age did not, but the three independent variables predicted occupational health. The aspect of job demand significantly predicting occupational health still supported the assertion of International Organization of Labour (2009), that job demand is one of the most important factors that could affect employees health in the workplace. It also supported Lu (2006) and Araki et al (1999), who reported that poor physical health was as a result of overtime work, lack of job autonomy, poor quality of work, exposure to hazards; and that overtime work was positively related to increased need for mental management.

The aspect of gender not predicting occupational health supported the findings of Hulst et al (2006) who revealed that gender had no correlation between male and female employees doing overtime work in relation to occupational health. On the contrary, this study negates Middleton et al (2001), Wall et al (1996) and Burke (2002), who reported significant difference in gender in relation to the type of occupational health problem male and female employees were susceptible to. This also negates the work of Adebayo and Osagu (2013), who revealed a significant effect of gender on burnout, which may result in occupational health problem and that female employees were more susceptible to burnout than their male counterparts.

In addition, age did not significantly predict occupational health and this did not support Zwart et al (1997) and Vanagras et al (2004), who revealed that the middle age group was

more prone to occupational health problems. The implication of this is that any age could be susceptible to occupational health problems, which may be a function of the workplace an employee performs his assignment. Lastly, from the second hypothesis, job demand, gender and age significantly jointly predicted occupational health, signifying that gender and age could not independently predict occupational health of employees, but could joint with other variables like job demand. This implies that among these three independent variables, job demand is a crucial determinant of occupational health among employees.

### Limitation

The study took place in Ondo states South-Western part, which is one of the thirty-six states in Nigeria. The study only made use of limited number of employees which was just a representative sample and the findings from this study should be generalized with caution since within Nigeria, different culture exists among the citizen. Also, what obtains in Nigeria may not be applicable elsewhere as regards government policies that deal with employer-employee relationship.

### Recommendation

Based on the findings above, organizations should be more concerned about the occupational health of their employees by looking into those factors that could increase the job demand of their employees. Also, role ambiguity and role conflict which has also been identified by Bersamin (2006) as part of the stressors that could increase the level of job demands, which may invariably affect occupational health of employees if not overcome must also must be avoided.

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