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RESEARCH ARTICLE

ASSESSMENT OF WORKPLACE STRESSORS IN OIL & GAS COMPANIES IN PORT HARCOURT Nwaogazie, Ify L* and Joy N. Ekwemuka

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ABSTRACT

This study investigated workplace stress in selected Oil and Gas companies in Port Harcourt Nigeria. The instrument for primary data collection is questionnaire approach designed to assess four stressful aspects of work (organizational culture; role & demands; work control/autonomy; and relationship & support); and also, the intervention measures and their effects in reducing workers' stress. Four groups of participants were involved in completing the questionnaire form, viz Managing Director, MD (8); Line Manager, LM(10); Line supervisor, LS(15); and workers (147). A sample of 180 out of 300 employees randomly selected, duly completed and returned the questionnaires administered to them, thus, giving a response rate of 60%. Kendall's statistic (W) was used to evaluate the degree of agreement amongst respondents on the issue of stress at workplace. For stress identification, Kendall's statistic (W) is distributed as follows: for MD (38.8%); LM (43%); LS (41%) and workers (13%). On the intervention, we have MD (47%); LM (53%); LS (48%) and workers (24.5%), respectively. The low values of Kendall's statistic (W) indicate a good reason to confirm stressful conditions in Oil and Gas companies studied. The results further reveals that members of staff may have resorted to individual interventions to improving their health conditions as against organizational interventions.

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INTRODUCTION

It is common knowledge that work-related stress can lead to increased absence due to illness, higher labour turnover and early retirement. Job Stress is the harmful physical and emotional response that occurs when the demand of the job do not match the capabilities, resources or needs of the worker. The four identified workplace stressors are:

- 1. Organizational Culture;
- 2. Roles & Demands:
- 3. Work Control Autonomy;
- 4. Relationship & Support. The next two cases are for interventions and evaluation of their effects, namely:
- 5. Implementation of Intervention options; and
- 6. Evaluation of Intervention to reduce stress at work.

Organizational Culture

Organizational Culture is taken as the shared beliefs and values guiding the thinking and behavioural styles of members in an industry or any workplace (Cooke and Rousseau, 1988). They believe that the culture in an organization provides a defined and commonly shared environment to which the individual must adapt to, fit in, and to succeed. Christo and Pienaar (2006) argued that the causes of Occupational Stress as relates to Organizational Culture include perceived loss of job and security, setting for long periods of time or heavy lifting, lack of safety, complexity of repetitiveness and lack of autonomy in the job. Also,

occupational Stress is caused by lack of resources and equipment; work schedules (such as working late shifts or overtime) and organizational climate are considered as contributors to employees stress.

Many researchers argue that the main cause of Occupational Stress is work overload (Topper, 2007; Buchanan and Huczynski, 2004). The increase in the work load in the organization without taking into account the availability of staff to carry out the tasks, may lead to occupational stress. Tehrani (2002) argued that stress is caused by unsympathetic organizational culture, poor communication between managers and employees, lack of involvement in decision-making, bullying and harassment, continual or sudden change, insufficient resources, conflicting priorities, and lack of challenges.

Job Roles and Demands

Everyone has a given capacity for work; and if a person's capacity is exceeded, the person may experience work-related stress. Some common work demands include:

- 1. Inadequate time and resources to complete jobs satisfactorily.
- 2. High mental task demands such as work that requires high-level decision making or prolonged periods of concentration.
- 3. Work that is monotonous and dull or does not utilize a worker's range of skills or previous training.

4. High emotional task demands, including work that is emotionally disturbing or requires high emotional involvement.

Each employer has an obligation to ensure that, as far as is reasonably practicable, the employees are not endangered by working for him/her. Employers must ensure that the demands placed on employees while at work are reasonable. This is not confined to the pure job the person does, but the role they have at work, from when they enter the workplace to when they leave.

Work Control/Autonomy

Work Control refers to how much influence a person has in meeting his task demands and how he performs his work in general (also known as autonomy). Unnecessary levels of supervision and surveillance, excessive responsibility but little authority or decision making and little or no say in how work is done can all lead to a stress response. A person's tasks need to be meaningful, varied and allowed for an appropriate degree of autonomy. It is possible for everyone in an organization (not just those in senior positions) to feel they have input into their work simply by the communication and consultation strategies that are utilized in the work team.

Many employers feel they must have total control over everything that goes on in the workplace. It is true that developing clear rules and procedures on certain issues are important (Earnshaw and others, 2001). If employees are to perform well, it is desirable for them to have control over elements of how and when their jobs are done. This applies to all levels-from the exploration line to the management board. A lack of control over their working life is one of the most common causes of stress for employees and can lead to disaffection, alienation and poor performance. Employers in oil and gas companies, who involve employees in making decisions often generate better ideas, make the most of people's talents and, by increasing motivation, reduce stress and improve performance.

Relationship and Support

Relationships are central to employees' experience of being at work. How well workers get on with bosses, colleagues or people they manage can have a huge impact on physical and mental wellbeing. Fairbrother and Warn (2003) indicated that conflicts between home and work, and the impact on personal relationships are also contributing factors to stress. Employers cannot always control relationships-personality clashes will occur and employers and employees often have very personal reasons for preferring to work with one person rather than another. A failure to build these relationships based on good behavior and trust can also lead to problems related to discipline, grievances and bullying.

Impacts of Workplace Stress

Stress is a highly personalized phenomenon and can vary widely even in identical situations for different reasons. The severity of job stress depends on the magnitude of the demands that are being made and the individual's sense of control or decision-making attitude he or she has in dealing with them.

The impacts of workplace stress can be understood in the context of the workplace stress process, as outlined by Kuper and Marmot (2003). The workers and the organizations involved suffer adverse impacts in many ways-exposure to stressors leads to distress, which in turn leads to adverse short-term responses such as high blood pressure and tenseness. Distress and short-term responses increase the risk of enduring health outcomes such as coronary heart disease, anxiety disorders and nicotine addiction. Workplace stress can affect health directly through physiological changes and indirectly by fostering a range of unhealthy behaviors. The stress process can be influenced by a wide range of modifying factors: social, biophysical, psychological, behavioral and genetic (Kuper and Marmot, 2003).

Consequences of Stress on Organization

Workplace stress is associated with a range of adverse consequences on organizations. Workplace stress reduces productivity through increased staff turnover, absenteeism (an employee's time away from work due to illness) and presenteeism (decreased on-the-job performance due to the presence of health conditions). Workplace stress causes illnesses, which result in increased absenteeism. Some estimate as much as 60% of absenteeism is attributable to stress-related illness. Workplace stress results in higher employee turnover; up to 40% of turnover has been attributed to stressors at work. High job control has been shown to predict lower absence and presenteeism. Other organizational outcomes linked to workplace stress include higher accident and injury rates, and higher healthcare expenditures and workers' compensation premiums (Darr, 2005).

METHODOLOGY

Study Area

The study Area is Port-Harcourt (4.46°N; 7.01°E), the capital of Rivers State, Nigeria (see Figure 1). It lies along the Bonny River (an eastern distributary of the River Niger, 66km upstream from the Gulf of Guinea. According to the 2006 Nigerian census, Port-Harcourt has a population of 1,382,592. Port-Harcourt features a tropical monsoon climate with lengthy and heavy rainy season and very short dry season. Only the months of December and January truly qualifies as dry season months in the city. The harmattan, which climatically influences many cities in West Africa, is less pronounced in Port-Harcourt. Port-Harcourt's highest precipitation occurs during September with an average of 367mm of rain. December on average is the driest month of the year, with an average rainfall of 20mm.

Data Collection

Participant

Fifteen questionnaires were randomly distributed each to twenty Oil and Gas servicing companies in Port Harcourt and 180 were duly completed and returned. Thus, the participant

response rate is 60%. The distribution is as follows: Managing Directors (MD) 8; Line Managers (LM) 10; Line Supervisors (LS) 15; and workers 147, respectively.



Figure 1 Map of Port Harcourt city, Rivers State Nigeria

Source: Google map (2014)

Questionnaire

The questionnaire design is of seven major parts. The first part contains six questions on the background information of the participant and his/her place of work (Company). Parts 2-5 contain five questions each to assess workplace stressors with respect to: i) Organizational Culture; ii) job roles and demand; iii) staff work control/autonomy; and iv) relationship and support. The last two parts (Parts 6 and 7) were designed with 6 and 5 questions each. Part 6 is to evaluate level of interventions to implementation for stressful aspect of work; and part 7 evaluates level of interventions aimed at reducing stress. Samples of the questionnaire design as well as frequency distribution for four groups of participants are as Presented in Tables 1-6.

Table 1 Respondents' frequency distribution on Workplace stressor: Organizational Culture

| Workplace suessor. Organizational culture | | | | | | | | | |
|---|-----------------------|---------------|----|----|-------|----|----|--|--|
| S | Organizational | Respondents * | | | er Op | | | | |
| No | Culture (Questions) | Respondents | AL | OF | SO | SE | NE | | |
| | There is lack of | MD | 4 | 2 | 1 | 1 | - | | |
| 1 | communication | LM | 3 | 4 | 1 | - | 2 | | |
| 1 | between my boss and | LS | 6 | 2 | 3 | 3 | 1 | | |
| | Í | Workers | 46 | 30 | 28 | 23 | 20 | | |
| | | MD | 3 | - | 3 | 2 | - | | |
| 2 | Staff are consulted | LM | 4 | 2 | 1 | 2 | 1 | | |
| 2 | about change at work | LS | 4 | 2 | - | 3 | 6 | | |
| | | Workers | 41 | 25 | 28 | 18 | 35 | | |
| | | MD | 4 | 6 | - | - | - | | |
| 3 | Staff are recognized | LM | 6 | 4 | - | - | - | | |
| 3 | for Hard work | LS | 11 | 2 | 1 | 1 | - | | |
| | | Workers | 51 | 20 | 20 | 27 | 29 | | |
| | M 0 1 1 | MD | 2 | 3 | 2 | 1 | - | | |
| | My Organization | LM | 4 | 2 | 1 | 2 | 1 | | |
| 4 | does not have a | LS | 8 | 5 | 2 | - | - | | |
| | culture of blame | Workers | 55 | 24 | 21 | 20 | 27 | | |
| | | MD | 3 | 4 | - | 2 | - | | |
| _ | I am not pressured to | LM | 5 | 1 | 2 | 1 | 1 | | |
| 5 | work long hours | LS | 8 | 3 | 1 | 2 | 1 | | |
| | work long hours | Workers | 49 | 28 | 30 | 16 | 24 | | |

[±] AL = Always, OF = Often, SO = Sometimes, SE = Seldom & NE = Never; * MD = Managing Director, LM = Line Manager, LS = Line Supervisor

Procedure

Prior to the distribution of the questionnaires, a pilot study was conducted with few sample members of each of the twenty Oil and Gas Companies to test the reliability and validity of the instrument. This was done in order to

incorporate their views and perceptions. There after, a convenience random sampling of 15 employees each from the 20 selected Oil and Gas Companies totaling 300 employees were administered the questionnaires. The questionnaire approach served as the primary source of data collection for this study.

Table 2 Respondents' frequency distribution on Workplace stressor: Roles and Demands

| CONT | Roles and Demands | D 1 4 . * | A | ption | s [±] | | |
|------|--|---------------|----|-------|----------------|----|----|
| S/N | (Questions) | Respondents * | | OF | | SE | NE |
| | | MD | 6 | 2 | - | - | - |
| 1 | I am clear on what my duties | LM | 4 | 4 | - | 2 | - |
| 1 | and responsibilities are | LS | 8 | 4 | 1 | 2 | 1 |
| | | Workers | 60 | 39 | 19 | 25 | 4 |
| | Staff do not feel that the job | MD | 3 | 3 | - | 2 | - |
| 2 | requires them to behave in | LM | 4 | 1 | 3 | 2 | - |
| ۷ | conflicting ways | LS | 8 | 3 | 1 | 1 | 2 |
| | confineing ways | Workers | 57 | 28 | 22 | 38 | 2 |
| | Confusion does not exist on how everyone fits in | MD | 3 | 2 | 1 | - | 2 |
| 3 | | LM | 4 | 2 | 1 | 2 | 1 |
| 3 | | LS | 7 | 4 | 2 | 2 | - |
| | | Workers | 40 | 30 | 32 | 35 | 10 |
| | Clarity of understanding of | MD | 4 | 2 | 2 | - | - |
| 4 | , | LM | 4 | 3 | 2 | - | 1 |
| 4 | priority or multiple priorities | LS | 8 | 2 | 3 | 1 | 1 |
| | exist | Workers | 43 | 29 | 22 | 29 | 24 |
| | I do not noglect some tosks | MD | 3 | 4 | - | - | 1 |
| 5 | I do not neglect some tasks | LM | 3 | 3 | 2 | 1 | 1 |
| 3 | due to time pressure or | LS | 6 | 4 | 2 | 1 | 2 |
| | unrealistic deadlines | Workers | 63 | 23 | 25 | 21 | 15 |

[±] AL = Always, OF = Often, SO = Sometimes, SE = Seldom & NE = Never; * MD = Managing Director, LM = Line Manager, LS = Line Supervisor

Table 3 Respondents' frequency distribution on Workplace stressor: Work Control/ Autonomy

| C'/NT | Work Control/ Autonomy | Dogwondonta * | Answer Options [±] | | | | | |
|-------|---------------------------------------|---------------|-----------------------------|----|-------|----|----|--|
| 3/1N | (Questions) | Respondents * | \mathbf{AL} | OF | SO | | | |
| | | MD | 4 | 2 | - | 2 | - | |
| 1 | Staff have a say on how | LM | 3 | 5 | 1 | - | 1 | |
| 1 | work is done | LS | 6 | 4 | 2 | 1 | 2 | |
| | | Workers | 61 | 30 | 23 | 18 | 15 | |
| | | MD | 3 | 2 | 2 | - | 1 | |
| 2 | Staff are able to mlan yearls | LM | 3 | 3 | 1 2 - | 1 | 1 | |
| 2 | Staff are able to plan work | LS | 8 | 4 | 2 | - | 1 | |
| | | Workers | 67 | 30 | 6 | 24 | 20 | |
| 3 | Staff are involved in decision making | MD | - | 6 | - | 2 | - | |
| | | LM | 3 | 2 | 3 | 2 | - | |
| 3 | | LS | 5 | 3 | 5 | 1 | 1 | |
| | _ | Workers | 11 | 40 | 25 | 51 | 20 | |
| | | MD | 4 | 3 | - | 1 | - | |
| 4 | Interruptions are not | LM | 5 | 2 | 1 | 1 | 1 | |
| 4 | excessive | LS | 2 | 7 | 5 | 1 | - | |
| | | Workers | 25 | 23 | 34 | 26 | 39 | |
| | Sufficient Knowledge of | MD | 2 | 3 | 3 | - | - | |
| 5 | work and organizational | LM | 3 | 4 | 3 | - | - | |
| | plan | LS | 4 | 4 | 4 | 2 | 1 | |
| | are needed | Workers | 52 | 41 | 29 | 20 | 5 | |

[±] AL = Always, OF = Often, SO = Sometimes, SE = Seldom & NE = Never; * MD = Managing Director, LM = Line Manager, LS = Line Supervisor

Data Analysis

The questionnaire was designed on five answer options namely, never, seldom, sometimes, often, and always. The ratings for each of the answer options are as follow: 5, 4. 3, 2, and 1, respectively. A frequency table was constructed to record the responses for each question. Descriptive statistics was used to analyze the data while Kendall's Coefficient of Concordance (W) was adopted to test for the degree of

Table 4 Respondents' frequency distribution on Workplace stressor: Relationship and Support

| S/N | Relationship and Support | Respondents * | | | ons [±] | | |
|------|--|---------------|----|----|------------------|-------|----|
| 5/11 | (Questions) | respondents | AL | OF | SO | SE | NE |
| | | MD | - | 3 | 4 | 1 | - |
| 1 | Together with my family and | LM | 4 | 2 | 4 | - | - |
| 1 | friends | LS | 4 | 5 | 3 | 3 | - |
| | | Workers | 33 | 36 | 24 | 33 | 21 |
| | Lam not subjected to personal | MD | 1 | 3 | 4 | 1 - | - |
| 2 | I am not subjected to personal harassment in the form of | LM | 5 | 4 | - | 1 | - |
| 2 | unkind words or behaviour | LS | 2 | 4 | 5 | 2 2 | 2 |
| | unking words of benaviour | Workers | 50 | 29 | 32 | 15 | 21 |
| | I receive proper support from peers and colleagues | MD | 4 | 1 | 2 | 1 | - |
| 3 | | LM | 3 | 4 | 3 | - | - |
| 3 | | LS | 2 | 7 | 3 | 2 | 1 |
| | | Workers | 40 | 48 | 18 | 16 | 25 |
| | | MD | 1 | 4 | 3 | - | - |
| 4 | I receive adequate support from | LM | 3 | 5 | 1 | 1 - 1 | 1 |
| 4 | supervisors | LS | 5 | 6 | 4 | - | - |
| | | Workers | 53 | 40 | 20 | 13 | 21 |
| | | MD | - | 3 | 4 | 1 | - |
| 5 | I have the ability to balance | LM | 2 | 2 | 4 | 1 | 1 |
| 3 | work and home | LS | 2 | 4 | 2 | 2 | 5 |
| | | Workers | 21 | 25 | 36 | 15 | 50 |

[±] AL = Always, OF = Often, SO = Sometimes, SE = Seldom & NE = Never; * MD = Managing Director, LM = Line Manager, LS = Line Supervisor

Table 5 Respondents' frequency distribution on intervention implementations for workplace stressors

| | * | | | | | | |
|-----|-------------------------------|---------------|-------------------|-----|------|-------|-----------------|
| | Intervention to | | An | swe | r Op | otion | ıs [±] |
| S/N | implementation (Questions) | Respondents * | SA | A | I | D | SD |
| | The company ensures that | MD | - | 4 | 3 | 1 | - |
| 1 | the workloads is in line | LM | 1 | 4 | 2 | 3 | - |
| 1 | with workers' abilities and | LS | 4 | 4 | 6 | 1 | - |
| | resources | Workers | 15 | 13 | 33 | 36 | 50 |
| | Job are designed to provide | MD | 4 | 2 | - | 2 | - |
| 2 | meaning and there are | LM | 3 | 5 | - | 2 | - |
| 2 | opportunities for workers | LS | 5 | 6 | 1 | 3 | - |
| | to use their skills | Workers | 53 | 93 | 1 | - | - |
| | There is an increased | MD | 4 | 2 | - | 2 | - |
| 3 | employee participation in | LM | 3 | 5 | 2 | - | - |
| 3 | work planning and | LS | 5 | 6 | - | 4 | - |
| | decision making | Workers | 4 3 5 49 | 27 | 71 | - | - |
| | Employee's needs are | MD | 2 | 6 | - | - | - |
| 4 | accessed and integrated | LM | 6 | 3 | - | 1 | - |
| + | into planning of work | LS | 6 | 3 | 6 | - | - |
| | schedule | Workers | 46 | 29 | 71 | 1 | - |
| | Health screening for stress | MD | 8 | - | - | - | - |
| 5 | symptoms, hypertension | LM | 10 | - | - | - | - |
| J | are conducted for staff | LS | 15 | - | - | - | - |
| | are conducted for staff | Workers | 84 | 41 | 1 | 21 | - |

[±] SD = Strongly Agree, A = Agree, I = Indifferent, D = Disagree & SD = Strongly Agree; * MD = Managing Director, LM = Line Manager, LS = Line Supervisor

agreement between respondents on the questionnaire parameters. Kendall's coefficient is a non-parametric statistic used to assess agreement among respondents (Nwaogazie, 2011). Its values range from zero (no agreement) to unity (complete agreement). Intermediate values signify low or high degree of unanimity between respondents.

The formula for calculating Kendall's Coefficient (W) is given as Equation (1):

$$W = \frac{12\sum(R_{\bar{k}} - \bar{R})^2}{m^2 n(n^2 - 1)} \tag{1}$$

Where R_i is given by Equation (2) and it represents the total rank or rating given by respondents; m represents the total

number of respondents while n represents the total number of objects (in this case, questions); and \overline{R} is the mean value of the total rating and is given by Equation (3):

$$R_i = \sum_{j=1}^m r_i * j$$
 and
$$\bar{R} = \frac{1}{2}m(n+1)$$
 (2)

Where i is an object, given a rank/rating, r_i by respondent j.

Table 6 Respondents' frequency distribution on effects of Interventions on workplace stressors

| S/N | Evaluation of effects of | D* | Aı | Answer Options [±] | | | | | |
|------|------------------------------|---------------|----|-----------------------------|----|----|----|--|--|
| 3/IN | Intervention (Questions) | Respondents * | SA | A | I | D | SD | | |
| | | MD | 2 | 3 | - | 3 | - | | |
| 1 | There is an improvement | LM | 5 | 3 | 2 | - | - | | |
| 1 | of mental health | LS | 10 | 3 | 1 | - | 1 | | |
| | | Workers | 45 | 26 | 53 | 12 | 11 | | |
| | There is satisfaction with | MD | 3 | 2 | - | - | 3 | | |
| 2 | salary and being an | LM | 3 | 3 | - | 4 | - | | |
| 2 | employee in the | LS | 1 | 6 | 7 | - | 1 | | |
| | organization | Workers | 40 | 27 | 4 | 7 | 69 | | |
| | | MD | 4 | - | 1 | 1 | 2 | | |
| 3 | There is a reduction in | LM | 3 | 4 | 2 | 1 | - | | |
| 3 | sickness and/or absence rate | LS | 8 | 2 | - | 1 | 4 | | |
| | | Workers | 36 | 28 | 5 | 28 | 50 | | |
| | There is an increase in | MD | 5 | 3 | - | - | - | | |
| 4 | commitment to the | LM | 3 | 5 | 1 | 1 | - | | |
| + | organization | LS | 7 | 3 | 4 | 1 | - | | |
| | organization | Workers | 57 | 23 | 20 | 27 | 20 | | |
| | | MD | 4 | 1 | 1 | 2 | - | | |
| 5 | There is increase in | LM | 4 | 4 | 1 | 1 | - | | |
| 5 | production turnover | LS | 7 | 4 | 1 | 3 | - | | |
| | | Workers | 61 | 47 | 30 | 5 | 4 | | |

[±] SD = Strongly Agree, A = Agree, I = Indifferent, D = Disagree & SD = Strongly Agree; * MD = Managing Director, LM = Line Manager, LS = Line Supervisor

RESULTS

Through the questionnaires instrument the evaluation of stressors with respect to the four influencing factors were made. The degree of agreement amongst the respondents on stressful aspect of work due to organizational culture is as shown in Table 7. Table 8 shows how the Kendall's statistic, W was calculated. R_i for WPSQ1 was calculated from Table 7 using Equation (2) as follows:

$$R_i = (46 \text{ x 5}) + (30 \text{ x 4}) + (28 \text{ x 3}) + (32 \text{ x 2}) + (20 \text{ x 1}) = 518.$$

 \overline{R} is evaluated using Equation (3), viz:

 $\bar{R} = \frac{1}{2} 147 (5 + 1) = 441$ (same for all WPSQ parameters or questions); and

Table 7 Workers Response to Questions on work stress due to Organizational Culture

| S | Questions on Organization | Parameter | Resp | ond | ents (| Optio | ons± |
|----|--|-----------|------|-----|--------|-------|---------------|
| No | Culture (Parameter) | rarameter | NE | SE | SO | OF | \mathbf{AL} |
| 1 | There is lack of communication between my boss and I | WPSQ 1¥ | 46 | 30 | 28 | 32 | 20 |
| 2 | Staff are consulted about change at work | WPSQ 2 | 41 | 25 | 28 | 18 | 35 |
| 3 | Staff are recognized for hard work | WPSQ 3 | 51 | 20 | 20 | 27 | 29 |
| 4 | My organization does not have a culture of blame | WPSQ 4 | 55 | 24 | 21 | 20 | 27 |
| 5 | I am not pressured to work long hours | WPSQ 5 | 49 | 28 | 30 | 16 | 24 |

*WPSQ 1 = Workplace Stress Question-1 (taken as a parameter for Kendall's W computation); * NE = Never; SE = Seldom; SO = Sometime; OF = Often; and AL = Always

$$W = \frac{12\sum(R_i - \tilde{R})^2}{m^2 n(n^2 - 1)} = \frac{12(15,103)}{147^2(5)(5^2 - 1)}; \quad W = 0.07 = 7\%$$

Table 8 Evaluation of Kendall's statistic (W) on Workers Response to OC^{\pm}

| S/No | Parameter | Mean | R | | $(\mathbf{R}-)^2$ |
|------|-----------|----------|-----|-----|-------------------|
| 1 | WPS Q1 | 3.401361 | 518 | 441 | 5929 |
| 2 | WPS Q2 | 3.129252 | 460 | 441 | 361 |
| 3 | WPS Q3 | 3.251701 | 478 | 441 | 1369 |
| 4 | WPS Q4 | 3.408163 | 501 | 441 | 3600 |
| 5 | WPS Q5 | 3.421768 | 503 | 441 | 3844 |
| | | | | | 15,103 |

Note: *OC = Organizational Culture, R_i = Total Rank, = Mean Value of total rank for Workers

To assess the degree of agreement amongst the four groups of participants (respondents), it is necessary to display the Kendall's coefficient of concordance (W) in bar chart. For the four workplace stressors, we have Organizational culture (Figure 2); roles and demands (Figure 3); work control/autonomy (Figure 4) and relationships and support (Figure 5), respectively. Similarly, Figures 6 and 7 show the distributions of Kendall's statistic (W) amongst the four groups of respondents for intervention implementation and evaluation of the effects of intervention for stressful work in selected oil and gas companies in Port Harcourt.

DISCUSSION

The distribution of Kendall's statistic (W) for four stressful factors (see Figures 2-5), viz organizational culture, roles and demand, work control/autonomy, and relationships and support for managing directors, line managers, supervisors and workers indicate lack of agreement. Given that 13 out of 16 bar graphs (see Figures 2-5) are less than 50% indicates low degree of agreement amongst the managing directors in the Oil and Gas companies studied. Same is true amongst the line managers, line supervisors and workers. There is good reason to confirm stressful conditions in the oil and gas companies studied. Out of 147 workers of oil and gas companies that responded to the questionnaires on the identification of stressful aspects of work showed 13% degree of agreement on Kendall's statistics (W) (see Figures 2-5 for average values). This reveals that workers are stressed. Individual characteristics such as personality, values, goals, age, and gender, level of education and family situation influence one's ability to cope.

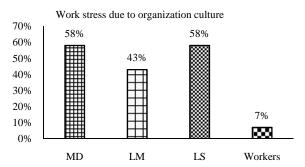


Figure 2 Kendall's W on Stressor-Organization Culutre

The low values of Kendall's statistic (see Figure 6) for managing directors (19%); line managers (21%); line supervisors (18%) and workers (17%), respectively, indicate that the respondents are not in agreement on interventions. On the part of workers, majority of them either disagreed or are

indifferent about the interventions to be implemented if available in the company. Some members of staff of the Oil and Gas Companies may have identified some stressful aspects of work while others have not. Also, majority of the staff indicated that supposed interventions as outlined in the questionnaire administered (see Tables 5&6) were not implemented as reflected in the low value of Kendall's statistic (W).

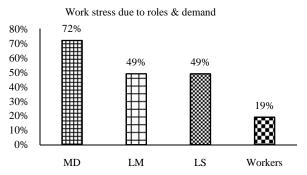


Figure 3 Kendall's W on Stressor-Roles & Demand

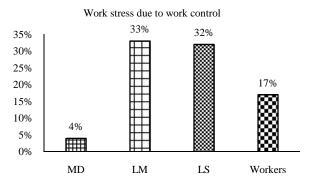


Figure 4 Kendall's W on Stressor-Work Control

Work stress due to relationship & Support

46%

40%

30%

21%

24%

9%

MD

LM

LS

Workers

Figure 5 Kendall's W on Stressor-Relationship and Support

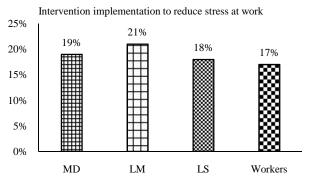


Figure 6 Kendall's statistic (W) for Intervention implementation

Seventy eight out of 147 respondents (workers) are in

agreement on the positive effects of interventions, while 69 are in disagreement. The foregoing values when translated to Kendall's statistic (*W*) yield a value of 24.5%. This value is much below 50% indicating that the supposed preventive measures introduced in the various companies seem to have minimum impact on workers.

On the average, the Kendall's statistic (W) on evaluation of the effects of intervention measures for Managing Directors, Line managers and Line supervisors are 47, 53.6 and 48.9% respectively (see Figure 7). The responses reveal that there may be an improvement in the Oil and Gas companies operations. The Line managers in particular reported an increase in mental health and production turnover. However, there is no notable change as per other wellbeing indicators. For Line supervisors, they observed positive changes in intervention indicators such as job satisfaction, commitment to organization and mental health. The success of the oil and gas companies is not solely dependent on top management. The support of the Managing Directors is needful in order to obtain commitment of the staff and line managers and supervisors. By motivating the line supervisors from the onset, it is easier to have their support when implementing intervention measures. Another interesting finding (see Figure 7) is that members of staff may have resorted to individual interventions to improving their health as against organizational interventions.

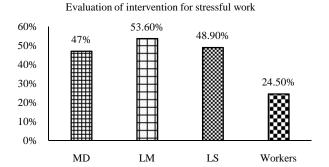


Figure 7 Kendall's statistic (W) for Interventions for stressful work

CONCLUSION

The study revealed that there is good reason to confirm stressful conditions in Oil and Gas companies in Port Harcourt. This is supported by the low average values of Kendall's statistic (W) on four workplace stressors culture; roles & demand; (Organizational control/autonomy; and relationship & support) for Managing Directors (38.8%), Line managers (43%), Line supervisors (41%) and workers (13%). On intervention measures such as redesign/restructuring, communication, education programs, participation and autonomy, low values of Kendall's statistic (W) were obtained for managing Director (19%), Line manager (21%), Line supervisor (18%) and workers (17%), respectively. The distribution indicates that the four groups of respondents are not in agreement on the effects of interventions. However, 78 out of 147 workers are in agreement on the positive effects of intervention, while 69 are in disagreement. This study further reveals that members of staff of Oil and Gas companies may have resorted to individual interventions to improving their health as against organizational interventions.

Recommendations

The following are the recommendations to ensure effective stress management in Oil and Gas companies (workplace):

- i. The work load in the Oil and Gas Companies should correspond with the availability of work force;
- ii. Employees should be provided with variety in their jobs, learning opportunities and autonomy;
- iii. Members of staff should be encouraged to give feedback. Also, they should be involved in decision making and in the way work is carried out;
- iv. Employees should be encouraged to build effective teams in which they are given responsibility for outcomes:
- v. Management of the Oil and Gas firms should review performance with employees to identify strengths and weaknesses and agree on personal objectives and training and development plans to help meet them;
- vi. Communication channels in the organization should be open to all employees and they should be allowed to participate in the decision-making process of the organization;
- vii. Risk assessments and control measures should be put in place in the Oil and Gas companies so that employers can be assured that, through their management systems, the demands placed on employees are reasonable and employees know how to cope with these demands;
- viii. Managers should also involve employees more formally through consultation. This may mean setting up procedures for employers to discuss major issues affecting the organization;
- ix. Employees must have access to the right information, and at the right time, in order to make an effective contribution; and
- x. Screening for stress symptoms as well as hypertension should be done quarterly for staff of the Oil and Gas Companies.

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