



ACHIEVING WORK-STRESS REDUCTION IN THE NIGERIAN PETROLEUM INDUSTRY: HOW EFFECTIVE ARE THE STRATEGIES?

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Article history:	Abstract:
Received: 14 th May 2023	This study was conducted to find out how effective the strategies adopted by supervisors in managing work related stress in the Nigerian petroleum industry are. The study was grounded on the Person–Environment fit theory, with a multiple case study design as the choice design. The population for the study was supervisors in petroleum companies in the Nigeria Niger Delta region who have successfully applied strategies to reduce work- related stress. Purposive sampling technique was adopted to sample six supervisors from three companies to participate in the study. The instrument for data collection was a structured interview guide and company document analysis. Results from the study showed that supervisor–worker relationship, creating a culture of co-worker support and mentoring of workers on stress management were part of the effective strategies does not require any significant financial implications from the company. Other effective strategies identified in the study that require some significant financial implications on the part of the company include workers training to enhance competency for assigned roles, hiring of additional workers to enable effective time-off schedule and shift rotation, investments in occupational health programs, payment for offsite recreational or social events, and workers compensation to ensure worker–pay match. The study concluded that appropriate utilization of these strategies may reduce the adverse effects of work related stress on worker’s health and improve profitability of the petroleum industry.
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INTRODUCTION

Stress is believed to be a state of the mind as well as the body. This may be created by certain biochemical reactions in the human body as well as psychological responses to situations, and is reflected by a sense of anxiety, tension and depression (Lederer et al., 2017). This, according to researchers, is caused by such demands by the environmental forces or internal forces that cannot be met by the resources available to the person. The greater the gap between the demands and the resources, the greater is the degree of stress (Malterud et al., 2016). Some of the individual strategies for coping with stress include: readjustment of life goals, support from family and friends, planning certain events of life in advance and keeping the body in good physiological shape by proper diet, exercise, yoga, meditation and biofeedback. Some of the organizational strategies for coping with stress include organized health maintenance facilities as a part of the organizational life, matching of employees qualifications with job requirements, job enrichment and job work redesigns, equitable performance appraisal and reward systems, participation in organizational decision making and building team spirit in the sense that there should be no interpersonal conflict within the group. All these strategies or a combination thereof should be applied to make the work environment less stressful

Occupational stress is a widespread occurrence in many nations of the world, including Nigeria. It is a contributing factor to absenteeism, disease, injury and lowered productivity. In general stress management programs in the work place that include relaxation therapies, exercise, and biofeedback have been shown to reduce the physiological symptoms such as hypertension, and increase job satisfaction and job performance. Strategies to implement a successful stress management program include incorporating the coping activities into one's daily schedule, monitoring one's symptoms and stressors, and being realistic in setting up a schedule that is relevant and attainable (Osibanjo et al., 2016). A short form of meditation, daily exercise program and the use of heart rate or thermal biofeedback can be helpful to a worker experiencing occupational stress. Unresolved work stress contributes to burnout, compassion fatigue, disengagement, and other work-contextualized factors. The impact of occupational stressors extends to the organization in a negative fashion as well.

The conceptual framework for the study is the person–environment (P–E) fit theory postulated by Caplan (1975). When factors in the work environment do not match the needs of the worker, there is the potential for inducement of work-related stress (Osibanjo et al., 2016). Based on the P–E fit theory, the amount of stress a worker experiences is directly related to the degree of mismatch between the worker and the workplace factors (Jee-Seon & Kim, 2020; Osibanjo et al., 2016). The key concept from the theory for this study is worker–environment mismatch. The lack of fit between the worker and the work environment can be considered from different perspectives: person–organization fit, person–job fit (Jee-Seon & Kim, 2020; Osibanjo et al., 2016), person–pay fit and person–person fit (Osibanjo et al., 2016). To eliminate work-related stress, there should be an appropriate match between the worker and organizational factors, job design and control, remuneration, and fellow workers (Dar & Rahman, 2020; Jee-Seon & Kim, 2020). When the workplace factors do not align with a worker’s needs, there is the potential to induce stress that can affect the worker’s health and productivity (Castner, 2020; Osibanjo et al., 2016). To address any misfit, the industry should focus on developing strategies to promote better quality of life and improved working conditions for its professionals.

MATERIAL AND METHODS

The study adopted a multiple case study design. This design was adopted because it is appropriate when a researcher is answering a research question using several cases and when exploring the similarities and differences between two or more cases (Lederer et al., 2017; Saunders et al., 2015; Yin, 2014). Also, a multiple case study approach was found to be appropriate for gathering data from multiple organizations and contexts and for analysis of health and working conditions in the organizations. The design became the choice approach to enhance triangulation of data from several sources. The population under study was supervisors in petroleum companies in the Nigeria Niger Delta region who have successfully applied strategies to reduce work-related stress. The sample size was determined based on context and the study population. According to Malterud et al., 2016, in a multiple case study design, a sample size of six to ten participants with diverse experiences may be adequate to achieve data saturation. In the study, purposive sampling technique was adopted to sample six supervisors from three companies to participate in the study. This was because purposive sampling increases the likelihood of accessing rich information and increases the efficiency in the sampling process by using the most informative candidates to enhance the value of the collected data (Griffith et al., 2016; Palinkas et al., 2015). To ensure that the right supervisor was sampled, contact was made with each organization’s officer in-charge of research to identify the supervisors who had self-reported as experienced in work-related stress and had been recognized or rewarded by their organization for successfully implementing strategies to reduce work-related stress. This is because focusing on information-rich samples yields more insights and in-depth understanding than empirical generalizations of samples (Benoot et al., 2016). The participants were interviewed until responses did not generate new information; the point of data saturation. In the study, ethical protection of research participants was upheld. Agreement of the participants were also sought for audio recording of the interview session. The participants were told of their right to review the transcript of the audio record. To maintain the confidentiality of the research participants and their organizations, pseudonyms were used to represent the participants and the organizations. Semi-structured interviews were used to collect the data for the study. Other documents reviewed were safety bulletins, information posted on the general notice boards, employee handbook, and company procedures related to management of work-related stress. This was to enhance objectivity and provide confirmatory evidence (Owen, 2014; Yin, 2014). Methodological triangulation was used to validate the results of the data from the different sources.

RESULTS AND DISCUSSION

Based on the responses of the research participants, the strategies used for managing work-related stress in the petroleum industry were grouped into two: the strategies that involve additional or significant financial investments and the strategies that may not involve additional or significant financial investment. The different groupings are depicted in Figure 1. The data from document review are in alignment with the grouping. A review of the strategies indicated inter-relationship between the strategies that require additional or significant financial investment and the strategies that may not require additional or significant financial investment. The implication is that the strategies that may not involve additional or significant financial investment may enhance the effectiveness of the strategies that require additional or significant financial investment and vice versa.

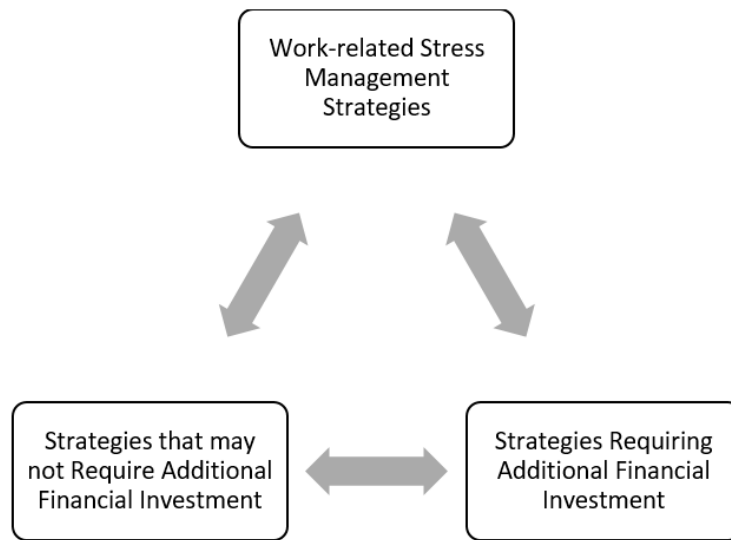


Figure 1: Grouping of the Strategies for Managing Work-Related Stress

Strategies with no/minimal financial investments: The identified strategies which requires no or minimal financial investment by the organizations include (a) provision of healthy and conducive working conditions, (b) elimination of role ambiguity, (c) flexible working conditions, (d) reward and recognition (e) job enrichment and rotation, (f) periodic individual and group counseling sessions, (g) training on stress management, (h) workers counselling, and (i) recreational activities. The respondents in this study agreed with these recommendations and indicated in practice how such strategies have been successfully applied.

Some of the strategies that supervisors have successfully used to manage work-related stress do not require additional or significant financial investment by the supervisors or organizational leaders. Figure 2 shows a summary of the themes on the strategies.

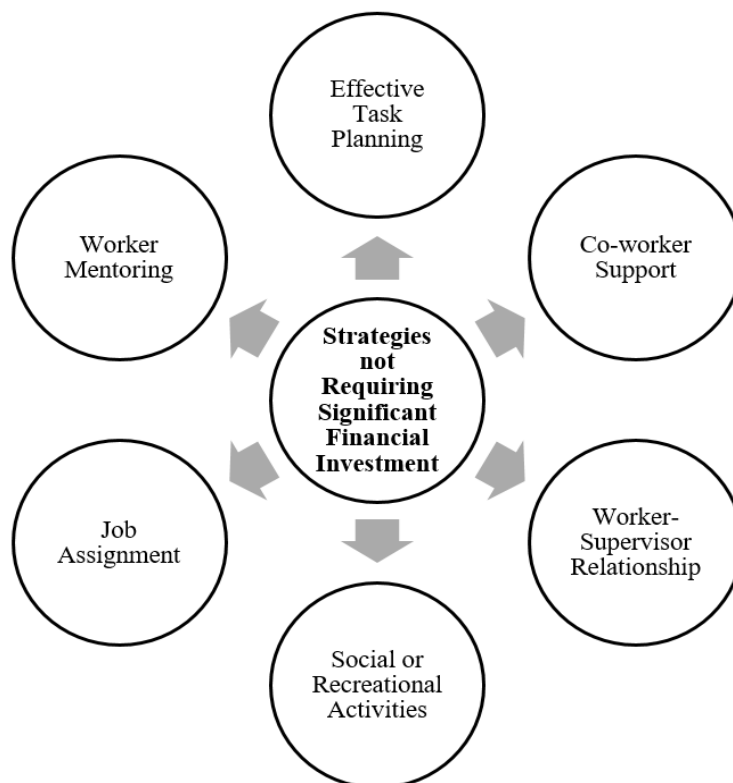


Figure 2: Strategies Not Requiring Significant Financial Investment

Many researchers observed that adjustments in the workplace to improve a match between the workers and the workplace factors can help in reducing work-related stress even without additional or significant financial cost (Doruk & Mantler, 2018; Feddeh & Darawad, 2020; Gu & Wang, 2019; Kleis & Kellogg, 2020; Lissah et al., 2020). The findings from this study confirmed how some of the adjustments at the workplace enhanced worker-job fit, worker-organization fit, worker-environment fit, worker-vocation fit, worker-worker fit, and worker-supervisor fit in line with the P-E fit theory thereby reducing work-related stress. The respondents identified effective supervisor-worker relationship, a strategy that does not require any additional financial investment, as the most successful of the strategies they have

used to manage work-related stress. When a worker experiences supervisor support, there is emotional or psychological response from the worker, which results in a positive impact on job satisfaction.

Environmental factors contribute to work-related stress. Since worker-supervisor relationship is part of the social environment with potential to contribute to work-related stress, effective worker-supervisor relationship enhances a culture of supervisor support, feeling of care, and workers' perception that the supervisor is interested in workers' concerns. Some leaders, through unfriendly leadership style, actually contribute to work-related stress (Zagross & Jamileh, 2016). Since there is a relationship between leadership style and work-related stress, effective stress management requires fostering a work culture where the organizational leadership style is compatible with the worker needs (Oyelaran et al., 2017). The culture may manifest in the form of leaders listening to workers concerns, open communication, and motivation of the workers to exhibit their full potential. Such atmosphere would mitigate work-related stress due to the mismatch between the workers needs and socio-environmental factors thereby eliminating accidents and other adverse consequences of work-related stress (Lecca et al., 2020; Lissah et al., 2020; Oyelaran et al., 2017; Worringer et al., 2020; Yukongdi & Shrestha, 2020).

Creating a culture of co-worker support is another effective work-related stress management strategy that may not require any significant financial investment. Since worker-worker relationship is part of the social environment with potential to contribute to work-related stress, building a work culture where there is mutual support among the workers can be effective in managing work-related stress. This finding from the study aligns with the observation of Charoensukmongkol et al. (2016) that workers that experienced co-worker support felt less emotional exhaustion and more personal accomplishment. As noted by P2 during the interview, organizations should create a culture where there is mutual trust and healthy competition among the workers. Considering the positive impact of co-worker support, there is the need for increased education and awareness on how the supervisors' and co-workers' behaviors contribute to work-related stress.

The use of recreational and social activity is another strategy adopted by supervisors for work-related stress management. While offsite recreational or social activities may involve financial commitment, P1, P2, and P4 identified cost-free recreational and social activities such as exercise, cracking of jokes, and sharing of comic reliefs. The responses of the participants align with the recommendation of Amarnath and Himabindu (2016) and Wheeler et al. (2020) that recreational activities is effective in managing work-related stress. Involvement in social activities is a means organizational leaders could use to promote worker-worker fit thereby reducing or eliminating work-related stress in line with the P-E fit theory.

Another cost-free strategy the supervisors successfully use for work-related stress management is mentoring of workers on stress management. Respondents in all three partner organizations identified toolbox talk as an avenue for mentoring on stress management during tasks. As noted by P1, "toolbox talk is a meeting held with the work team prior to the start of any task to discuss the procedure for the job and the safety precautions to prevent incident while working." Mentoring can also be through safety meetings and sharing of safety messages. The mentoring can be part of supervisor's support for the worker (Kristman et al., 2017; Wong et al., 2017). The awareness can improve the worker's understanding of work-related stress, stress-inducing conditions, life-style changes needed to mitigate stress, adaptive skills for conditions outside the worker's control, and strategies the worker can implement to reduce the impact of work-related stress. Document review at partner organizations showed evidence of a culture of safety discussion as part of the mentoring process. At partner organization C2, there was a roster for thrice a week HSE discussion on topics that included different aspects of health and safety. At partner organization C3, safety and health alerts were posted on the notice boards to raise awareness about different aspects of HSE. A typical alert that was relevant to work-related stress was titled "Fatigue."

Another strategy the supervisors use is the alignment of assigned task with the worker's need and desires. Such alignment enhances worker-job fit. Part of the strategy the supervisors use to enhance worker-job fit is ensuring worker control of the assigned task. As noted by P2, "supervisors should involve the worker in key decision making concerning the worker's job." Job control is a means to enhance reduction in the adverse effects of increased workload while increasing the adverse effects of emotional dissonance that also necessitates self-control. To enhance job control, P3 recommended "empowering the workers to speak up where the job assigned does not align with the worker's needs." P6 uses similar strategy by "creating the atmosphere where the workers can speak their mind about any task."

Strategies Requiring Significant or Additional Financial Investment

Findings of the study further showed that there are some effective strategies that may involve significant or additional financial investments. Such strategies as indicated in Figure 3 include workers training to enhance competency for assigned roles, hiring of additional workers to enable effective time-off schedule and shift rotation, investments in occupational health programs, payment for offsite recreational or social events, and workers compensation to ensure worker-pay match.

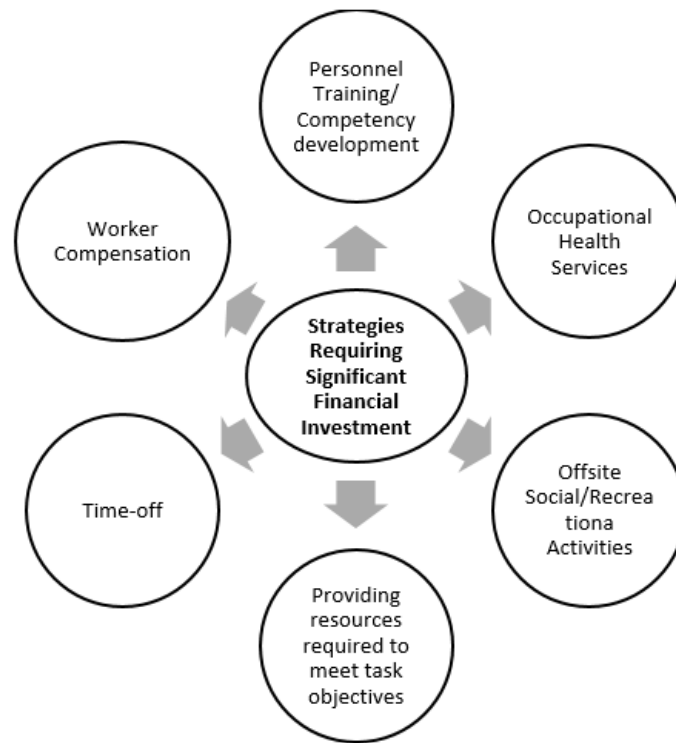


Figure 3: Strategies Requiring Significant or Additional Financial Investment

The strategies that involve additional financial investment mostly fall within the group some researchers describe as the action-oriented approach. The strategies mostly involve changing the conditions or work environment that induce stress to achieve the condition that aligns with the P–E fit theory. The training of the worker helps in improving competencies and developing new skills to meet the requirements of assigned tasks, managing work demands, handling performance issues, or eliminating the stressful conditions. The strategy of providing the resources to meet task objectives may involve financial investments to improve job design. Improving job design can be a means to reduce role overload, role ambiguity, or job conflict (Amarnath & Himabindu, 2016; Isfianadewi & Noordyani, 2020; Muthusamy & De Silva, 2019; Oyelaran et al., 2017). Investing in hiring the right and adequate number of workers enables balancing the time at work and the time off work. The strategy is effective in work-related stress management since the time a worker spends in activities outside the workplace positively enhances the restoration of any energy lost at work.

In line with the P–E fit theory, the aim of work-related stress management strategy is to ensure a fit between the desires of the worker and the organizational needs. As observed by some of the respondents, achieving the fit can be challenging especially considering what P1 and P6 called “urgent requests by clients.” As noted by P1: “The clients wants the job completed within a certain timeline but you being at site may know that the task is not achievable within the timeline but so as not to look as if you are not serious you keep pressing on to finish and that can expose the workers to stress”.

P6 made a similar observation: “The client that is calling you does not look at the time; all the client is interested in is for you to deliver on his request and such request puts pressure on you to meet the demand within the client’s timeline”. Such situations may create a conflict between the organizational needs and the worker’s desire thereby adversely impacting the stress management strategy of the organization. Apart from the challenge of managing clients’ requests, many of the respondents alluded to the need to aspire for a fit between the worker’s desires and the organizational needs. For instance, with effective planning or training of workers, the respondents aim to enhance worker-job fit. As noted by P6, “such strategy helps to align the worker personal needs with the job requirements” while P2 identified training as a means to eliminate “competency-induced stress.” As noted by P1 and P6, the lack of control over clients’ requests can impact the choice of stress management strategy. Also, the financial implications of the strategies shown in figure 3 can affect the use of the strategies. Supervisors in the petroleum industry of the Nigerian Niger Delta region should be familiar with these strategies and explore avenues to implement them to eliminate or reduce misfit between the worker and factors in the work environment.

CONCLUSION

This study was conducted to find out if the strategies adopted by supervisors in the petroleum industry to manage work-related stress were effective. It was noted that organizational leaders face the challenge of managing work-related stress. Despite the challenges, some supervisors in the petroleum industry have successfully used effective strategies to manage work-related stress. Identifying and implementing strategies for effective work-related stress management is a means to eliminate or reduce adverse impact on workers’ health, promote workers welfare and wellbeing, improve work-family and work-life balance, and reduce dependency ratio. Leaders in the petroleum industry may use the findings from this study to manage work-related stress to reduce the adverse effects on human health, improve profitability of the petroleum industry thereby providing the required resources for the Nigerian government to implement the social contract with the citizenry, create job opportunities, invest in infrastructures, and generally improve

the living standard and welfare of the citizenry. Effective management of work-related stress through the strategies identified in this study may also help in reducing or eliminating stress-related illnesses.

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