ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 8| Issue: 5| May 2022|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2022: 8.205 || ISI Value: 1.188

INFLUENCE OF LIFESTYLE ON STRESS MANAGEMENT IN PUBLIC SECTOR HEALTH WORKERS IN SEMI-URBAN AREA – A PRELIMINARY STUDY

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Article DOI: https://doi.org/10.36713/epra9919
DOI No: 10.36713/epra9919

ABSTRACT

Introduction: *This research set out to evaluate the effects lifestyle has on stress in primary health care personnel's working in the public Health sector in a semi urban region of Rivers State, Nigeria, and if possible understand how diet as well as other intrinsic factors might help in the management of stress.*

Method: *The Holmes and Rahe stress scale was administered, as well as other questions in a self-administered questionnaire to test for how Age, diet, food type, physical activity and sleep affected stress on the stress scale. The questionnaire was administered to 53 individuals (8 males and 45 females), with ages between 24-60 and data was evaluated based on several different criteria.*

Result: *A low level stress was found to be higher (37.7%) in the age groups 25-34 and 35-44 (60.0% and 68.8% respectively). Men (87.5%) were found to have moderate to high level stress than the women (57.8%). Respondents with moderate to high levels stress had 50% - 80% chance of major health breakdown within the next 2 years according to the Holmes and Rahe statistical predictor model which saw 35.7% of respondents who slept less than 7 hours a day had high levels of stress than does who slept more than 9 hours at night (28.6%). Regarding exercise, respondents who were inactive (30.8%) to low (43.5%) in terms of minutes per week of physical activity as well as those who were inconsistent (45.5%) with physical activities (in terms of number of times per week) had high levels of stress. Regarding body mass index (BMI) and stress, the risk for health breakdown within 2 years were observed as overweight/obese (64.5%) individuals had moderate to high levels of stress compared to normal (59.1%). Concerning dietary pattern, moderate to high levels stress were observed in semi vegetarian (100%), lacto-Ovo vegetarians (66.9%) and non-vegetarians (61.1%). Blood group was found to influence the way individuals dealt with the stress - with type O positive (68.7%) being the most sensitive, and type AB positive the least sensitive.*

Conclusion: *Effectively knowing and practicing how to eliminate the negative factors of stress and modifying lifestyle especially sleep hours, food, physical activities in male population and the active age group can assure one of better health outcomes by reducing the chances of major health breakdown within 2 years.*

KEY WORDS: *Sleep hours, Exercise, Physical activity, blood group, Diet, stress, Primary Health Workers.*

INTRODUCTION

Stress, the term that invaded our vocabulary in so many ways throughout this century is a real and global issue taking its toll through many forms of illness. Little has been studied on the implications and how diet and blood type might help in the management of stress (Daniela, 2018). According to the American Psychiatric association, 63% of stress is due to People worrying about the Future of the nation, 62% is due to Money and 51% is due to violence/crime (Koolhaas *et al.*, 2011). Furthermore, the role of natural antioxidant and free radical scavengers in food sources in controlling disease and maintaining health is also of paramount scientific interest (Afieroho *et al*., 2013). Stress affect the way food moves through your body, leading to diarrhoea or constipation. One might also experience nausea, vomiting, or a stomach ache, which are symptoms people undergoing stress would face. It is important to know that illness can invoke stress and vice versa (America Institute of stress, 2018).

The rush of hormones, rapid breathing, and increased heart rate can upset your digestive system. You are more

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likely to have heartburn or acid reflux thanks to an increase in stomach acid. Stress doesn't cause ulcers (a bacterium called *H. pylori* often does), but it can increase your risk for them and cause existing ulcers to act up. Under stress, the liver produces extra blood sugar (glucose) to give you a boost of energy (America Institute of stress, 2018). If you are under chronic stress, your body may not be able to keep up with this extra glucose surge. Chronic stress may increase your risk of developing type 2 diabetes mellitus (Afieroho *et al.*, 2013). There is a global resurgence of interest in use of medicinal plants. The role of natural antioxidants in food sources in preventing disease cannot be over-emphasized.

The study will compare diet and other intrinsic factors in the management of stress of Health workers in Ikwerre Local Government Area of Rivers State, Nigeria using acceptable scientific methods. Considering the magnitude of causes of stress and the ever lowering standards of living in third world country such as ours, it is necessary to evaluate/compare the role of blood group and food in management of stress. Stress can lead to several other illnesses and some food sources are known antioxidants and beneficial is management of diseases for which stress maybe a contributory factor (Ginger Nash, 2016). Health workers see themselves as working too hard and earning less couples with the constant exposure to health hazards, so a need for change of job and or lifestyle maybe implicated to better manage the stress outcome they perceive. Many of the studies have found herbal medicines and drug to be safe, effective and beneficial, but they are not completely harmless hence the need to look at natural food sources as a potential advantage in stress management

MATERIALS AND METHODS

The Holmes and Rahe stress scale was administered, as well as other questions in a self-administered questionnaire to test for how Age, diet, food type, physical activity and sleep affected stress on the stress scale. The questionnaire was administered to 53 individuals (8 males and 45 females), with ages between 24-60 and data was evaluated based on several different criteria. Holmes and Rahe statistical predictor model with 150 points or less (low levels) indicated a relatively low amount of life change and a low susceptibility to stress-induced health breakdown; whereas 150 to 300 points (average levels) indicated 50% chance of health breakdown in the next 2 years; and 300 points or more (high levels) indicated 80% chance of health breakdown in the next 2 years. It was descriptive randomized -one off interview. All health workers within the sample population which had five model primary health care centres with basic emergency medical and obstetric facilities where used.

Questionnaires were administered to collect socio-demographic information and other details, vital signs were measured and charted. Blood sample (1ml) was also collected for laboratory analysis of Blood group. All necessary permission to be included in the study were obtained-Written consent was signed. In addition to demographic details, current and past medical history including; drug history (alcohol, tobacco, traditional medicines, and other regular medications for chronic ailments). Any participants were free to withdraw from the study at any stage or time.

RESULTS

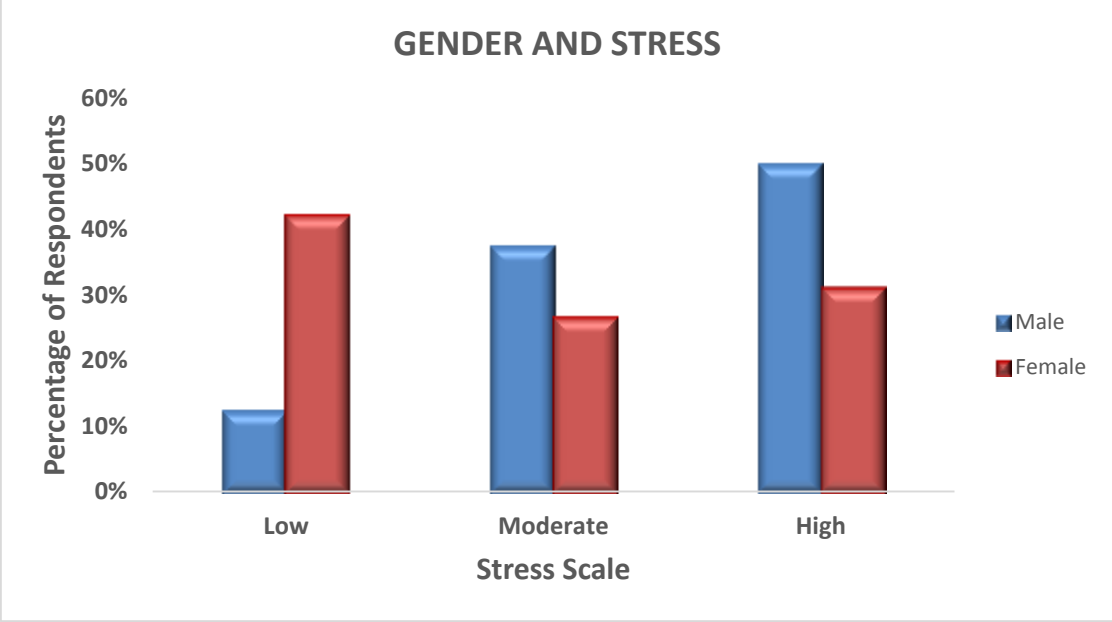

Figure 1: Distribution of respondents' gender on stress scale outcome

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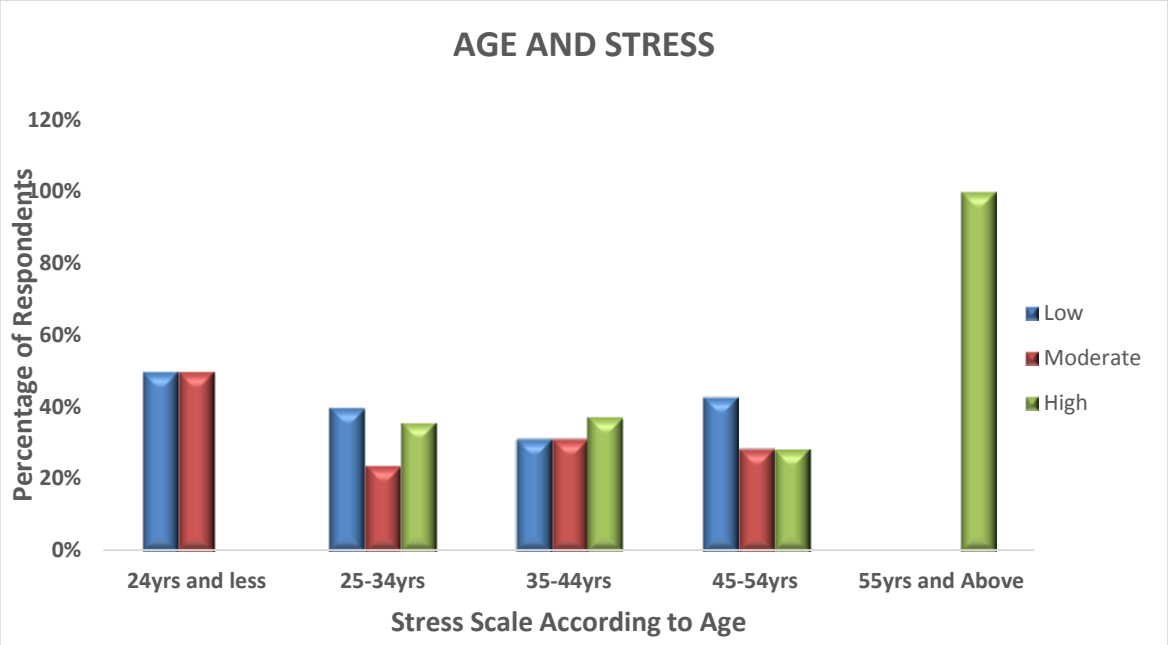

Figure 2: Distribution of respondents' according to age groups on stress scale outcome

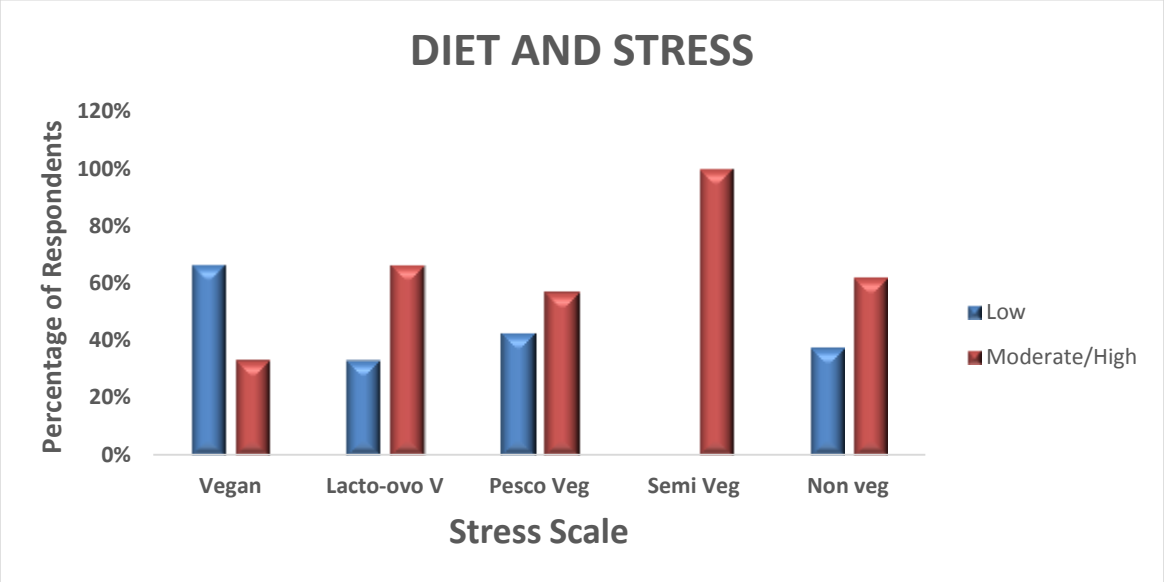

Figure 3: Distribution of respondents' diet on stress scale outcome

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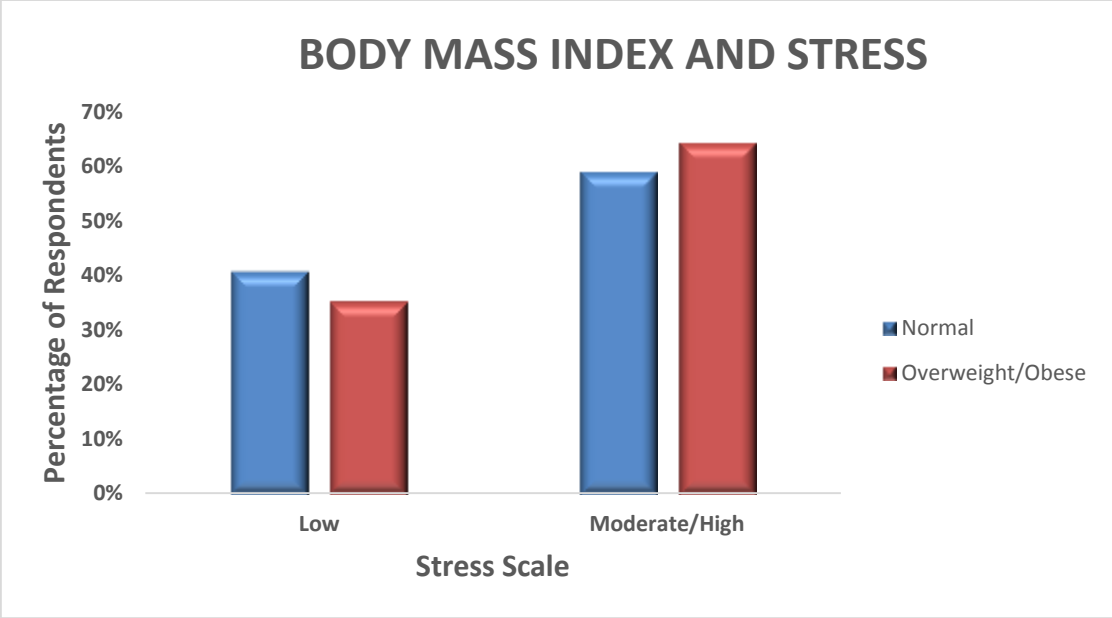

Figure 4: Distribution of respondents' Body mass Index (BMI) on stress scale outcome

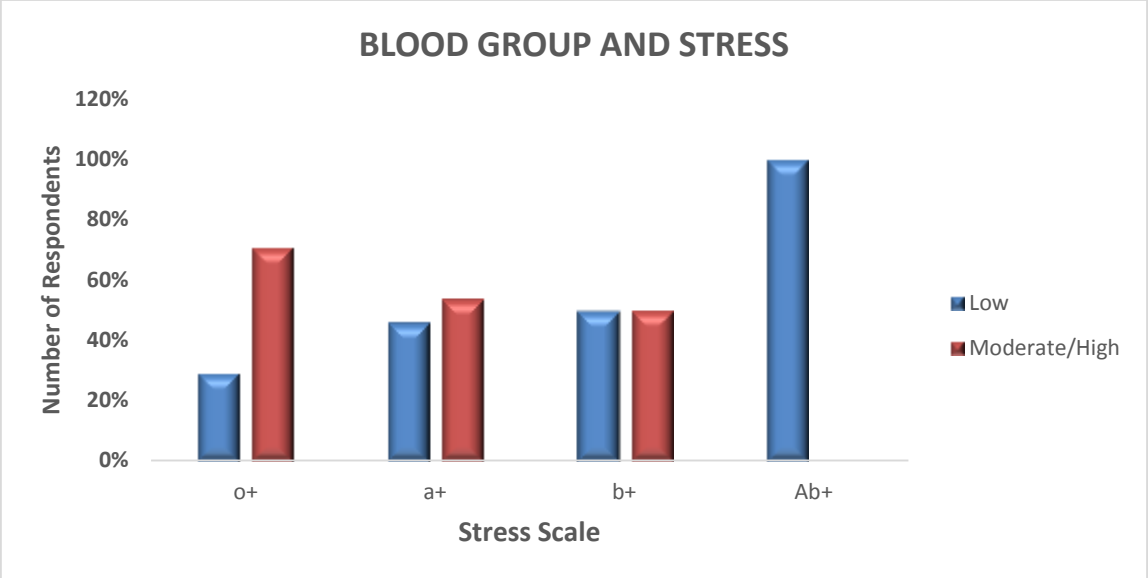

Figure 5: Distribution of respondents' according to blood group on stress scale outcome

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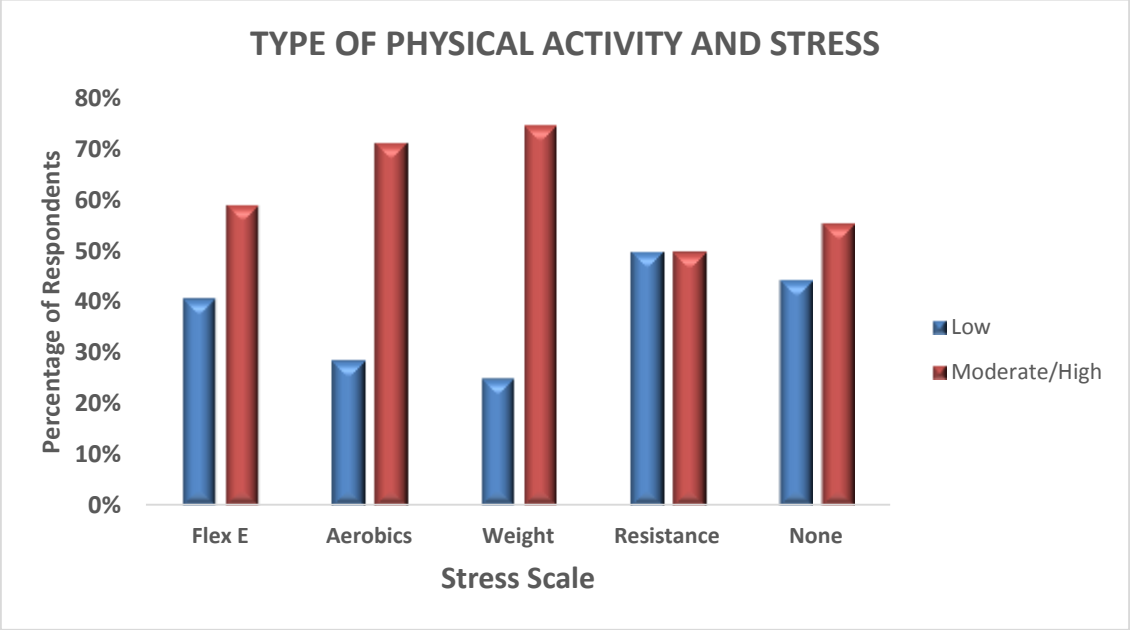

Figure 6: Distribution of respondents' according to type of physical activity on the stress scale outcome

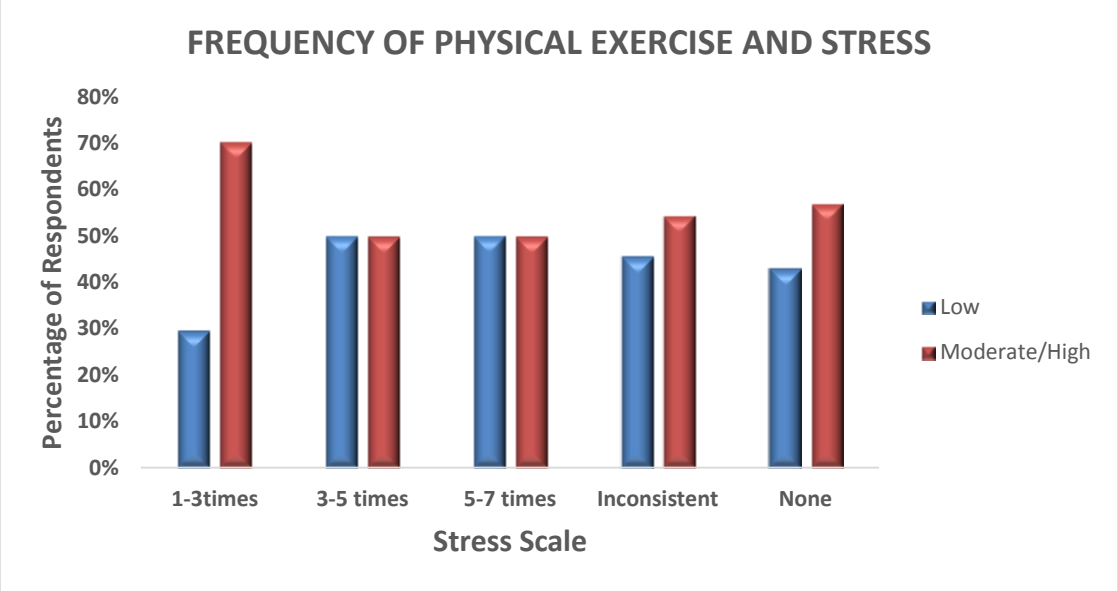

Figure 7: Distribution of respondents' on frequency of physical activity on the stress scale outcome

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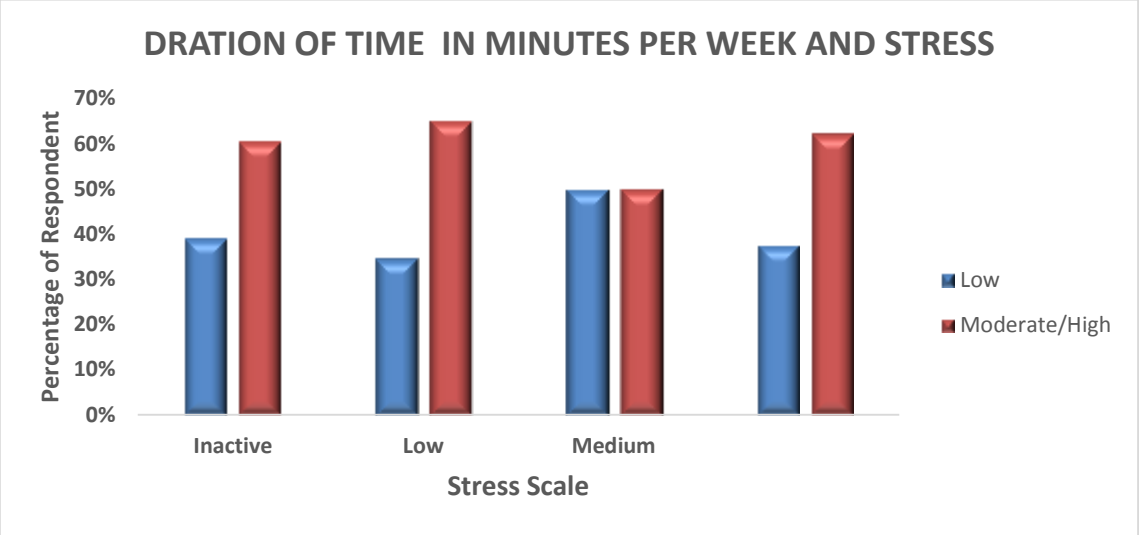

Figure 8: Distribution of respondents' according to duration of physical activity in minutes per week on stress scale outcome

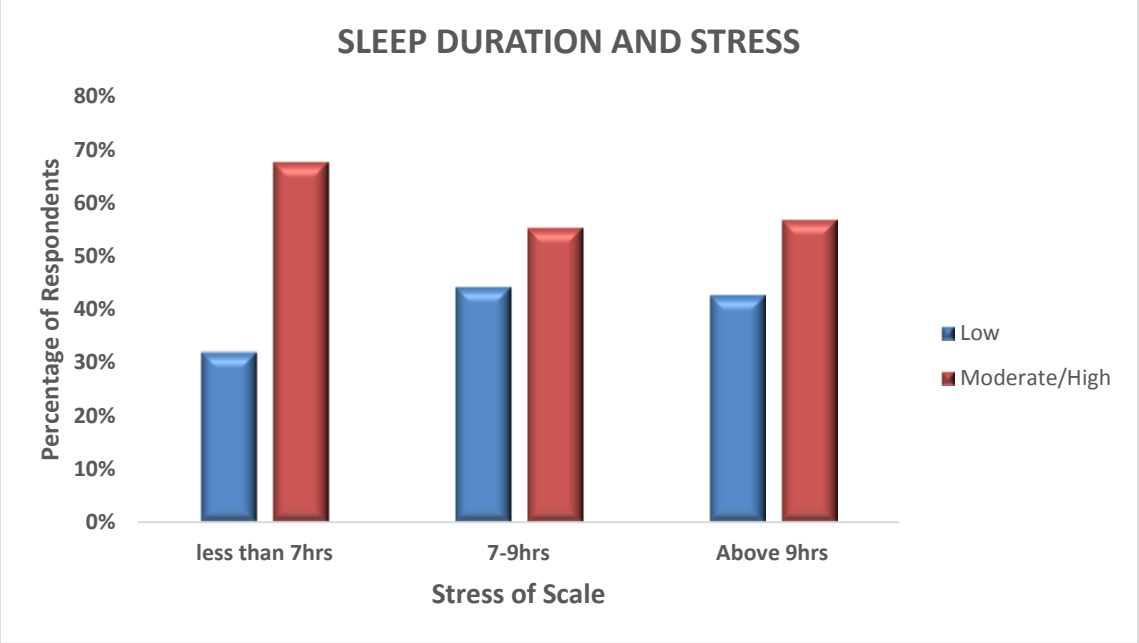

Figure 9: Distribution of respondents' according to sleep duration on stress scale outcome

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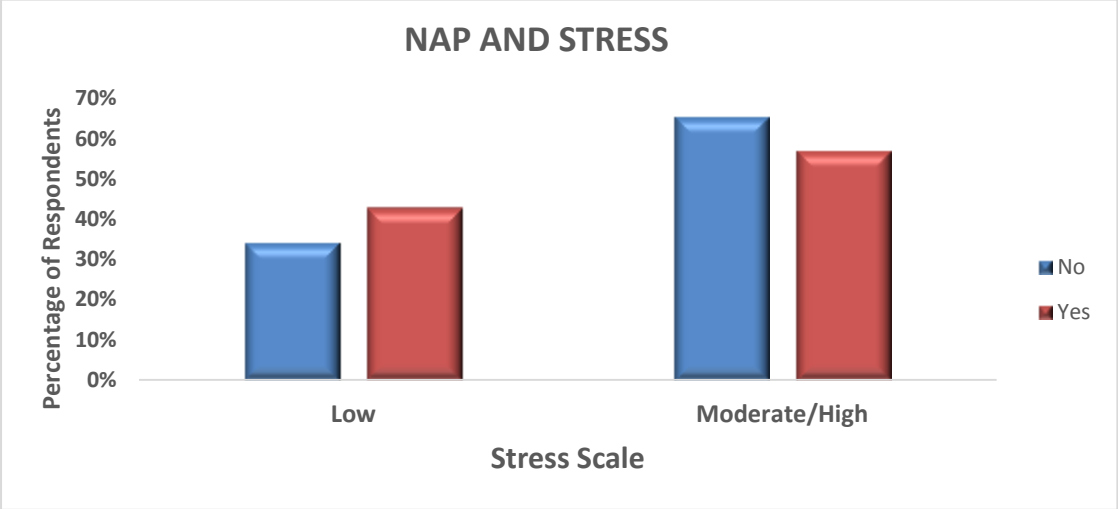

Figure 10: Distribution of Respondents according to Naps on the stress scale outcome

DISCUSSION

A low level stress was found in 37.7% of the respondents. Moderate level stress affected 28.3% of the respondents, while 34.0% of them displayed high level stress. Moderate to high levels stress were found in the age groups 25-34 and 35-44 (60.0% and 68.8% respectively) which corresponds to the active phase of life when compared to other age groups. Men (87.5%) were found to have moderate to high level stress than the women (57.8%). This translated as well in the lifestyle of men in this environment who are predominately bread winners of their families and farmed after work hours daily including weekends. Respondents with moderate to high levels stress had 50% - 80% chance of major health breakdown within the next 2years according to the Holmes and Rahe statistical predictor model which saw 35.7% of respondents who slept less than 7 hours a day had high levels of stress than does who slept more than 9 hours at night (28.6%). This same pattern was seen in respondent who didn't naps during the day. Regarding exercise, respondents who were inactive (30.8%) to low (43.5%) in terms of minutes per week of physical activity as well as those who were inconsistent (45.5%) with physical activities (in terms of number of times per week) had high levels of stress.

Regarding BMI and stress, the risk for health breakdown within 2years were observed as overweight/obese (64.5%) individuals had moderate to high levels of stress compared to normal (59.1%). Concerning dietary pattern, moderate to high levels stress were observed in Semi vegetarian (100%), lacto-Ovo Vegetarians (66.9%) and Non-vegetarians (61.1%). Blood group was found to influence the way individuals dealt with the stress - with type O positive (68.7%) being the most sensitive, and type AB positive the least sensitive. The results showed similar frequencies compared to data in the scientific literature in terms of blood type distribution, food type and physical activity.

The calculated chi-square (X^2) at df (1) of all variables were not significant with a *P*-value greater than the chosen alpha (P> 0.05), thus the null hypothesis is accepted. This implies that there is no significant relationship between gender, diet, naps, exercise, blood group etc. and stress management of health workers. More so, the lack of statistical significance in the results despites the marked difference in the mean stress scores which was due to the small sample size which is below 100 respondents. More analysis revealed the correlations between the stress scale and blood type and diet and other variables measured.

CONCLUSION

Effectively knowing and practising how to eliminate the negative factors of stress and modifying lifestyle especially sleep hours, food, physical activities in male population and the active age group can assure health workers of better health outcomes by reducing their chances of major health breakdown within 2 years. This proves that this approach might just be a very helpful tool suited for the management of the stress by using specific and targeted lifestyle adjustments.

Further study with a larger sample size will be needed to show the statistically significant differences in these variables and in turn influence/strengthen policy formulation on the need for health workers to modify lifestyle positively to reduce stress.

LIMITATIONS OF THE STUDY

Ethical issues; Consistency is food choices and analysis to be done on sample; Insecurity

COMPETING INTERESTS DISCLAIMER

Authors declare that there is no competing interest and no funding was received for this study.

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