

## THE IMPACT OF STRESS ON PRODUCTIVITY – EVIDENCE FROM THE ACADEMIC STAFF OF FEDERAL UNIVERSITY OYE-EKITI, NIGERIA

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### Abstract

*Stress is part of the inevitable stimuli to productivity, efficiency, and effectiveness showcased by employees in organizations. It is a universal phenomenon and part of the price to be paid for effective productivity. However, exposure of employees to a high level of stress jeopardizes the chances of employees' optimal productivity, hence a loss to the organization. University Lecturers are part of the employees that are mostly affected by excessive stress. Thus, this paper critically examined the impact of stress on productivity among the academic staff of Federal University Oye-Ekiti, Nigeria. Out of 200 questionnaires distributed, 52 were retrieved and analysed. The statistical analysis was carried out using python3 package. The data analysis, data manipulation and static and interactive visualizations were done using different open-source libraries in python which include numpy, pandas, matplotlib, seaborn, sklearn, graphviz, dtreeviz, plotly, cufflinks, statsmodels and scipy. The findings reveal that work overload, excessive pressure, overcrowded classes, among others, are associated with factors responsible for the exposure of lecturers to excessive stress.*

**Keywords:** *Stress, productivity, workload, Stimuli, Excessive*

## INTRODUCTION

*Stress is not something to be avoided. Indeed, it cannot be avoided, since just staying alive creates some demand for life-maintaining energy. Even when man is asleep, his heart, respiratory apparatus, digestive tract, nervous system and other organs must continue to function. Complete freedom from stress can be expected only after death (Selye, 1975).*

Every employee in an organization must deal with stress. In other words, it is impossible to be productive and successful as employees without experiencing stress in the workplace. Stress is the antecedent of employees' meaningful input-output activities in a system. It is a price that must be paid if success is to be achieved in an organization. However, it is noted that excessive stress is hazardous to employees' well-being and the overall output. Such stress often creates concerns that may result in resentment from workers and provoke disharmony between the employer and employees, with devastating consequences for healthy industrial relations. For instance, the commitment of employees, as well as productivity, may be negatively affected. The experience of university lecturers in the last few decades seems unpalatable considering the employability of Nigerian graduates. This is because many university lecturers, characteristically, bite more than they can chew. Underlying this is the excessive workload which is usually accompanied by endless deadlines. As succinctly stated in the Collins English Dictionary, a deadline is a time or date before which a particular task must be finished. Moreover, it refers to the latest time by which a task must be done or submitted. Nonetheless, it is interesting to note that meeting deadlines within a short period of time often results in a behavior that has the potential to undermine standard, especially in the area of teaching and community development which is considered a major responsibility within the university system.

### The concepts of stress

According to the World Health Organization (WHO, 2007), stress is the health epidemic of the 21st century. Stephen and Cary (2020) describe stress as a situation where pressure exceeds a person's ability to cope. Similarly, the University of Regina (1998) views stress as a personal response to a threatening situation or a change in circumstances. The University further indicates that stress is an individual's reaction to an external stimulus or anything that triggers worry or anxiety in such a way that a person will be unable to cope with a prevailing situation. Also, Fink (2017) argues that stress has a devastating effect on workers' physical and emotional health. Yet Selye (1975) in Fink (2017) notes that, the non-specific response of the body to any demand is known as stress. From this multitude of definitions, it can be inferred that stress is a person's inability to cope with the inevitable pressure or necessary demands of work. In this case, stress can either be a perception or an actual disequilibrium between the demand of work and an employee's ability to cope. To further drive home this point, Wilford (2017) asserts that stress causes employees to lose enthusiasm and reduce the commitment required for the job which invariably affects productivity.

### Stress and productivity

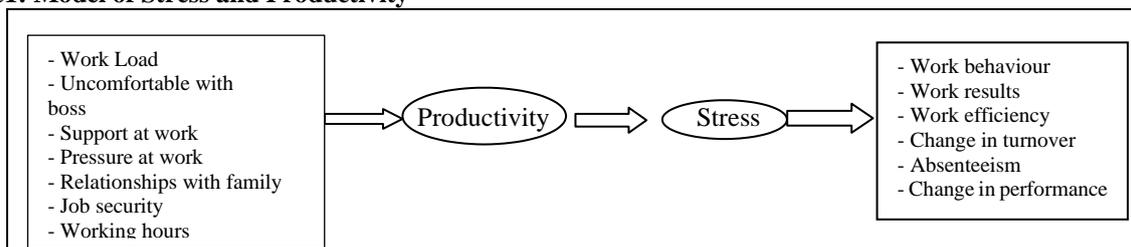
As earlier explained, the levels of stress vary significantly from one organization to another and also between countries. However, stress is a worldwide epidemic. In the UK, government statistics show that over half a million workers suffered from work-related stress, depression, or anxiety in 2016/17, while 40% of the population in both the US and France, and 60% in Japan, experience high to moderate stress (Huttunen, 2023). Increasing demand and downsizing suggest that fewer employees must do more and more, ultimately contributing to stress and discontent (Brenner et al., 2014 as cited in Lagrosen and Lagrosen, 2020). Evidently, a study on 21,000 European employees revealed that 60% of all European employees have at least one health problem related to their work (Daubas-Letourneux and Thébaud-Mony, 2003), also in Lagrosen and Lagrosen (2020). The conclusion of these scholars is that stress, generally, is seen as a common contributor to this development.

As already articulated, excessive stress or unmanageable pressure constitutes an impediment to productivity and the optimal performance of employees. Arguably, workers cannot be maximally productive in a hostile work environment that is full of work overload, threats, ambiguity, and irregular salaries. Unsurprisingly, Issa et al (2009) suggest that excessive pressure results in negative implications. The underpinning is that greater stress correlates with lower productivity of employees.

### Conceptual Framework on stress and productivity

A conceptual framework for the study is presented in Figure 1, showing a model of stress and productivity.

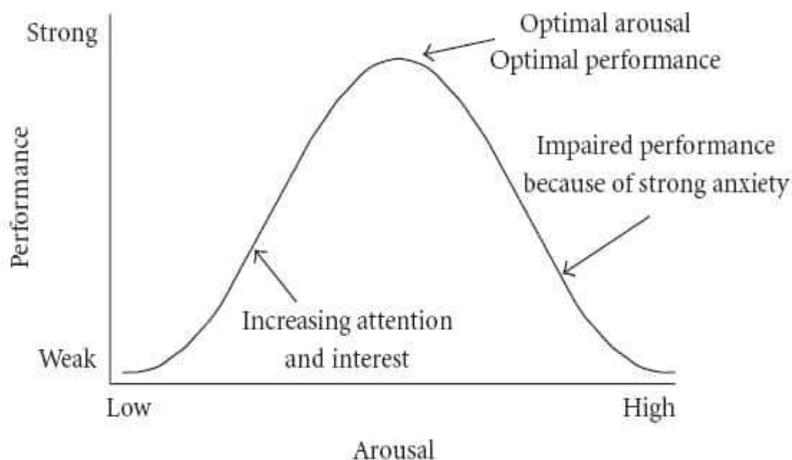
**Figure 1: Model of Stress and Productivity**



Source: Blackwell (1998), Luthans (2002), Imtiaz & Ahmad (2009), Naqvi, et al (2012), Khan & Khan (2013) in Wilford (2017).

The conceptual framework in Figure 1 explains the impact of stress on productivity in an organisation. As evident, column one shows variables, such as workload, uncomfortable with boss, support at work, pressure at work, relationships with family, job security and working hours, as factors that often trigger stress in the workplace. Excessive stress invariably affects the attitudes of employees to their work as indicated in column four. These are work behaviour, work result, work efficiency, change in turnover, absenteeism and change in performance. The negative attitudes of employees such as lack of motivation and commitment to their jobs, caused by excessive stress, usually have adverse effect on their productivity in the long run.

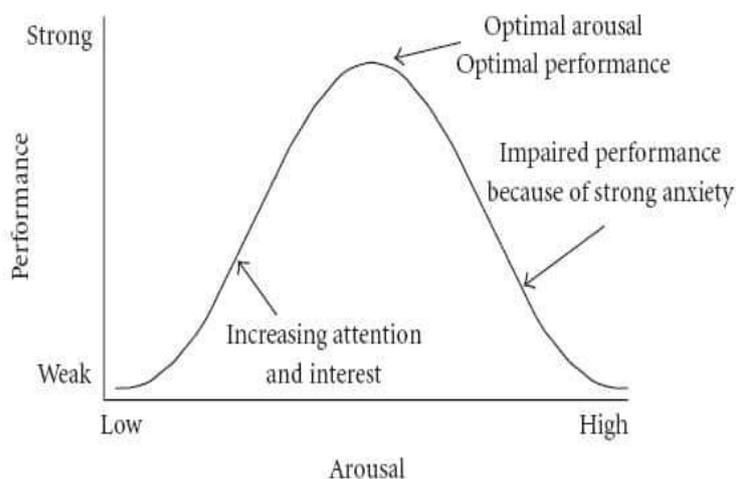
**Figure 2: Arousal and performance**



**Source: Yerkes (2020).**

Figure 2 suggests that stress may not be hazardous to health contrary to the general notion. However, stress may be beneficial to optimal production depending on the nature of the job and individual personality. Hence, the arousal and performance model emphasizes the point at which stress can constitute a hindrance to optimal performance. Although stress can be a motivating factor for productivity, the point at which it hinders effective production is best explained by the Yerkes-Dodson Law and Performance. Accordingly, there is a high tendency for performance to increase if there is increase in physiological or mental arousal (stress). However, this is only up to a point because performance decreases when the level of arousal (stress) becomes too high. The Yerkes-Dodson Law is further explained in figure 3.

**Figure 3: Yerkes-Dodson Law and performance**



**Source: Yerkes (2020). Yerkes-Dodson Law and performance**

The complexity and familiarity of the task determine the variability of the graph. As can be observed, Figure 3 suggests that the optimal performance of different tasks requires different levels of arousal. For example, tasks that demand stamina or persistence may be performed better with higher levels of arousal because they increase motivation, but difficult or unfamiliar tasks may require lower levels of arousal in order to facilitate the required concentration. The shape of the curve can vary greatly depending on the nature of the task or task differences. With a decline in performance as arousal increases, the relationship between arousal and performance becomes inverse. This is usually the case with highly intellectual or complex tasks as opposed to simple or well-learned tasks.

## Causes of work-related stress

The causes of unmanageable work-related stress are numerous. They include, among others, ambiguous job descriptions, threats or victimization, work overload, job insecurity, deadlines, and lack of motivation on the part of the management. This is corroborated by Wilford (2017), who asserts that work-related stress are associated with factors related to deadlines or pressure to complete assignments, job insecurity, and working during holidays or annual leave.

## Stress statistics

**Table 1: Stress statistics**

Area and source	Statistics	Stress components
USA (Maxon, 1999)	75% of American workers	Describe work as stressful
USA (Maxon, 1999)	26.2% of adults over 18 years	Suffer mental disorder
UK (NASUWT, 2012)	Nearly 50% of teachers have considered quitting jobs	Increased stress and cuts in pay and pensions have led to high levels of dissatisfaction in profession
Zimbabwe (IPC, 2014)	30% of employees	Experience depression symptoms
Zimbabwe (IPC, 2014)	43% of the working population	Show symptoms of stress, mental illness and distress at workplace
Global average (IPC, 2014)	15-25% of the working population	Mental illness and distress at work

**Source: Wilford (2017): Stress statistics**

Table 1 illustrates stress statistics and components in the United States of America (USA), Zimbabwe, and the global average. In 1999, approximately 75% of American workers described their jobs as stressful, while 26.2% of adults over the age of 18 had a mental disorder. In 2014, 30% of employees in Zimbabwe experienced depression symptoms; while 43% of the working population show symptoms of stress, mental illness and distress at workplace. In the 2014 global average, 15-25% of the working population exhibited stress at the workplace and as well suffered mental illness and distress at work.

In the same vein, The Association for Global Organization for Stress identified the following stress related facts and statistics:

- Stress in America survey results show that adults continue to report high levels of stress and many report that their stress has increased over the past year – American Psychological Association.
- 75% of adults reported experiencing moderate to high levels of stress in the past month and nearly half reported that their stress has increased in the past year –American Psychological Association.
- Approximately 1 out of 75 people may experience panic disorder – National Institutes of Mental Health.
- Stress is a top health concern for U.S. teens between 9th and 12th grade, psychologists say that if they do not learn healthy ways to manage that stress now, it could have serious long-term health implications – American Psychological Association.
- 80% of workers feel stress on the job and nearly half say they need help in learning how to manage stress. And 42% say their co-workers need such help – American Institute of Stress.
- Stress levels in the workplace are rising with 6 in 10 workers in major global economies experiencing increased workplace stress. With China (86%) having the highest rise in workplace stress – The Regus Group
- Alarmingly, 91% of adult Australians feel stress in at least one important area of their lives. Almost 50% feel very stressed about one part of their life – Lifeline Australia.
- Australian employees are absent for an average of 3.2 working days each year through stress. This workplace stress costs the Australian economy approximately \$14.2 billion – Medibank
- An estimated 442,000 individuals in Britain, who worked in 2007/08 believed that they were experiencing work-related stress at a level that was making them ill –Labour Force Survey.
- Approximately 13.7 million working days are lost each year in the UK as a result of work-related illness at a cost of £28.3 billion per year – National Institute for Health and Clinical Excellence.
- Depression is among the leading causes of disability worldwide – World Health Organization
- Fewer than 25% of those with depression world-wide have access to effective treatments – World Health Organization.

## Symptoms and Signs of Stress at the workplace

Stressors are those changes that occur in a person's life as a result of threatening situations or circumstances. Some of the stressors experienced by university Lecturers include the following: anxiety, fear, anger or irritability, turnover, sickness, absenteeism, inability to meet deadlines, postponement of lectures, arguments, temperamental problems, complaints, disorganization, and collection of assignments. According to Dean (2002) and Wilford (2017), excessive stress leads to health challenges of the employees directly or indirectly at the expense of the organization. It also causes reduction of employees' inputs and overall production, as well as absenteeism due to health challenges of employees and low productivity levels in organizations.

**Table 2: Workplace stressors**

<p><b>PHYSICAL</b></p> <p>Appetite Change, Tightness in Neck</p> <p>Upset Stomach, Pounding Heart</p> <p>Accident Proneness, Cold Feet and Hands</p> <p>Sweating, Unexplained Choking</p> <p>Feeling Fatigue, Teeth Grinding, Constipation, Chills</p> <p>Restlessness, Back Pain Memory Loss, Muscle Tension, Difficulty Sleeping, Blurred Vision, Diarrhea, Chest Pain, Rashes, Twitching, Word Loss, Breathing Difficulties</p> <p>Headaches, Premature Aging Nausea, Overeating, Colds, Violent Behaviour, Staring into space for extended period of time, Drinking alcohol or using drugs to change your mood</p>	<p><b>RELATIONAL</b></p> <p>Isolation, Intolerance, Resentment, Loneliness, Lashing out, Hiding, Clamming up, Sexual Problems, Distrust, Fewer contacts with friends, Lack of intimacy</p>	<p><b>EMOTIONAL</b></p> <p>Frustration, Depression, Mood Swings, Quick to Anger, Nightmares, Irritability, Easily Discouraged, Little Joy, Worrying, Imagining the Worst, Feeling Overwhelmed, Forgetfulness, Nervousness, Defensiveness, Fear, Grief Anger, Anxiety</p>	<p><b>MENTAL</b></p> <p>Difficulty solving problems, Difficulty making decisions, Difficulty concentrating, Difficulty calculating, Negative self-talk, Negative attitude, Denial: Believe nothing is wrong, Regularly criticize and complain, Withdrawal: Avoid situations, Catastrophize, Overly suspicious.</p>	<p><b>SPIRITUAL</b></p> <p>Emptiness, Loss of Meaning, Doubt, Unforgiving, Loss of Direction</p>
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**Source:** Cued, but redesigned by the authors, from University of Regina (1998): Counseling Services, Strategies & Skills for Academic Excellence, p. 2.

#### Stress management techniques

Since stress is inevitable, it is critically important to develop appropriate coping strategies so that stress can be properly managed. Although there are several stress management techniques, the recommendations made by the University of Regina (1998) are thought to be more appropriate for university lecturers because they are divided into three categories. **1)** Techniques for enhancing physical well-being which include relaxation and having regular, well-balanced meals. **2)** Techniques for helping with academic well-being include understanding individual limits and planning around them. Similarly, utilizing individual time effectively and efficiently is critical. **3)** Techniques for promoting psychological well-being, such as identifying and addressing the sources of stress. Also important is minimizing negative thinking and accepting what cannot be changed.

#### 4. Research Methods and Findings

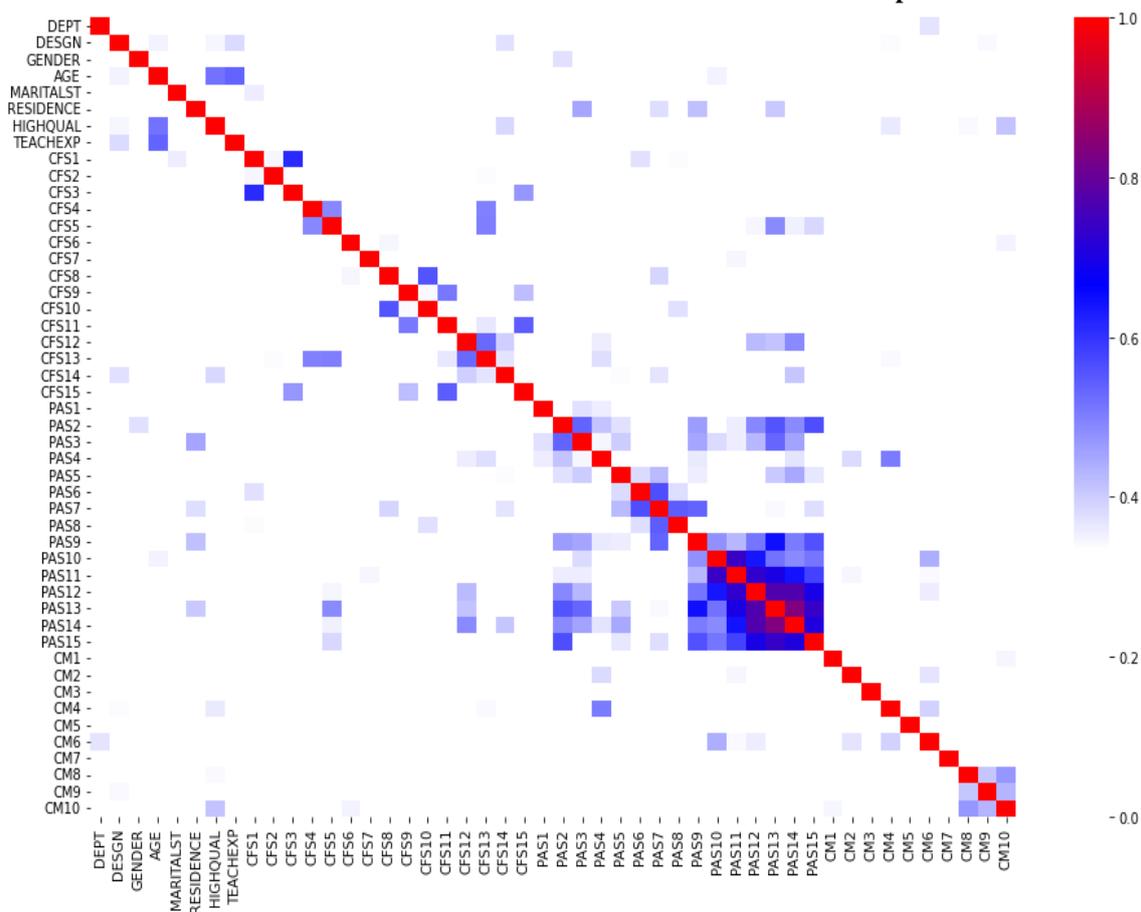
The statistical analysis of this study and plots were carried out using Python3 package. All data analysis, data manipulation, and static and interactive visualizations were done using different open-source libraries in python. In other words, they include numpy, pandas, matplotlib, seaborn, sklearn, graphviz, dtreeviz, plotly, cufflinks, statsmodels, and scipy.

#### Results and discussion

A total of 52 records were collected, while 49 variables (columns) were considered for analysis. This is to highlight the major factors that cause stress and the level to which productivity is affected, including the coping methods that people have utilized. The interest was to relate the effect of stress and coping methods to the productivity of staff. Nine of the 49 variables are personal data which are Department, Designation, Gender, Age, Marital Status, Residence, Highest qualification and Years of teaching experience. The 52 records collected cover five major Departments EMBS (15), ICH (8), MTH (14), PHY (3) and SCE (4) while the remaining seven other departments are grouped as “Others” (that make up the remaining 8 records). The first stage of analysis was to examine the cross-correlation of all the 49 variables, as shown in Figure 1. The white space depicts the region of very low correlation.

**Figure 4: Cross-correlation of the 49 variables**

**Figure 4: The cross-correlation of the 49 variables shows the level of their relationship.**



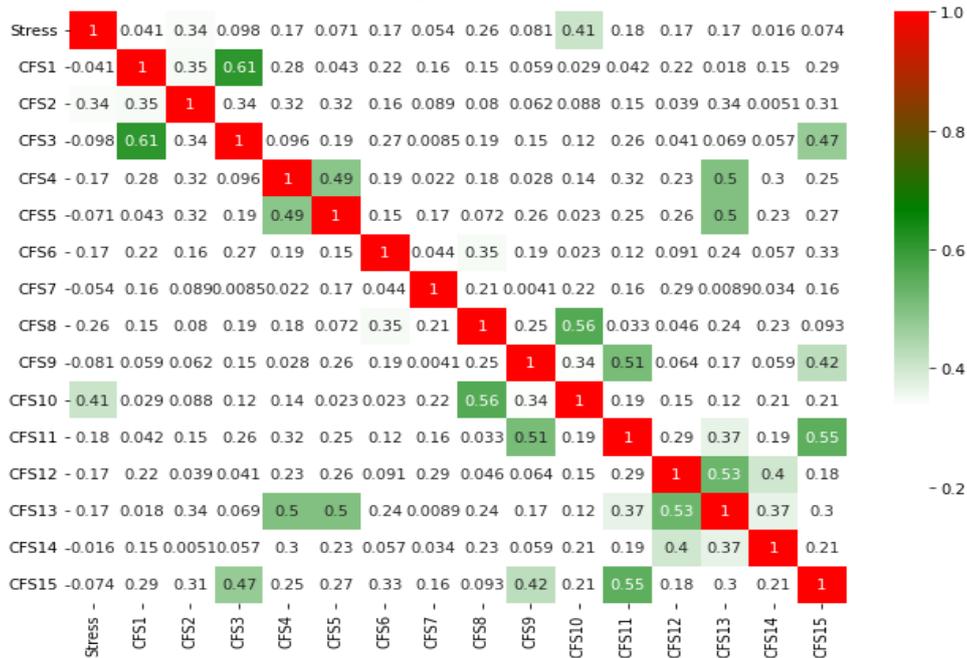
**Source: Field Survey (2022)**

Figure 4 presents the cross-correlation of the 49 variables, which indicates the level of their relationship. The white areas indicate poor correlation, whereas the blue areas indicate significant correlation. Three new dependent variables, namely Stress, level of Production Affected (ProdAffected), and Coping, were created from the findings. The 15 stress-related questions were used to define the new dependent variable, "stress," which is scored "1" if a response is determined to be highly stressed on the condition that more than 50% of the responses from that correspondence indicated that the stated stress-causing variables are either very much a source of stress or not, but it is scored "0" if more than 50% of the responses indicated that the stated stress-causing variables are rarely a source of stress or not. The same technique is used for the scoring of the level of which the productivity is affected, if more than 50% of responses of a correspondence agree that the indicated variables (15 variables) affect them all of the time or most of the time, then is scored "1" as a person whose production is seriously affected, but if more than 50% of the responses indicate that those variables affect them only a little of the time or none of the time, it is scored "0" as productivity that is less affected.

Also, a respondent is scored "1" as highly coping with the stress if more than 50% of the responses from a respondent indicated yes to suggest means (10 variables) of coping with the stress but if otherwise is scored "0" as less coping. These three new variables namely Stress, the level at which productivity is affected and how a candidate is coping is used to give insight into the most significant factors that cause stress, what are the main factors that affect productivity and the best coping method that staff in FUYOE are using to cope with the situation.

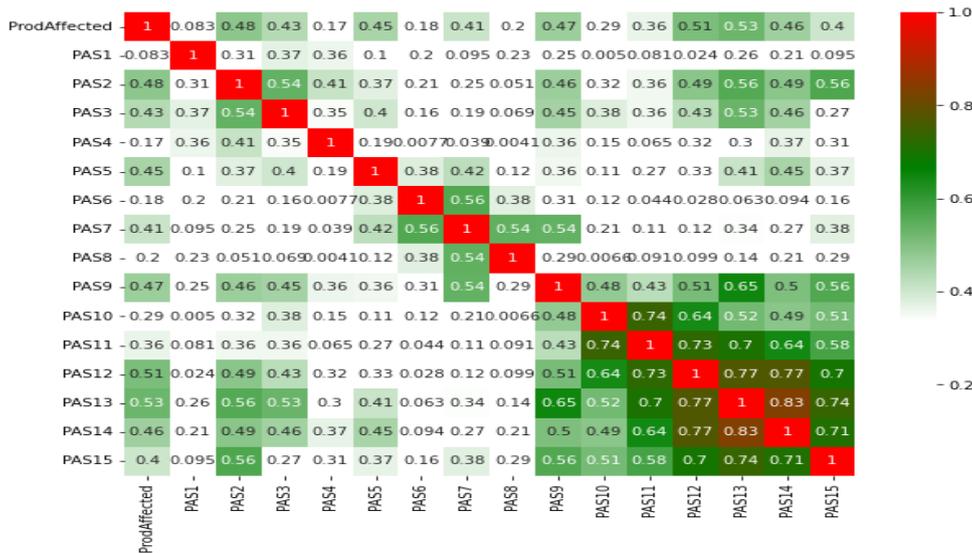
The correlation of the 15 questions asked on stress with the new variable Stress is shown in Figure 5. The question CFS10 (that is Inadequate teaching facilities) is shown to have the highest effect on the new variable called Stress (Figure 5) with more than 0.4 correlations. Also, the correlation of all the 15 questions asked concerning how the level of productivity is affected (ProdAffected) is shown in Figure 3. The order of the effect of the variables on how they affect the level of productivity for those above 0.4 correlation is PAS11 < PAS15 < PAS7 < PAS3 < PAS5 < PAS14 < PAS9 < PAS2 < PAS12 < PAS13 showing PAS13 (that is a response to the question "How often do you find yourself not working as carefully as you should?") followed by PAS12 (response to the question "How often do you miss lectures as a result of important official meetings?") as having that affect the level of productivity (Figure 3). The level of impact of suggested factors of coping with stress on the new variable called Coping is shown in Figure 4. The most significant method that determines if the person is coping or not is CM8 (i.e. Delegation of duties) and followed by CM2 (i.e. Neglect the problem) as shown in Figure 4.

**Figure 5: The absolute cross correlation of the 15 questions on stress on the variable Stress**



Source: Field Survey (2022).

**Figure 6: The absolute cross correlation of the 15 questions on effect on productivity on the variable production effect (ProdAffected)**



Source: Field Survey (2022)

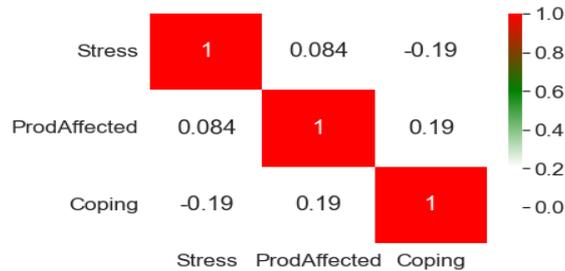
**Figure 7: The absolute cross correlation of the 10 questions on coping method on the variable Coping (Move to Supplementary S1)**



Source: Field Survey (2022)

The level of correlation of the three newly generated variables that measure Stress, how Productivity is Affected and Coping are shown in Figure 7. There is a low level of correlation between the three dependent variables. The inverse nature of stress and level of coping, as well as the direct correlation between the level of productivity affected and coping, is a relatively significant result. The relationship between coping with Stress shows that those who are highly stressed are using most of the suggested means of coping while those whose productivity is highly affected do not seriously agree with the coping methods. The relationship between Stress and Productivity Affected is lower compared to the correlation of the two variables with coping but shows that those who are highly stressed also have their productivity to be seriously affected.

**Figure 8: Cross-correlation of the three dependent variables; Stress, level of production affected (ProdAffected) and coping (supplementary).**



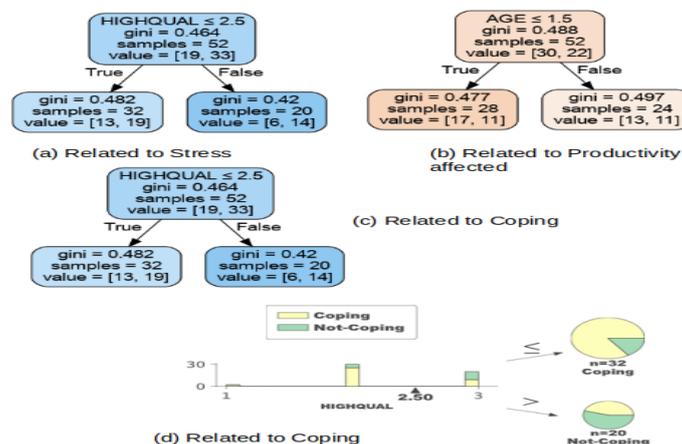
Source: Field Survey (2022)

The possible effects of the personal data variables namely Age, Gender, Residence, Teaching experience and level of highest qualification is considered using the tree mapping plots as shown in Figure 6. The results show that level of the highest education has a more significant effect on the level of Stress, how Productivity is affected and Coping. As shown in Figure 6a for the stress, 19 responses from the total population of 52 are indicated as less stressed while 33 are highly stressed. Those whose degree is greater than 2 (Ph.D. holders) are 20 and among them, 6 are analyzed to be less stressed while 14 are analyzed as highly stressed. The same trend is also observed for lower degrees (BSc and MSc) that made up a total of 32 from which 13 are analyzed as less stressed while 19 are analyzed as highly stressed. The percentage of highly stressed among the Ph.D. holders is higher (70%) than those of lower degree holders (59%).

A similar pattern was observed for the coping level (Figure 6c and d), the Ph.D holders are analysed to better cope (14 out of 20 coping (i.e. 70%)) with the situation (i.e. using the suggested coping techniques) that those with lower degree holders (19 out of 32 (i.e. 59%)) (Figure 6d). This simply indicates that most of the PhD holders are making use of the coping techniques indicated than those of lower degree holders and also the level of education has the same effect on both Stress and Coping.

Considering how productivity is affected, the variable Age is found to be more significant compared to other chosen variables. Among the 52 respondents, 20 are analyzed to have their productivity significantly affected while 30 are analyzed to be less affected. The Age that is less than 1.5 (that is age falls within the range of 21 to 40), among the 28 respondents in this category, 11 are analyzed to have a higher effect on productivity (38%) while 17 showed less effect on productivity. The age range of 41 to 60 shows that the productivity of 11 among the population of 24 is highly affected (46%), while 13 are less affected. As clearly seen, overall, a lower population of the people's productivity is affected by the stated factors (42%) but a relatively higher percentage of affected productivity is observed among those whose age is higher than 40 (46%) compared to those whose age is lower (39%).

**Figure 8: (a) Using Stress as a dependent variable (b) using the level of productivity as a dependent variable (c) using the level of coping as a dependent variable**



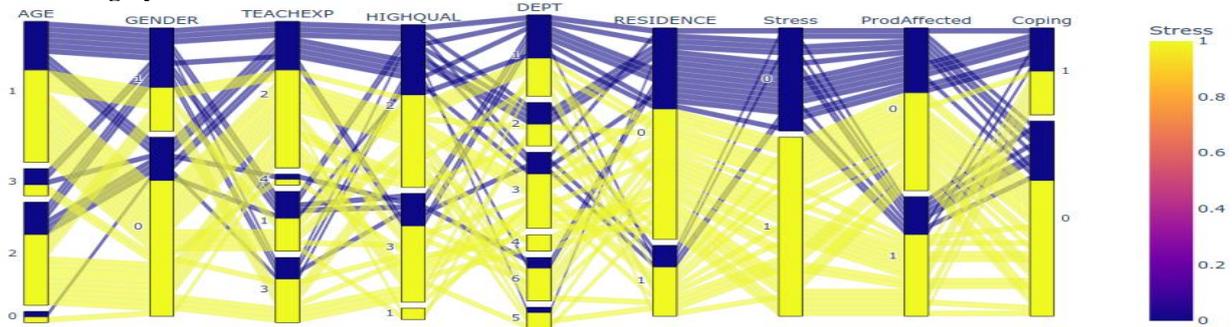
Source: Field Survey (2022)

Figure 8: (a) Using Stress as a dependent variable (b) using the level of productivity as a dependent variable (c) using the level of coping as a dependent variable.

The relation of all the selected variables to the Stress, the level of productivity affected and Coping is shown in Figure 8. It is clearly observed that the percentage of those highly stressed (scored 1 in the plot) is higher than the less stressed while the percentage of those whose productivity is affected is lower and those seriously using the coping methods are also lower.

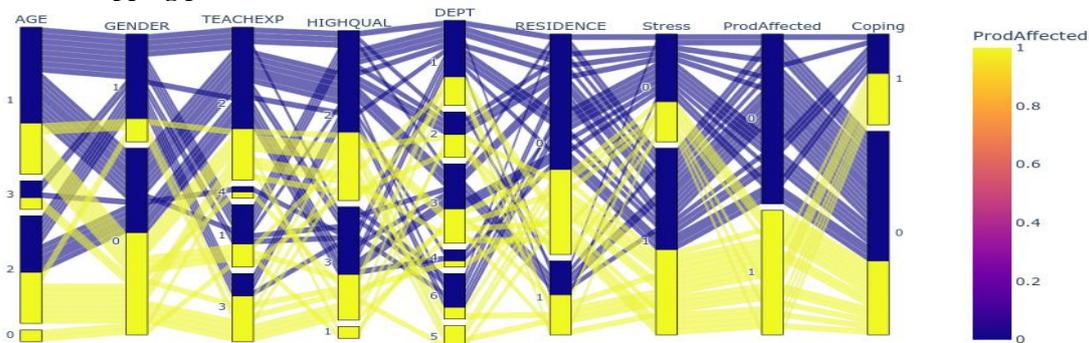
A higher percentage of Male (0 in the plot) are more stressed compared to Female (1 in the plot) and the productivity of male are also analyzed to be more affected (Figure 8) but a lower percentage of both male and female are making use of the coping methods (Figure 9). Though the population size of the BSc holders is very small compared to Ph.D. and M.Sc. holders, yet all the analysis show all BSc holders are highly stressed (Figure 7), are all analyzed to have their production affected (figure 8) and all found to be less making use of coping methods (Figure 8). As shown in Figure 10, a higher percentage of the correspondence is analyzed to be highly stressed (63.46%), a lower percentage is analyzed to have their productivity highly affected (42.31%) and a much lower percentage is found to be coping (30.77%).

Figure 9: The mapping plot selected variables with the Stress, Productivity affected and Coping. The colour yellow indicated highly stressed while blue indicated less stressed



Source: Field Survey (2022)

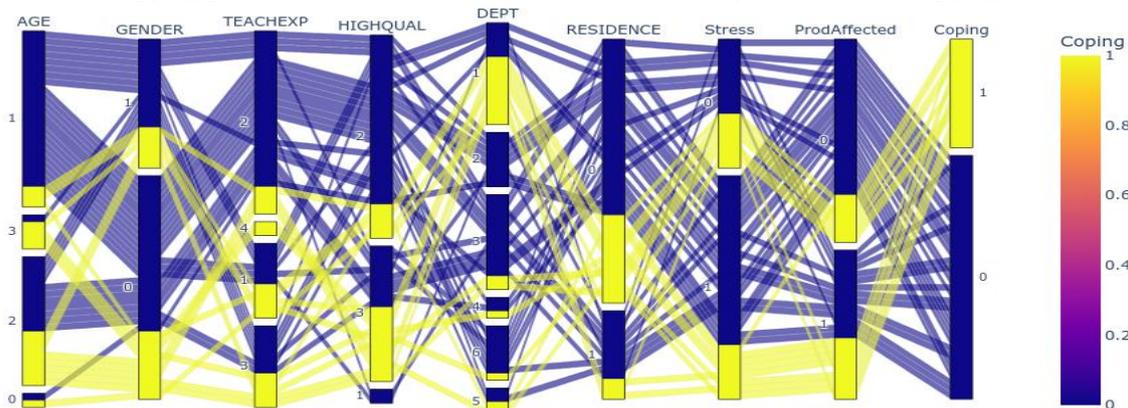
Figure 10: The mapping plot selected variables with the Stress



Source: Field Survey (2022)

Figure 10: The mapping plot selected variables with the Stress, Productivity affected and Coping. The yellow colour indicates where productivity is highly affected while blue indicates less affected productivity.

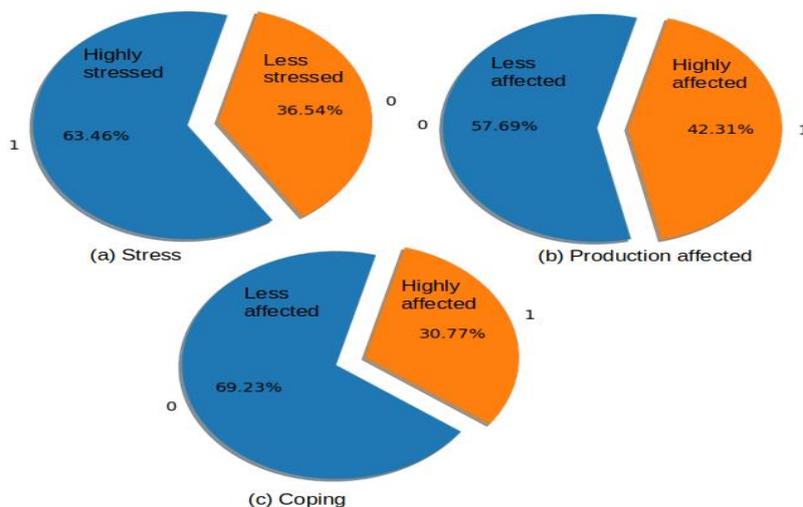
Figure 11: The mapping plot selected variables with Stress, Productivity affected and Coping



Survey (2022)

Figure 11: The mapping plot selected variables with the Stress, Productivity affected and Coping. The yellow colour indicates high coping while blue indicates low coping.

**Figure 12: The pie chart showing the percentage of those that are analysed**



Source: Field Survey (2022)

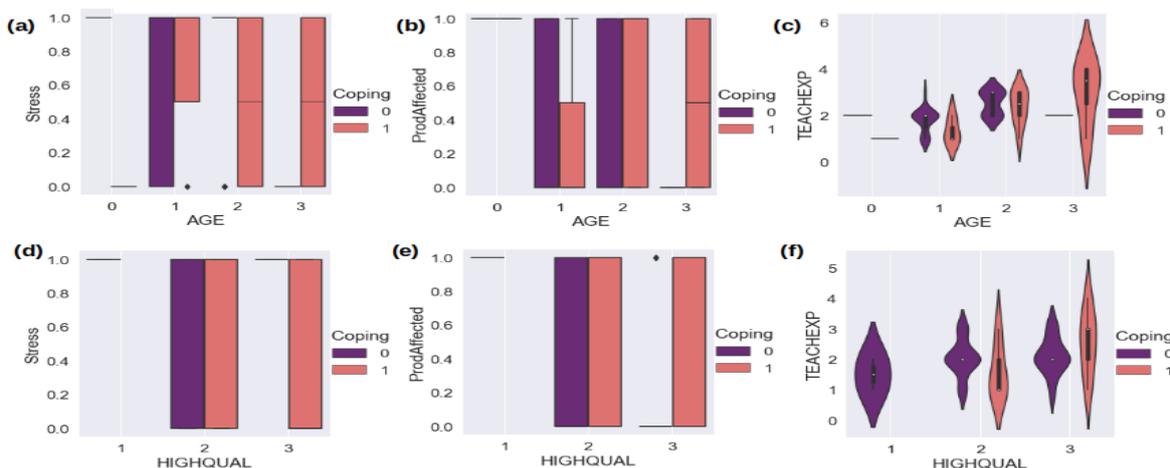
Figure 12: The pie chart showing the percentage of those that are analysed to be (a) highly stressed compared to less stressed, (b) production highly affected compared to less affected and (c) highly coping compared to less coping

The plots that give a better clarification of the level of coping according to the age when compared to the level of Stress, level of production affected and teaching experience are shown in Figure 11 (a, b, c respectively) while the comparison according to the level of the highest level of education is shown in Figure 11d, e and f. The Lower age range of 31-40 is analysed to be lower in coping with the stress and how their productivity is affected (Figure 11a and b) while the highest age range 51-60 is analysed to be completely coping with both stress and how their productivity is affected.

The difference in the age distribution of the stress and how the productivity is affected is in the age range of 41-50 that is found to have an equal level of population that is highly coping and less coping with productivity affected but they are completely coping with the stress. The higher the age, the higher the level of teaching experience (Figure 11c) and the higher the coping ability. Considering the level of education to stress and how productivity is affected (Figure 11d,e), those that have the highest education (Ph.D) are all analysed to be highly coping while MSc has an equal number of those who are highly coping and less coping. There is a direct relationship when comparing the year of teaching experience to the highest education, those with the lowest education (BSc) are analysed to be completely less coping while those with the highest degree have higher coping and lower level of population that is less coping.

Finally, the relationship of the stress to the level of productivity affected according to their coping ability is shown in Figure 12. Those that are highly coping are also analysed to have higher stress and high level of their productivity affected (productivity affected increases with stress) while those that are less coping are those that are highly stressed but lesser level of how their productivity is affected (productivity affected decreased with increasing stress).

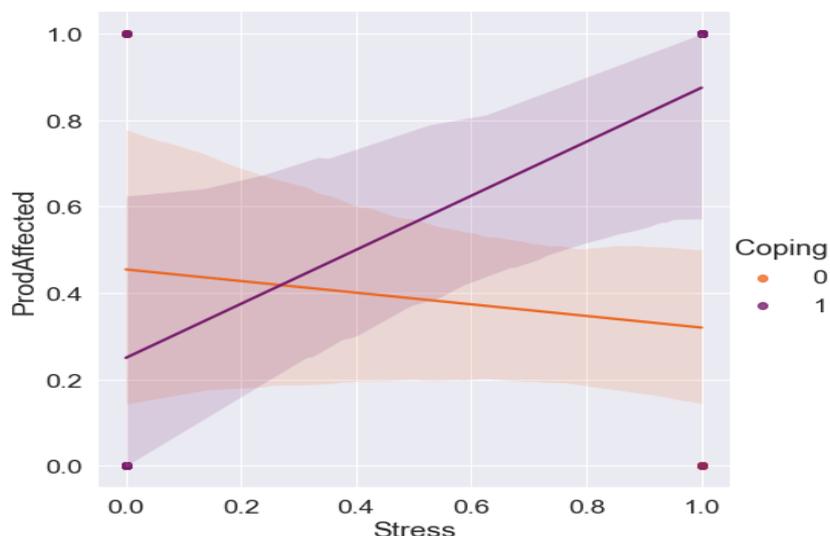
**Figure 13: The figure showing the level of coping**



Source: Field Survey (2022)

Figure 13: The figure showing the level of coping (analysed to be highly coping in brown and less coping in purple) compare (a) Stress with Age (b) level of production affected with Age (c) Teaching experience with Age (d) Stress with highest education (e) level of production affected with the highest qualification and (f) teaching experience with the highest education.

**Figure 14: The relationship between the level of productivity affected and stress considering those that are highly coping and those less coping**



Source: Survey (2022)

### Summary and conclusion

This paper investigated the impact of stress on productivity among the academic staff of Federal University Oye-Ekiti, Nigeria. The definitions of the basic concepts, factors responsible for excessive stress among university Lecturers and the impact of such on their productivity were examined. Out of 200 questionnaires distributed, 52 were retrieved and subsequently analysed. The statistical analysis of the study and plots were all carried out using python3 package. All the data analysis, data manipulation and static and interactive visualizations were done using different open source libraries in python which include numpy, pandas, matplotlib, seaborn, sklearn, graphviz, dtreeviz, plotly, cufflinks, statsmodels and scipy. The findings revealed that work overload, excessive pressure, overcrowded classes, meeting deadlines, administrative duties, students' unrest, cultism, lack of motivation, accommodation challenges and lack of conducive environment, are associated with factors responsible for the exposure of lecturers to excessive stress. It was concluded that stress has negative impact on the productivity of Lecturers of the Federal University Oye-Ekiti.

### Recommendations

In view of the findings and conclusion of the study, the following recommendations are made as a way forward for the university Lecturers to effectively and efficiently manage stress:

1. Government should recruit more qualified Lecturers. This is considered pivotal to addressing the stress associated with work overload, excessive pressure and overcrowded classes.
2. In order to depopulate overcrowded classes, government needs to build more structures that can conveniently accommodate large classes.
3. Also, the University Management should partner with philanthropists for infrastructural development in order to solve the stress caused by inadequate accommodation.
4. The University Management should attempt to identify the causes of students' unrest and those involved in cultism so as to take commensurate action and permanently put the challenge at rest.
5. Finally, the Lecturers need to adopt various stress management techniques to address stress since the phenomenon is inseparably attached to productivity.

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