Stress, traffic congestion, and productivity- An empirical analysis among university workers in Lagos, Nigeria

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Abstract

The study investigated the impact of stress and traffic congestion on employee productivity among University of Lagos staff who regularly commute to work. A total of 250 employees, including both academic and non-academic staff, participated in the study. Drawing on Lazarus's Stress Theory (1988) and French, Captan, and Harrison's Person-Environment Fit model (1982), the research explored the relationship between employee stress levels, productivity, and the environment (specifically, traffic congestion). The study employed three standardized scales: The Perceived Stress Scale (PSS) by Cohen and Williamson (1988), the Employee Productivity Scale (EPS), and the Traffic Congestion Scale (TCS) adapted by Mohammed and Zannatul (2019). Hypotheses were formulated, including the expectation of a significant association between traffic congestion and stress. Additionally, the study examined whether stress levels differed significantly between academic and non-academic staff and whether stress and traffic congestion could predict employee productivity. The study revealed significant results after analyzing the data using independent t-tests, Pearson correlation coefficients, and regression analysis. Specifically, it found that increased stress levels and traffic congestion were associated with lower employee productivity. Surprisingly, no significant difference was observed in academic and non-academic staff stress levels. The study recommends comprehensive employee welfare and housing policy reforms, including providing on-campus or near-off-campus accommodation for long-distance staff members.

Keywords: Traffic Congestion, Stress Reactions, Health Symptoms, Employee Productivity

Introduction

Stress is an omnipresent aspect of human existence, transcending cultural boundaries and affecting individuals regardless of their background or ethnicity. When people experience stress, it can lead to mood swings and unpredictable behaviour, potentially straining relationships with family and friends. This cyclical process can erode confidence and exacerbate emotional issues, as highlighted by recent research (Conceição et al., 2024; Oweisana & Ordua, 2022; Weerasinghe et al., 2020; Anas & Xu, 1999). Scholars have consistently emphasized the detrimental impact of everyday stress on both physical health and psychological wellbeing. Studies by DeLongis, Coyne, Dakof, Folkman, and Lazarus (1982), Eckenrode (1984), and Kanner, Coyne, Schaefer, and Lazarus (1981) underscore the importance of addressing stress in our lives. In the contemporary workplace, significant transformations have reshaped work and employment across various countries. These changes have contributed to an increasingly

stressful work environment (Marmot, 2015; Siegrist & Jian, 2016), with implications for physical, social, and mental health. Noteworthy shifts include: (1)- Sectoral Changes: The transition from industrial mass production to service-oriented and technology-driven jobs has altered the employment landscape. (2) Job Security and Flexibility: Traditional job trajectories characterized by stability and continuity have given way to more flexible arrangements, including mobility, retraining, and de-standardized employment contracts. (3) Globalization and Work Pressure - Economic globalization and heightened competition among transnational companies have intensified work pressure. Financial constraints and the aftermath of the Great Financial Crisis have further exacerbated stress levels (Wahrendorf, Sembajwe, Zins, Berkman, Goldberg, & Siegrist, 2012; Siegrist & Jian, 2016).

As a consequence, the burden of work-related stress and its impact on health has become increasingly evident (Conceição, Monteiro, Kasraian, Berg, Haustein, Alves, Azevedo, 2024; Oweisana & Ordua, 2022; Schnall, Dobson & Rosskam, 2009; Wahrendorf, Sembajwe, Zins, Berkman, Goldberg, & Siegrist, 2012; Marmot, 2015). Addressing stress in the workplace is crucial for promoting overall wellbeing and productivity

Work-related stress incurs significant industry costs (Arnold, Robertson & Cooper, 1991). Consequently, stress research has shifted from exclusively focusing on significant life events to recognizing the impact of minor environmental stressors. These subtle stressors, such as work deadlines and marital disagreements, have garnered attention due to their ability to describe stress within enduring relationships (e.g., spouse, friend) and roles (e.g., worker, student). Previous studies primarily explored intrinsic factors related to job roles, including role problems, workplace relationships, career development, organizational climate, and the work-home interface (Cooper et al., 1988). Experts widely acknowledge that demanding or threatening extrinsic features of job environments significantly affect workers' health.

Additionally, researchers suggest that specific intrinsic characteristics, such as personality traits and coping behaviour, contribute to individuals' vulnerability to stress (Cox, 1976; Cartwright & Whatmore, 2005). However, consensus remains elusive regarding how this interaction is best defined and how extrinsic and intrinsic components impact health (Edwards & Cooper, 1990; Van, DeJongr, & Landsbergis, 2005). Despite research efforts, studies on extrinsic job factors remain scarce, including traffic congestion, long work hours, heavy workloads, organizational changes, tight deadlines, altered duties, job insecurity, and lack of autonomy. Stress can adversely affect individuals, reducing motivation and performance and declining mental and physical health.

The transportation system is a vital component of modern society, designed to facilitate efficient and cost-effective movement across different regions within a country, ensuring maximum mobility for all citizens (Weerasinghe, Karunarathna & Subashini, 2020; Leshem & Ritov, 2007; Kanruzzama & Rumpa, 2019). However, in bustling metropolises like Lagos, where people commute amidst heavy vehicular traffic, traffic congestion has become a significant issue affecting workers physically and psychologically. Unlike advanced societies with well-developed transportation infrastructure designed for productivity and practicality (Leshem & Ritov, 2007), Africa and Nigeria face a more chaotic reality. As Nigeria's most populous state and commercial hub, Lagos forces workers to navigate traffic daily as they travel to and from work. Unfortunately, the current road network, including highways, is becoming dangerously congested due to the surge in vehicle numbers and inadequate municipal roads (David & Gregory, 2010). This gridlock places immense pressure and fatigue on individuals, significantly impacting their wellbeing and productivity. Many workers who

regularly commute report stress symptoms, anxiety, anger issues, and physical ailments such as backaches, all contributing to decreased productivity (Conceição et al., 2024; Oweisana & Ordua, 2022; Novaco, Stokols, & Milanesi, 1990).

Traffic congestion and overcrowded public transportation systems significantly reduce stress and employee productivity in densely populated metropolises like Lagos. Consequently, the impact of road traffic congestion on employee performance has garnered attention from human resource professionals, management experts, academics, and employers. Specifically, the time spent dealing with traffic congestion versus time spent working plays a crucial role in overall employee performance within organizations (Lupala, 2010; Kanruzzama & Rumpa, 2019).

Employers increasingly feel the harmful effects of daily traffic jams on their businesses. Research on stress-related factors reveals that commuting issues influence job dissatisfaction and changes (Conceição et al., 2024; Oweisana & Ordua, 2022; Novaco, Stokols, & Milanesi, 1990). A recent study in the United States found that 48% of working adults reported job dissatisfaction due to commuting, 32% considered commuting when choosing their current job, 27% believed they could work effectively from home, and 15% would change jobs for a shorter commute (Road Wage Survey, 2011). Additionally, long-distance commuting is associated with tardiness (Kluger, 1998).

Beyond productivity gains, the quality of commuting impacts motivation, financial savings, and employment opportunities. However, individual costs both in terms of time and money should be considered, along with potential consequences such as work-life balance distortion, health issues, increased stress, and environmental concerns like carbon emissions and heightened traffic congestion (Conceição et al., 2024; Oweisana & Ordua, 2022; IBM Corporation, 2009; Lyons & Chatterjee, 2008; Kanruzzama & Rumpa, 2019).

Traffic congestion on roads commonly occurs during peak hours typically in the morning and evening when workers commute to and from their duties. Additionally, there may be a third peak period, especially in the central business district, characterized by commercial and haulage activities during the afternoon. For commuters, traffic congestion serves as a significant stressor. The psychological impact of congestion includes anxiety, a sense of loss of control, work frustration, and reactive behaviours like shouting. Commuters in Lagos adhere to an average of eight hours—the standard working day—resulting in synchronized road engagement and disengagement, amplifying anxiety. Stress affects nearly every system in the body, influencing behaviour and wellbeing. It contributes to psychological and physiological disorders, reducing overall quality of life. Stressed individuals may exhibit mood swings, difficulty concentrating, memory issues, and unpredictable behaviours, potentially straining relationships with family and friends (see Oweisana & Ordua, 2022; Weerasinghe et al., 2020; Anas & Xu, 1999) Arnott, 2007; Weisbrod, Vary & Treyz, 2001; Fujita & Thisse, 2002). This cycle of low confidence can lead to more significant emotional problems. Ultimately, stress manifests as irritability, anger, impatience, anxiety, and feelings of being overwhelmed or burdened (see Conceição et al., 2024; Oweisana & Ordua, 2022; Weerasinghe et al., 2020; Anas & Xu, 1999). Moreover, pollution accumulates inside cars during traffic jams and at red lights, posing health risks such as lung cancer, asthma, heart disease, and stroke.

Various studies have explored the impact of traffic congestion on person-hours lost, revealing associations with psychological dysfunctions that ultimately affect human capacities and productivity (Oni, 1992; Levinson and Kumar, 1994; Crane & Chatman, 2003; Gordon et al., 1989). In contrast, empirical research on job-housing imbalances (Cervero, 1996; Cervero & Wu, 1998; Schwanen et al., 2004) highlights significant commuting burdens. Theoretical urban economic models also

suggest congestion-induced inefficiencies (Weerasinghe et al., 2020; Anas & Xu, 1999; Arnott, 2007; Weisbrod, Vary & Treyz, 2001; Fujita & Thisse, 2002), particularly in terms of reduced agglomeration benefits (Graham, 2007). Given this context and the health consequences and psychological issues associated with traffic congestion and stress, our current study aims to empirically establish the psychophysiological and physical effects of traffic congestion and stress on worker productivity, performance, and behaviour.

Conceptual Clarification

Stress, derived from the Latin word "stringere," meaning to draw tight, initially emerged from early concepts of strain and load in physics and engineering. Over time, this definition influenced our understanding of how stress impacts individuals. According to this perspective, external forces (load) exert pressure on an individual, resulting in strains—similar to how physical strains affect machines (Hinkle, 1973). Nevertheless, alternative perspectives consider stress as an individual's reaction to disruptions. These later theories propose that external or internal forces can trigger short-term or long-term "fight or flight" reactions in people's psychological functioning (Arnold, Robertson & Cooper, 1998). In such situations, individuals, like animals, must decide whether to confront the danger or escape.

The term "stress" first gained prominence in a biological context through the work of renowned endocrinologist Hans Selye in the 1930s. Selye expanded and popularized the concept, encompassing inappropriate physiological responses to various demands. In his usage, stress refers to both a condition and the stimulus causing it. Stress spans a broad spectrum—from mild irritation to severe dysfunction that can significantly impact health. According to Robbins (2004), stress is a dynamic state where an individual faces opportunity, constraints, or demands related to their desires, with uncertain and essential outcomes. It encompasses circumstances threatening an individual's wellbeing, including immediate safety, security, self-esteem, reputation, and peace of mind. Stress affects physical and psychological health, resulting in physical, mental, and emotional strain.

Importantly, stress is not inherently negative; it can also offer potential gains. Moorhead and Griffen (1998) define stress as an adaptive response to stimuli that impose physical and psychological demands on an individual. These varied definitions and descriptions highlight the excessive physical and psychological demands on individuals. Ultimately, stress arises from perceived threats or dangers, accompanied by the pressure to alleviate them.

Types of Stress

1. **Acute Stress:** Acute stress is a short-term form of stress that can be either positive or distressing. It arises from recent past demands and anticipated pressures shortly. While small doses of acute stress can be thrilling, excessive amounts become exhausting. Examples include job interviews, financial difficulties, divorce, or encounters with traffic authorities like LASTMA.
2. **Episodic Acute Stress**: Episodic acute stress becomes a pervasive part of life, leading to ongoing distress. Individuals experiencing episodic acute stress often feel constantly under pressure, as if everything is going wrong. This chronic state can take a toll on both physical and mental wellbeing. Symptoms may include tension headaches, migraines, hypertension, chest pain, and heart disease.
3. **Chronic Stress**: Chronic stress feels unending and inescapable. It can result from traumatic experiences or childhood trauma. This persistent stress gradually wears down individuals daily, year after year. Chronic stress affects physical health,

mental wellbeing, and overall quality of life. Examples include poverty, dysfunctional family situations, and feeling trapped in an unhappy marriage or a despised job.

Nature, Stages, and Effects of Stress

Stress, as described by Hans Selye (1946), unfolds in three distinct stages:

1. **Alarm Stage**: The body's stress response activates when a threat or stressor is identified. Initially, resistance decreases, followed by a counter-shock phase where defense mechanisms engage. Adrenaline surges, triggering the "fight-or-flight" response. The hypothalamic-pituitary-adrenal (HPA) axis also activates, releasing cortisol.

2. **Resistance Stage**: This stage represents maximum adaptation, ideally leading to equilibrium. The body faces the choice to fight or flee. If the stressor persists or defenses fail, the third stage emerges.

3. **Exhaustion Stage**: Adaptive mechanisms collapse. Depleted resources impair normal function. Autonomic symptoms (sweating, rapid heart rate) may reappear. Extended exhaustion leads to long-term damage, manifesting as ulcers, depression, diabetes, cardiovascular issues, and other mental illnesses.

Blumenthal (2003) distinguishes stress effects:

- **Behavioural Effects**: Stress contributes to accident proneness, substance abuse, impaired speech, restlessness, and forgetfulness.
- **Cognitive Effects**: Thought processes suffer—difficulty making decisions, hypersensitivity, mental blocks, and impaired concentration. Substance abuse can exacerbate these cognitive challenges.
- **Physiological Responses**: This is initiated in the brain. Stress affects organs. Adrenaline raises blood pressure and liver sugar release. Corticosteroids are helpful for "fight or flight" and suppress the immune system if prolonged. Accumulated stress products play a role in degenerative diseases.
- **Health Impact**: Prolonged stress detrimentally affects health. It exacerbates or causes conditions like asthma, amenorrhea, coronary heart disease, chest pains, headaches, migraines, diabetes, ulcers, and decreased libido. Notably, stress is immunosuppressive, leaving individuals vulnerable to infections and diseases, especially in an AIDS-prevalent world.

Theoretical Framework for Occupational Stress

Several theories influence occupational stress, but this study specifically focuses on two key frameworks: Lazarus's transactional model of stress and coping theory and the Person-Environment-Fit model. These theories provide insights into the complex relationship between relevant variables.

Lazarus's Transactional Model of Stress and Coping Theory: According to Lazarus (1988), stress arises when an individual perceives that their demands exceed their personal and social resources. In this model, stress is not solely defined by external events or the individual's response; instead, it hinges on the person's perception of the psychological situation. The impact of stress on psychological functioning depends more on feelings of threat, vulnerability, and coping ability than on the specific stressor itself. For employees, stress can emerge when they lack adequate resources for their tasks or when the work environment mismatches their abilities. This stress, in turn, affects optimal psychological functioning and ultimately impacts productivity.

Person-Environment-Fit Model: French, Captan and Harrison (1982) proposed the Person-Environment-

Fit model, which explores the relationship between stress, the individual, and the environment. The theory posits that strain occurs when there is a misfit between the person and their work environment psychological and behavioural dysfunctions result from this misalignment, adversely affecting productivity. Specifically, the model suggests that individuals fit certain occupations based on many interacting variables. The degree of strain experienced by an individual is directly proportional to the level of misfit between their characteristics and the demands of their occupation.

Therefore, in the bustling urban landscape of Lagos, Nigeria, university staff members navigate a complex interplay of stressors that impact their productivity. Two of these stressors stand out prominently: work-related stress and the daily grind of traffic congestion. While the conventional concept of 'work stress' has received considerable attention in existing literature, scant research has specifically explored the nexus between employees' stress at work and their experience with traffic congestion.

This empirical study aims to bridge this gap by investigating the predictive role of traffic congestion in shaping university staff members' stress levels. By examining this relationship, we shed light on potential interventions to enhance wellbeing and productivity in this context. Arising from the extensive literature review and the aim of this research, we outlined four objectives to work, and based on the objectives, we hypothesized that:

1) Stress will have a significant impact on the level of productivity of employees of the University of Lagos.
2) There will be a significant relationship between Stress and Traffic Congestion faced by the employees of the University of Lagos.
3) Stress and Traffic Congestion will significantly predict the level of productivity of employees of the University of Lagos.

4) There will be a significant difference in the stress levels of academic and non-academic staff members at the University of Lagos.

Methods

Study Setting

This study was conducted in Lagos State, Nigeria, explicitly focusing on Academic and Non-Academic Staff at the University of Lagos. Lagos, known as the financial capital of Nigeria, also serves as the country's tech hub, hosting numerous academic institutions. With a population of 25 million, Lagos faces significant traffic congestion, making it an ideal setting for investigating stress-related factors among employees. The convenience, time constraints, and respondents' familiarity with the research context influenced the choice of this location.

Sample & Sampling Procedure

A total of 250 Academic and Non-Academic Staff from the University of Lagos participated in the study. These individuals were randomly selected through accidental sampling. Among the participants, 110 were male, and 140 were female. All participants regularly commute from their homes to work. Their age range was 35-65 years, with an average tenure of 5 years.

Design: The study employed an Ex-Post-Facto research design. The participants are people who routinely face heavy traffic congestion during their commutes, leading to psychophysiological consequences. The variables were naturally manipulated, and data on workers' reported stress levels, hours spent in traffic, and productivity were collected for subsequent analysis.

Instruments

Demographic Information Inventory (DII): This inventory captured respondents' demographic details, including age, gender, and years of work experience.

Perceived Stress Scale (PSS): Developed by Cohen & Williamson (1988), the PSS assesses perceived stress. It consists of 10 items measuring how individuals appraise stressful life situations. Responses are on a four-point Likert scale, ranging from 0 (Never) to 4 (Very Often). The scale demonstrated high internal consistency and test-retest reliability.

Traffic Congestion Scale (TCS): Developed by Mohammed & Zannatul (2019), this self-report scale comprises ten items. Participants rate their agreement on a five-point Likert scale. The TCS score ranges from 10 to 50, demonstrating high internal consistency and reliability.

Employee Productivity Scale (EPS): Adapted from Lee (2010), this scale assesses self-reported productivity. Its reliability (Cronbach's alpha) is 0.657, indicating acceptable consistency. The EPS contains 26 items.

Procedure

Formal administrative approval was secured, and participants provided informed consent. Questionnaires were distributed to willing participants at various points within the selected institution. The researcher personally collected the data. Respondents had 30 minutes to complete their questionnaires, allowing time for thoughtful responses. Confidentiality was strictly maintained throughout the data collection process.

Variables	Levels	Frequency	Percentage (%)
Gender	Male	110	44.0
	Female	140	56.0
	Total	**250**	**100.0**
Age	20-30 Years	58	23.2
	31-40 Years	62	24.8
	41-50 Years	69	27.6
	51 Years-Above	61	24.4
	Total	**250**	**100.0**
Job Role	Academic Staff	109	43.6
	Non-Academic Staff	141	56.4
	Total	**250**	**100.0**
Years of Work Experience	5-10 Years	109	43.6
	11-15 Years	46	18.4
	16-20 Years	37	14.8
	21-25 Years	28	11.2
	26 Years-Above	30	12.0
	Total	**250**	**100.0**

Results

Table 1: PERCENTAGE DISTRIBUTION OF RESPONDENTS BY SOCIODEMOGRAPHIC CHARACTERISTICS

Table 2: MEAN AND STANDARD DEVIATION OF PERCEIVED STRESS, TRAFFIC CONGESTION, EMPLOYEE PRODUCTIVITY BY GENDER, AGE, JOB ROLE, AND YEARS OF WORK EXPERIENCE.

Variables	Level	Perceived Stress Index		Traffic Congestion index		Employee Productivity index	
		Mean	SD	Mean	SD	Mean	SD
Gender	Male	22.70	5.382	35.50	5.599	18.80	4.183
	Female	24.28	5.699	36.39	5.865	19.31	2.323
Age	20-30 Years	24.02	5.542	34.53	5.459	18.74	2.750
	31-40 Years	24.23	5.240	37.39	6.276	19.39	2.531
	41-50 Years	24.06	5.493	36.74	5.218	18.87	2.351
	51 Years-Above	21.98	5.971	35.13	5.726	19.36	4.926
Job Role	Academic Staff	23.83	6.032	36.35	5.327	18.88	2.406
	Non-Academic Staff	23.39	5.267	35.72	6.070	19.25	3.818
Years of Work Experience	5-10 Years	24.42	5.41	35.51	6.27	19.02	4.00
	11-15 Years	23.48	4.32	35.93	5.31	18.98	3.30
	16-20 Years	22.89	5.66	36.86	4.07	19.24	1.89
	21-25 Years	22.25	6.36	37.39	5.32	19.32	2.45
	26 Years-Above	22.80	5.84	35.47	5.92	19.10	2.29

Test of Hypotheses

Hypothesis 1: *Stress will significantly influence the level of productivity of employees of the University of Lagos.*

TABLE 3: PEARSON R CORRELATION TEST OF PERCEIVED STRESS AND TRAFFIC CONGESTION

	Mean	Std. Dev	N	Perceived Stress	Employee Productivity	P>.05
(1) Perceived Stress	23.58	5.606	250	1	-.002	.200
(2) Employee Productivity	19.09	3.277	250	-.002	1	

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3 presents the correlational analysis between stress levels and productivity among the sampled respondents. From the results, it is observed that there is no correlation between perceived stress and employee productivity (r = -0.002). Therefore, hypothesis 1 is rejected.

Hypothesis 2: *There will be a significant relationship between Stress and Traffic Congestion faced by the institution's employees.*

TABLE 4: PEARSON R CORRELATION TEST OF PERCEIVED STRESS AND TRAFFIC CONGESTION.

	Mean	Std. Dev	N	Perceived Stress	Traffic Congestion	P < 0.05
(1) Perceived Stress	23.58	5.60	250	1	.165*	
						.009
(2) Traffic Congestion	36.00	5.75	250	.165*	1	

*. Correlation is significant at the 0.05 level (2-tailed).

From Table 4, it is observed clearly that there is a significant positive correlation between Perceived Stress and Traffic Congestion (r = 0.165, at p<0.05). Given this result, hypothesis 2, which states that there will be a significant relationship between Stress and Traffic Congestion, is therefore accepted.

Hypothesis 3: *Stress and Traffic Congestion will significantly predict the level of productivity of employees of the University of Lagos.*

TABLE 5: RELATIVE CONTRIBUTION OF PERCEIVED STRESS, TRAFFIC CONGESTION TO THE PREDICTION OF EMPLOYEE PRODUCTIVITY (DF = 2, 248).

Model	B	SE	β	T	Sig.	R	R²	F ratio	pv
Perceived Stress	-.41	.041	-.23	3.44	P<0.05	.51	0.26	8.13*	P<.05
Traffic Congestion	-.30	.020	-.16	2.51	P<0.01				

a. *Dependent Variable: Employee Productivity.*
b. *Predictors: (Constant), Perceived Stress, Traffic Congestion.*

The summary of regression analysis in Table 5 suggests that Perceived Stress and Traffic Congestion significantly predicted or influenced the respondents' productivity level. It is observed from the table that the 41.0% variation in Employee Productivity is influenced negatively by Perceived Stress, while Traffic Congestion predicted 16.0% of the observed variation in employee productivity. Perceived stress and traffic congestion jointly predicted only about 26.6% of the observed employee productivity variance. Therefore, This result implies that the higher the stress and traffic congestion experienced by commuting workers, the lower the productivity at work. Hypothesis 3 is, thus, accepted.

Hypothesis 4: *There will be a significant difference in the university stress level of academic and non-academic staff.*

TABLE 6: INDEPENDENT T-TEST COMPARISON OF STRESS BY JOB ROLE.

	Job Role	N	Mean	SD	T	df	P < 0.05
Perceived Stress	Academic Staff	109	23.83	6.03	.311	248	0.311
	Non-Academic Staff	141	23.39	5.26			

From the result in Table 6, academic staff of the institution reported higher mean scores (M = 23.83; SD = 6.03) compared to their counterparts who are non-academic staff of the institution (M = 23.39; S.D = 5.26) on Perceived Stress. By implication, and expectedly academic staff reported higher mean stress level compared to their non-academic

counterpart. Nevertheless, the calculated of t = 0.311 was found to be lower than the critical table value, which implies that there is no significant difference in the stress level of academic and non-academic staff. Thus, hypothesis 4 is partly accepted.

Discussion

The relationship between stress, traffic congestion, and employee productivity is multifaceted. **Traffic** **congestion**, a typical urban challenge, can significantly impact employees' stress levels. Prolonged commutes, delays, and frustration

navigating congested roads contribute to heightened stress. **Stress**, in turn, affects psychological wellbeing, cognitive functioning, and overall health. When employees experience chronic stress due to traffic congestion, their productivity may decline. Stress-induced fatigue, impaired concentration, and emotional strain can hinder work performance. Awareness of this relationship is crucial for both individuals and employers. Therefore, this study surveys the relationship between stress, traffic congestion, and employee productivity among employees of a first-generation university in a cosmopolitan city.

The study results revealed a significant relationship between stress and employee productivity. Specifically, a negative correlation was observed between perceived stress levels and productivity. According to Lazarus's stress theory, an individual's mental characteristics and environmental conditions shape cognitive appraisals. These appraisals categorize stressors as challenges (eustress) or threats (distress). When employees perceive stressors as opportunities for personal mastery, it motivates them toward increased productivity. Conversely, viewing stressors as harmful or draining can lead to reduced productivity. Thus, functional stress (eustress) may enhance productivity, while dysfunctional stress (distress) can hinder it.

The results of our study highlight a significant joint effect of perceived stress and traffic congestion on employee productivity. Specifically, as reported traffic congestion levels increase, so does the perceived stress among employee commuters. Our findings suggest that higher perceived stress and increased traffic congestion experienced by commuting workers lead to decreased productivity at work. This trend is particularly pronounced among university staff who commute between home and work regularly. Notably, our findings align with the United Nations report (2011), which indicates that higher road congestion contributes to stress and fatigue in the population, significantly

impacting workers' health and productivity. Additionally, David and Gregory (2009) concluded that Lagos, like other major African cities, faces substantial traffic congestion, directly affecting worker productivity and hindering effective time management due to traffic-related challenges.

The findings from our study underscore a significant relationship between stress and traffic congestion. As reported traffic congestion levels increase, so does the perceived stress among employee commuters. This trend was particularly evident among university staff who regularly commute between home and work. The link between perceived stress and traffic congestion aligns with previous research by Conceição et al. (2024), Oweisana & Ordua (2022), Weerasinghe et al. (2020), and Tykkyläinen (2010). These studies collectively emphasize that long-distance commuting and extended time spent in traffic exact a considerable toll on worker productivity, especially when reliable and affordable transportation options are lacking. Additionally, the literature highlights the adverse impact of long-distance commuting on employee wellbeing, as the compact working schedule resulting from prolonged traffic exposure negatively affects overall work conditions.

Conclusion

The primary objective of our study was to investigate how stress and traffic congestion influence the productivity of University of Lagos staff who commute regularly to work. Additionally, we explored how stress and traffic congestion can predict productivity levels among these employees. Our findings established a link between stress and reduced productivity. Expectedly, higher stress level among the among staff compared to non-academic staff was clearly established. An average of one out ten academic staff are off-campus resident who have to commute to work from far distances daily amidst heavy morning and evening traffic congested roads. Therefore, it is out of place for many employees to report poor

performance feedback, which perhaps a direct indication of stress and traffic congestion affecting their functioning at work. Some employees have resorted to staying away from work or arriving late due to the traffic challenges they faced or work from remote location via online mode. While the sampled University staff members commend the management for their proactive measure to mitigate accommodation difficulties faced by staff member, they also recognized that Lagos being a cosmopolitan "mega-city" and commercial nerve center of the nation will continue to experience traffic congestion, so future effort should be directed at providing on-campus accommodation for fairly above 75% of university staff members.

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