

INFLUENCE OF ACCESSIBILITY, SATISFACTION OF TRAIN SERVICES AND TIME MANAGEMENT ON COMMUTING STRESS AMONG TRAIN COMMUTERS BETWEEN LAGOS AND IBADAN.

Olowoyo, Bolarinwa M. & Malomo Bolajoko I.

Department of Psychology
University Of Lagos,
Akoka Lagos

ABSTRACT

The recently completed train services between Lagos and Ibadan is already bedevilled with operational problems. Commuters are complaining of satisfaction and time management rendered by the Nigeria Railway Corporation. Therefore, this study set out to investigate the influence of accessibility, satisfaction of train services and time management on commuting stress among train commuters between Lagos and Ibadan. The theory of Reasoned Action and Planned Behaviour were reviewed for this study. A survey research design was employed on Two hundred and seventy-two (272) participants who commuted between Lagos and Ibadan using convenient sampling method. To obtain responses, three valid scales were utilized. The result of the study revealed that train commuters' accessibility to train stations and satisfaction of train services significantly predicted commuting stress of train commuters between Lagos and Ibadan, ($p < .001$). Also, the result revealed that there was a significant negative relationship such that the train schedule gave participants ample time to conduct their business of the day ($r = -.254$). Additionally, the outcome of this study revealed that train commuters who utilize the train for work and business experienced a high commuting stress ($p = .59$, & $.34$) respectively compared to commuters who utilize the train for leisure ($p < .001$). Lastly, there were no significant differences in the commuting stress among all age groups ($p > .001$). In conclusion, timely train schedule and quality train services are important for time management and satisfaction of train commuters. It is therefore recommended that management of Nigeria Railway Corporation should maintain timely schedule of train movement and should also ensure accessibility to train stations.

Keywords: *Train Services, Commuting Stress, Commuters*

BACKGROUND OF THE STUDY

Transportation is the movement of people, goods and information from one location to another. It is believed to be as old as man. Transport which can also be referred to as transportation was derived from two Latin words 'trans' which mean 'across' and 'portare' which mean

'carry' (Adeniran and Yusuf, 2016). Merriam Webster Dictionary defines it as a means of conveyance or travel from one place to another or a public conveyance of passengers or goods especially as a commercial enterprise and Longman Dictionary of Contemporary English (2003) defines transportation as a process or business

of taking goods from one place to another or a system for carrying passengers or goods from one place to another. Transportation refers to the process of conveying or moving of goods and people from place to place (Anyanwu et al 1997). According to Good and Jebbin (2015), transportation is a system for carrying passengers, raw materials and goods from one place to another both internally and internationally, often through power driven machines.

Public transport is a system of transport for passengers by group travel systems available for use by the general public unlike private transport, typically managed on a schedule, operated on established routes, and that charge a posted fee for each trip (Wikipedia).

Rail transportation is a means of transportation on vehicles which run on tracks (rails or rail roads). It is one of the most important, commonly used and very cost-effective modes of passenger commuting and goods carriage over long, as well as short distances.

A virile rail transportation system plays a significant role in the sectoral development and overall growth of any economy. It opens up regions, hinterlands and rural areas by facilitating agricultural development. Also, it attracts residential, commercial, educational and recreational activities and development around its axis (Nwanze, 2002). Compared to other modes of transportation, rail transportation is

relatively safe, reliable and economical. Arguably though, it provides all season protection to the products moved on uninterrupted basis and able to transform a nation's economy because mass movement of people, goods and services is possible through it.

However, there are several major problems facing rail system development but the most important ones are: technical problems such as tight curves, steep gradient, rail buckling; associated speed limits; poor communications; government interference with management structure; lack of freedom to set tariffs; underfunding and volatile staff training (www.yourarticlelibrary.com, Igwe *et. al.*, 2011). Also, the railway requires a large investment of capital; the cost of construction, maintenance and overhead expenses are very high as compared to other modes of transport. Another disadvantage of railway transport is its inflexibility. Its routes and timings cannot be adjusted to individual requirements.

Historically, the railways in Nigeria were conceived and constructed from Lagos to the furthestmost parts of the north-eastern part of the country, to open up the hinterlands along its corridor. With the passing of the Nigerian Railway Corporation Act 1955, the company gained its legal right to construct and operate rail service in Nigeria. The development of railways in Nigeria started from Lagos Colony to Ibadan in march 1896, by the British Government (www.researchgate.com). The general

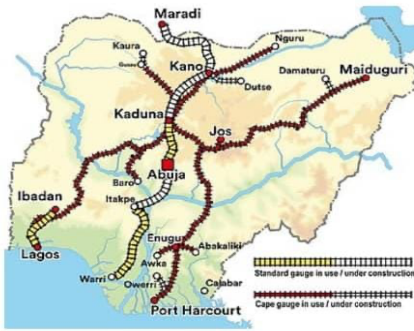
objective of railway construction in Nigeria between 1898 and 1927 was partly to maintain links between the central seat of colonial government in Lagos and other parts of the country. In the letters of the Act setting up the Nigerian railway corporation, it is to engage as "carriage of passengers and goods in a manner that will offer full value for money, meet cost of operations, improve market share and quality of service, ensure safety of operations and maximum efficiency, meet social responsibility in a manner that will meet the requirements of rail users, trade, commerce, industry, government and the general public (Nigerian transport profile, 1993). The development of transport in the overall activities of a nation is the ability to deliver an improved, efficient, effective, affordable, accessible, safe, reliable and an integrated transport system which will prosper the economic, social and political segments of the nation.

According to Osuji (2013), before the development of modern highways and airports in Nigeria, the railway was the only means to travel efficiently and move goods from one point to another. This created the leeway for the modest development witnessed from the colonial times and before the early 1970s. Furthermore, in constructing a well-used transport channel like railway service sometimes requires a good knowledge of how factors influence demand for the service and travel mode choice (Banister, 2011, Litman, 2013).

However, development and promoting

the use of railway has become an important part of government strategies to reduce carbon emissions from the transport sector worldwide and also a means to generate revenue while also easing transport stress of its citizens, hence this requires a very good understanding, while taking into cognizance the factors that can influence public transport mode choice which includes 'policy implementation process'. On the other hand, there is been a lot of new constructions in the aspect of road network coupled with renovation of old roads. However, there has no matching expansion in the domain of rail system. Furthermore, the safety of railway channel as a means of public transport is crucial for mobility and one of the perceived reasons why some people prefer the use of train to bus when commuting might be centred around conformity or the anxiety that comes with the use of public bus and the perceived safety and satisfaction that comes with the use of train.

Railway transport is already becoming part of the major public transport channel in the southwestern part of Nigeria and there is need to understand the reason why people prefer to use the railway channel instead of road channel and while doing this we will be taking into cognizance conformity and anxiety that the commuters might experience while trying to make decisions about their preferred channel of interstate travel within the southwestern states in Nigeria using (Lagos, Ogun and Oyo state).



Railway system of Nigeria 2021

Accessibility and satisfaction with train services.

Accessibility refers to the ease with which individuals can get to the train station and use train services. It encompasses factors such as the availability and proximity of train stations, the frequency and reliability of train schedules, the affordability of fares, and the physical accessibility of trains and stations for people with disabilities or other mobility challenges. Satisfaction with train service refers to how happy or content individuals are with the quality of the train service they have received. This can include factors such as the cleanliness and condition of trains and stations, the helpfulness and friendliness of staff, the speed and punctuality of trains, and the overall comfort and safety of the journey. Satisfaction can also be influenced by factors such as the availability and quality of onboard amenities, the ease of ticket purchasing and boarding, and the effectiveness of communication during disruptions or delays.

It is known that people using the train for their commute are generally less stressed compared to people using a private car (Wener and Evans, 2011).

Railway service quality has been assessed worldwide. However, a greater share of the studies has been performed in developed countries. The travel demand, legal restrictions, travel behaviour, and disharmony among planning authorities in developing countries are different from those in developed countries, while the developing countries face extensive challenges of ensuring mobility for huge population at an affordable price while balancing the environmental concerns. In fact, developing countries often have context-specific factors not found in more advanced nations. For example, Geetika and Nandan (2010) were the first to study about porter behaviour. Porters are people that help to carry luggage inside the station in exchange for money. Often, these porters may be people with low education levels who have grown up in tough neighbourhoods.

STATEMENT OF PROBLEM

The recently completed train services between Lagos and Ibadan is already bedevilled with operational problems. Commuters are complaining of dissatisfaction and time management rendered by the Nigeria Railway Corporation. Therefore, this study set out to investigate the influence of accessibility, satisfaction of train services and time management on commuting stress among train commuters between Lagos and

Ibadan.

The study investigated the influence of accessibility and satisfaction of train services, as well as time management, on commuting stress among train commuters between Lagos and Ibadan. Specifically, the study seeks to address the problem of commuting stress experienced by many train commuters, which can negatively impact their well-being and productivity. The study examined whether factors such as the ease of accessing train services, the quality of the services, and effective time management strategies can help to mitigate the negative effects of commuting stress among train commuters. Additionally, the study explored the relationship between commuting stress and other factors such as demographic characteristics, reason for travel, and frequency of travel. Hence, there exist some major challenges faced with train accessibility in this region which one of them is train timing and frequency of train interstate movement. Usually, the problem with the train timing is that most people willing to go with the train won't have access to the train service due to their location. Hence, them trying to meet up with the train timing might put them under a whole lot of pressure both physically and psychologically due to the fact that once they've missed the timing its till the next day before they'll have that opportunity increasing the frequency of train movement will also increase the timing giving the commuters variety of time and options to pick from every day. However, several

studies have been carried out to investigate the Influence of satisfaction on the stress level of commuters around the world but not in the railway mode of transportation in the western part of the country. Further, the choice behaviour of commuters plays a crucial role in the implementation of decisions about transportation. Hence, the commuter may choose a mode out of many available modes for specific reasons. Consequently, many factors are responsible in making decisions concerning mode of transportation. Furthermore, taking into cognizance the mode of choice decision, a proper analysis of choice decision making must be implemented. Thus, "a proper analysis of the mode choice decisions can help in addressing issues such as forecasting demand for new modes transport, mitigating traffic congestion allocating resources examining the general efficiency of travel, and providing insight into the traveller's behaviour characteristics". On the other hand, one of the major obstacles influencing the improvement of railway channel of transportation in the Southwestern part of Nigeria is the absence of assessment guidelines that can be used as a reference basis for organizing multimode passenger transportation in the region. However, by improving the perceived safety, time management and satisfaction of commuters, this can lead to a reduction in the usage of private and other channel of transportation.

OBJECTIVES OF THE STUDY

The main objective of this study is to examine the influence of accessibility,

satisfaction of train services and time management on commuting stress among train commuters between Lagos and Ibadan. The specific objectives are to:

1. Identify if Train commuters' accessibility and satisfaction of train services significantly predict commuting stress of train commuters between Lagos and Ibadan.
2. investigate if there be a negative significant relationship between time management and commuting stress among train commuters between Lagos and Ibadan
3. examine if Train commuters who utilize the train for work and business significantly report a low commuting stress compared to commuters who utilize the train for visiting
4. access if Train commuters between the ages of 41 to 50 years express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years.

LITERATURE REVIEW

A few studies developed demographic models to determine the significant attributes of rail passenger perceptions in developing countries. Geetika et al. (2010) investigated the passenger satisfaction at Indian railway platforms on refreshment, information system, porter behaviour, basic facility, safety and security. Mijares et al. (2016) analysed the waiting time, in-vehicle travel time, fare, air quality, risk perception, and adaptation of a small number of rail passengers (225 respondents) to understand passenger

satisfaction and their adjustable behaviour in severe environments at a metro rail line in Philippines. Mijares et al. (2016) considered income as the only demographic characteristics of rail passengers, ignoring their demographic diversity. Kriswardhana et al. (2018) assessed the 400 rail passengers' responses on 13 ordinal variables of rail services in Indonesia and found that the scheduled arrival of trains positively affected the overall satisfaction level. A major drawback of the study is that none of the ordinal variables investigated were clearly explained beforehand. For example, the variable "officer service" seems to be ambiguous because it does not indicate whether passengers judged officers' performance on the basis of efficiency, promptness, politeness or ethics, or on a combination of all the mentioned bases. Hadiuzzaman et al. (2019) used the adaptive neuro-fuzzy inference system (ANFIS) to assess the effects of physical and service quality attributes on intercity train service for regular and festival scenarios at Kamalapur Railway Station, Dhaka. Although the study provides important insight into intercity trains in Dhaka city, it neither addressed income variety among respondents nor developed correlation among studied variables. Islam et al. (2018) assessed railway service quality in Joydebpur Railway Station (which also happens to be the study area of this article) using 21 service quality attributes by considering the situation both at the station and inside trains. The study found that people were slightly more dissatisfied with facilities inside train than those inside

the station. A major limitation of the study is its simplistic weighted average method to assess the service quality attributes. However, the study is interesting as it uses photographs to visualize the current service conditions inside trains and at the station. Such conditions are uncommon in advanced countries. For example, the study shows people jam-packed inside unhygienic trains. To save time from finding later trains, some people try to board trains at full capacity and sit on train roofs. Such people may have safety problems throughout the train journey. In fact, trains are jam-packed with people above the rooftop during the holiday season in Bangladesh.

Literature review has revealed that integrating traffic safety into demand models has not been explored yet. However, there exist only a very few studies that have delved into researching on the dimension of transportation safety influence on mode choice that were particularly in school children travel preferences. However, in a study conducted on travel mode choice of children aged between 6 and 12 years old was studied. For this age category, parent are the ones who predominantly determine children's choice of travel. Furthermore, their study revealed that traffic infrastructure significantly influences both the real and the perceived traffic safety of parents, varying based on age and gender of children. According to another study undertaken by the average household income level and car ownership were found to be important determinants of

mode choice. Furthermore, it was also concluded that traffic safety perception is partially dependent on socioeconomic status of household. Consequently, it was also concluded that safety consciousness positively influences the transit mode choice, meaning that parents consider car as a safe travel mode for their children's trips to and from school. The affective encounters of commuting refer to "feelings evoked by travelling, such as stress, excitement, pleasure, boredom and control" (Anable & Gatersleben, 2005). According to Russell's circumplex model of affect (Russell, 1980), an environment is automatically experienced in terms of two dimensions: valence (degree of pleasantness) and arousal (degree of intensity). For example, "*stress*" is a combination of intense arousal and unpleasantness. However, most research into affective experiences of commuting has focused on stress.

During the early 1970s, researchers documented personal stress associated with commuting to work. However, the factors influencing commute stress are only partly clear. Early studies focused on impedance, defined as the difficulty commuters experience in moving from home to work and back. Furthermore, researchers initially measured impedance as travel distance or time but soon focused on travel speed to capture the effect of congestion. Novaco, Stokols, and Milanesi (1990) differentiated between physical impedance (e.g., speed) and subjective impedance measured as drivers' perceptions about inability to avoid traffic, speed

reductions due to traffic jams, exposure to traffic control devices and other characteristics of the commute. It has been theorised that impedance contributes to stress through the mechanism of perceived control: higher impedance causes commuters to feel less control and thus more stress. Furthermore, one study found control to be “the most powerful predictor of commuting stress” (Sposato, Röderer, & Cervinka, 2012). Control can be operationalised in a variety of ways. Schaeffer et al. (1988), in comparing stress for commuters driving alone versus car-pooling, differentiated between control over the internal environment of the car (e.g., controlling the radio) and control over the route taken to work.

Theory of reasoned action (TRA)

Theory of reasoned action (TRA) was developed by Fishbein & Ajzen, (1975), the theory justifies behaviour through the identification of the primary determinant of that behaviour, the sources of these determinant variables, and by organizing the relationship between the determinant variables. Hence, the theory is manifest through the sequence of reformulations that build on one another in a developmental fashion. However, here are some of the accomplice theories that support the theory of reasoned action (Fishbein & Ajzen, 1975), “*theory of planned behaviour (Ajzen, 1985), and the integrative model of behavioural prediction (Fishbein, 2000)*”. The theory states that the better one understands which beliefs cause

Behaviour by what process, the better able one is to design successful messages.

RESEARCH QUESTIONS

1. Will Train commuters' accessibility to train stations, satisfaction of train services significantly predicts commuting stress of train commuters between Lagos and Ibadan?
- 1 Will there be a negative significant relationship between time management and commuting stress among train commuters between Lagos and Ibadan?
- 2 Will Train commuters who utilize the train for work and business significantly report a low commuting stress compared to commuters who utilize the train for visiting?
- 3 Will Train commuters between the ages of 41 to 50 years express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years?

RESEARCH HYPOTHESIS

1. Train commuters' accessibility to train stations, satisfaction of train services will significantly predict commuting stress of train commuters between Lagos and Ibadan.
1. There will be a significant negative relationship between time management and commuting stress among train commuters between Lagos and Ibadan.
2. Train commuters who utilize the train for work and business will significantly report a low commuting stress compared to

commuters who utilize the train for visiting.

3. Train commuters between the ages of 41 to 50 years will express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years.

METHOD

Research settings.

Research was carried out in three stations; Mobolaji Johnson train station located at Alagomeji, Lagos state, Obafemi Awolowo Train station located at Moniya, Oyo state and Wole Soyinka train station located at Abeokuta, Ogun state. The questionnaires were administered to passengers in transit. The train stations were selected due to the heavy commuters' presence.

Study Population.

The population of this study consisted of the entire train commuters in the three stations investigated; Mobolaji Johnson station located at Alagomeji, Lagos state, Obafemi Awolowo station located at Moniya, Oyo state and Wole Soyinka station located at Abeokuta, Ogun state. The number of train commuters in the southwestern part of Nigeria is estimated to be around 1500 monthly according to a rough statistic given by a source from their statistics division of the train station. Purposive convenient technique was the sampling method adopted for this research. Cross-sectional survey research design was used because data was obtained from different locations. Two valid scales were adopted for data gathering.

These are: Beck Anxiety Inventory (BAI) developed by Aaron T Beck, MD (Beck et al., 1990; Steer and Beck, 1997), time management questionnaire (TMQ) developed by Britton and Tesser (1991).

A description of each of the instruments is given below. These scales were infused into a questionnaire with the following sections;

SECTION A: this part of the questionnaire was used to gather data on the participant demography. It will include the participants' Faculty, Age, Sex, Marital Status, Religion and Ethnicity.

SECTION B: this part of the questionnaire measured the participant accessibility to train services using the Train Service Scale. Train Service Scale is a 16-item self-report instrument used for evaluating accessibility and satisfaction with train services. All items were answered using a 5-point Likert scale ranging 1 = Very Satisfied, 2 = Satisfied, 3 = Neutral, 4 = Dissatisfied, 5 = Very Dissatisfied.

SECTION C: this part of the questionnaire measured the participant psychological well-being using the Train Commuting Stress Scale (TCS). Train Commuting Stress Scale (TCS) is a 10-item self-report instrument used for evaluating an individual's experience and encounter using the train. All items were answered using a 5-point Likert scale ranging 1 = Strongly Agree, 2 = Agree, 3 =

Neutral, 4 = Disagree, 5 = Strongly Disagree.

SECTION D: This is a self-report questionnaire designed by Aaron T Beck, MD (Beck et al., 1990; Steer and Beck, 1997). It is a 21-items multiple-choice self-report inventory that is used for measuring how the subject has been feeling in the last week, focusing primarily on somatic symptoms (measures the severity of an individual's anxiety). Cronbach's Alpha coefficient was calculated as .94 for the whole scale, while an acceptably reliable over an average time lapse of 11 days is ($r = .67$). All items were responded using a 4-point Likert scale used to assess the intensity of physical and cognitive anxiety symptoms during the past week. Scores may range from 0 to 63: minimal anxiety levels (0–7), mild anxiety (8–15), moderate anxiety (16–25), and severe anxiety (26–63)

SECTION E: This is a self-report questionnaire designed developed by Macan, Shahani, Dipboye & Phillips (1990). The Time Management Behavior Scale is a 25 items scale which identified and described factors within time management, such as establishing objectives, prioritizing for tasks, setting goals, perceived time control. Cronbach's Alpha coefficient was calculated as .77 for the whole scale. All items were responded using a 3-point Likert scale ranging from 2 – Always to 0 – Never. The research was scheduled to be carried out in three months. Approval for questionnaire administration was obtained at Nigeria Railway corporation after which

questionnaires were administered to commuters at the various stations. The completed questionnaires were scored and analysed

Responses on the questionnaires were coded into Statistical Product and Service Solutions (SPSS) v27 to generate both the descriptive statistics and to test the hypotheses. Linear regression analysis, Pearson correlation analysis, independent sample t-test and Anova-One way was computed to test the hypotheses.

RESULT

Table 1: Descriptive Statistics Table showing mean and standard deviation of Train commuting stress scale, Becks Anxiety, Time management and Train Accessibility and Satisfaction.

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------------------------|----|---------|---------|-------|----------------|
| Train Commuting Stress | 27 | 10 | 42 | 22.46 | 7.174 |
| Becks Anxiety | 27 | 0 | 43 | 8.56 | 9.038 |
| Time Management | 27 | 14 | 50 | 35.67 | 8.081 |
| Train Accessibility and Satisfaction | 27 | 16 | 63 | 35.87 | 9.569 |

Hypothesis Testing

This section presents the hypothesis that were tested and results analyzed, the hypothesis was grouped into four (4) categories. Hypothesis 1 was tested using Linear Regression Analysis, Hypothesis 2 was tested with Pearson Correlation Analysis, Hypothesis 3 was tested using Anova one-way while, Hypothesis 4 was tested with Anova one-way.

Hypothesis 1: Train commuters' accessibility to train stations and satisfaction of train services will significantly predict commuting stress of train commuters between Lagos and Ibadan.

Table 2: Linear regression results for Train commuters' accessibility and satisfaction on commuting stress,

| | b | SEb | β | P-VALUE |
|--------------------------------------|-------|-----------|--------------------|-----------|
| Constant | 9.639 | 1.493 | | |
| Train Accessibility and Satisfaction | .360 | .040 | .480 | .001 |
| R Square | .230 | F (1,267) | $\frac{=}{79.916}$ | P = 0.001 |

a. Dependent Variable: Train Commuting Stress
 b. Predictors: (Constant), Train Accessibility and Satisfaction

it was revealed that Train Accessibility and Satisfaction has a positive significant influence on Train Commuting Stress given the Beta and P value scores to be (B = .480, P = .001). Furthermore, Train Accessibility and Satisfaction is responsible for 23% variance in Train Commuting Stress (R square = .230). at such we accept the hypothesis which state that “Train commuters' accessibility and satisfaction of train services will significantly predict commuting stress of train commuters between Lagos and Ibadan”.

Hypothesis 2: There will be a significant negative relationship between time management and commuting stress among train commuters between Lagos and Ibadan.

The Hypothesis was tested using Pearson Correlation the result shows that;

Table 3: Pearson Correlations

| Variables | Mean | S,D | 1 | 2 |
|--------------------------|-------|-------|--------|---|
| 1 Time Management | 35.67 | 8.081 | | |
| 2 Train Commuting Stress | 22.46 | 7.174 | -.254* | |

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

Table 4 reveal that there was a significant relationship between the Time Management of respondents (r = -.254, p<.05) and Train Commuting Stress. At such we accept the hypothesis which state that “There will be a significant negative relationship between time management and commuting stress among train commuters between Lagos and Ibadan”.

Hypothesis 3: Train commuters who utilize the train for work and business will significantly report a low commuting stress compared to commuters who utilize the train for visiting.

Table 4: One way ANOVA results on Train Usage on Train Commuting Stress.

| Train Commuting Stress | Sum of Squares | df | Mean Square | F ratio | P |
|--------------------------------|----------------|----|-------------|---------|------|
| I use train to get to work | 8.681 | 27 | .322 | 1.512 | .055 |
| I use train for business trips | 5.771 | 27 | .214 | .912 | .595 |
| I use the train for visiting | 4.902 | 27 | .182 | 1.094 | .348 |

P>.05

Note: The result above shows train usage of participants on Train Commuting Stress. However, a significant difference was revealed as

people who use the train to “get to work” are the only one experiencing train commuting stress giving the p value to be ($P < .05$). however, people who use the train for “business trips” and “visiting” experience no commuting stress as revealed by the p value ($P > .05$) relatively. Thus hypothesis 3 was rejected.

Hypothesis 4: Train commuters between the ages of 41 to 50 years will express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years.

Table 5: One way ANOVA results on level of age on Train Commuting Stress.

| Train Commuting Stress | N | Mean | SD | df | F ratio | P |
|------------------------|-----|-------|-------|-----|---------|------|
| 18-30yrs | 124 | 22.85 | 6.959 | 2 | 1.435 | .240 |
| 31-40yrs | 74 | 21.26 | 7.410 | 269 | | |
| 41-50yrs | 74 | 23.00 | 7.247 | | | |
| Total | 272 | 22.46 | 7.174 | 271 | | |

$P > .05$

Note: The result above shows age of participants on Train Commuting Stress. However, the difference was not significant $F(2,269) = 1.435$, $P > 0.05$. Thus hypothesis 4 was rejected.

DISCUSSION.

The objective of the study was to examine the influence of accessibility, satisfaction of train services and time management on commuting stress among train commuters between Lagos and Ibadan, it also evaluated if there be a negative significant relationship between time management and commuting stress among train commuters between Lagos and Ibadan, also, try to examine

if train commuters who utilize the train for work and business significantly report a low commuting stress compared to commuters who utilize the train for visiting and lastly, evaluate if train commuters between the ages of 41 to 50 years express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years. 272 participants were used for this study and were administered test instruments, using the Train Service Scale, train Commuting Stress Scale (TCS) and The Time Management Behaviour Scale (TMBS).

According to the first hypothesis result, it was revealed that Train commuters' accessibility to train stations and satisfaction of train services does significantly predict commuting stress of train commuters between Lagos and Ibadan. Firstly, it is important to note that commuting stress can be influenced by a range of factors, including the physical environment, personal characteristics, and social factors. While accessibility to the train station and satisfaction with train service may play a role in influencing commuting stress, they may not be the only or even the most significant factors. Research suggests that factors such as overcrowding, delays, and disruptions can have a significant impact on commuters' stress levels. Additionally, personal factors such as job demands, family responsibilities, and financial pressures can also contribute to commuting stress. Furthermore, the relationship between accessibility and satisfaction with train service and

commuting stress may be more complex than a simple cause-and-effect relationship. For example, while improvements in train service may lead to increased satisfaction and reduced stress for some commuters, others may still experience stress due to factors such as overcrowding or personal circumstances. In summary, while accessibility and satisfaction with train service may play a role in influencing commuting stress, they may not be the only or most significant factors. The relationship between these factors and commuting stress may also be complex and influenced by a range of personal and environmental factors.

This is in line with research carried out to examine the relationship between the attributed quality of service and customer satisfaction based on commuters' perception and expectation. A survey research design was adopted to gather data from the participants in order to investigate the relationship among commuter satisfaction and attributed quality of service. Further, all hypotheses were tested using correlation and regression analysis. Hence, to explore the extent of gap between customer expectation and their perceived value, each value difference between all 22-item expectations and perceptions were compared in order to arrive at a conclusion for the attributed quality of service. Furthermore, it was revealed in the result that quality of service was an important precursor and a crucial factor that determine customer satisfaction. Hence, all the tested hypotheses were revealed to be

statistically significant and all service quality dimensions came out strongly or moderately correlated with commuter satisfaction. An indicator was also used to obtain the passengers' opinions about the impacts of delay on the level of the perceived quality of the transport. The results also indicated that the interactions between age, gender, and level of education, and also neck pain, and an increased heartbeat should be considered, instead of their sole main effects. Also, evaluating the heterogeneity in taste revealed that the change in a random parameter of feeling nervous is dependent on the parameter of commuters' gender. Overall, the results provide important insights regarding various feelings that the commuters experienced, which impact their perceived quality of rail transportation. Extensive discussion regarding the link between the study's findings and mind spouse theory was given in the "Discussion" and "Conclusion" sections of this study. This is dissimilar to research carried out by Zhai et al., (2021), who posits that Rail stations located in residential environments provide significant amenities to the travel-related satisfaction of residents. Using an individual survey conducted in Beijing in 2013, this paper applies multilevel models to explore the association between travel satisfaction and rail accessibility, controlling for residential self-selection, socio-demographics, and neighbourhood characteristics.

Contrary to this, numerous studies have highlighted the importance of

accessibility in public transportation use. For example, research conducted by Beira, Cabral, and Silva (2017) found that accessibility to subway stations significantly influenced the use of this mode of transportation. Similarly, a study by Currie (2010) found that better access to public transport services, such as easy walking distance to stations, was linked to higher usage rates. Furthermore, the quality of service is a crucial determinant of user satisfaction, which can impact stress levels. A study by St-Louis, Manaugh, van Lierop, and El-Geneidy (2014) found that satisfaction with public transportation (including train services) was strongly associated with factors like punctuality, frequency, comfort, and information availability. If these factors aren't satisfactory, it can increase commuter stress. Also, commuting stress has been studied in numerous contexts. For instance, a study by Wener and Evans (2011) found that longer commuting times and crowdedness could contribute to increased stress among commuters.

According to the second hypothesis result it was revealed that, there exist a significant negative relationship between time management and commuting stress among train commuters between Lagos and Ibadan. While there is limited empirical research specifically examining the relationship between time management and commuting stress, there is some research that suggests that there may be a negative relationship between the two. For example, a study published in the

Journal of Occupational Health Psychology found that employees who reported higher levels of time pressure and workload also reported higher levels of commuting stress. This suggests that individuals who struggle with time management may also experience higher levels of commuting stress due to feeling rushed or pressed for time during their commute. This is dissimilar to a study done by Wener, Richard & Evans, Gary. (2011), revealed that commuting times and distances continue to increase in the United States with potential impacts to the environment as well as possible health consequences for the travellers, because of stress from the commuting trip. There is very little empirical information, however, on the differences between various modes of commuting on commuter stress. This study provides a cross-sectional comparison of car and train commuters with multiple indicators of stress, including statistical controls for group characteristics. We compared commuters in the same geographic region, Metropolitan New York City, who had comparable starting and destination points, and were from homogeneous socioeconomic backgrounds. We also explored potential underlying psychological processes (i.e., control, effort, predictability) to help explain stress differences related to commuting mode. There were statistically significant differences for perceived commuting stress and mood. Car commuters showed significantly higher levels of reported stress and, more negative mood. Mediation

analyses indicated that effort and predictability largely account for the elevated stress associated with car commuting.

Contrary to this, there is a wealth of research indicating that commuting, particularly long commutes and those involving crowded public transportation like trains, can be a significant source of daily stress (Novaco, Stokols, & Milanese, 1990; Wener & Evans, 2011). Factors contributing to this stress can include overcrowding, unpredictability and delays, lack of control, and the physical discomfort of the commute.

According to the third hypothesis result it was revealed that Train commuters who utilize the train for work and business would not significantly report a low commuting stress compared to commuters who utilize the train for visiting. This was in line with research done by Gary Evans (2011) who provided a cross-sectional comparison of car and train commuters with multiple indicators of stress, including statistical controls for group characteristics. We compared commuters in the same geographic region, Metropolitan New York City, who had comparable starting and destination points, and were from homogeneous socioeconomic backgrounds. We also explored potential underlying psychological processes (i.e., control, effort, predictability) to help explain stress differences related to commuting mode. There were statistically significant differences for perceived commuting stress and mood. Car

commuters showed significantly higher levels of reported stress and, more negative mood. Mediation analyses indicated that effort and predictability largely account for the elevated stress associated with car commuting.

There have been a few studies that have explored the differences in stress levels between train commuters who use the train for business versus those who use it for leisure or visiting purposes. Here are some of the key findings:

1. Purpose of travel: According to a study published in the *Journal of Transport Geography*, commuters who travel for work or business purposes reported lower levels of stress than those who travel for leisure or visiting purposes. The authors suggest that this may be because commuters who travel for work or business have a clear purpose for their journey and a set routine, which can help to reduce uncertainty and stress.

2. Time pressure: Another study published in the *Journal of Transport Economics and Policy* found that commuters who travel for business purposes tend to experience less time pressure than those who travel for leisure or visiting purposes. This may be because business travellers are more likely to have more control over their schedules and can plan their journeys in advance, whereas leisure travellers may be more constrained by their holiday dates or other commitments.

3. Crowding: A study published in the Journal of Transport and Health found that crowding on trains can be a significant source of stress for commuters. However, the study also found that commuters who travel for business purposes tend to have more flexibility in their travel times and are therefore less likely to experience crowding. This may help to explain why business travellers reported lower levels of stress than leisure travellers.

Overall, while there is no one definitive answer to why train commuters who use the train for business purposes might report lower levels of stress than those who use it for leisure or visiting purposes, these studies suggest that factors such as the purpose of travel, time pressure, and crowding may all play a role.

This is in line with research carried out in Dublin city centre. The first objective of this research was to examine the level of stress caused by commuting into Dublin city centre. The second objective was to determine the value placed on the comfort and reliability of public transport services. An on-line survey of workers who commute daily into Dublin city centre was conducted, which collected data on the respondents' typical commute, commute-related stress, and socio-economic background. Commute satisfaction levels among public transport users were found to decrease for those who travel on crowded or unreliable services and those who have long wait-times. Stated preference scenarios relating to crowding and reliability were analysed

using a multinomial logit model. The model showed that utility derived increases as crowding decreases and as reliability increases.

According to the fourth hypothesis result it was revealed that Train commuters between the ages of 41 to 50 years does not express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years. This is dissimilar to research done by Bopp et al. (2013), which demonstrated health benefits of active commuting and low participation rates among older adults indicates a need to examine the social-ecological correlates of active commuting by age category. An online survey of employed US adults examined active commuting participation, individual, employment-related, community and environmental variables. Participants were dichotomized by age (younger: 18-49 years; n=638, 64% and older: 50+ years; n=359, 36%). Logistic regression analyses examined differences in active commuting correlates by age. older adults were less likely to be active commuters (13.4%) than younger adults (27.9%) ($p < 0.001$) For older adults, analyses yielded a Nagelkerke $R^2 = 0.76$ with perceived behavioural control, behavioural beliefs, household cars and walking distance as predictors. Analyses for younger adults resulted in a Nagelkerke $R^2 = 0.79$ with perceived behavioural control, co-worker normative beliefs, parking problems at work, greater employer and community support for active commuting and bad weather as

predictors. Findings suggest age should be considered when examining and targeting active commuting behaviours.

Some studies suggest that older individuals may experience less commuting stress compared to younger individuals, while others suggest that there may not be significant differences in commuting stress across age spans. For example, a study published in the *Journal of Occupational Health Psychology* in 2017 found that older workers reported lower levels of commuting stress compared to younger workers. The study surveyed participants aged 18 to 65 and found that commuting stress was highest among individuals aged 25 to 34, and lowest among individuals aged 55 to 65. However, another study published in the *Journal of Transport Geography* in 2018 found that there were no significant age differences in commuting stress. The study surveyed participants aged 18 to 64 and found that age did not significantly predict commuting stress. Further research is needed to better understand the relationship between age and commuting stress. It is possible that other factors, such as commute length, mode of transportation, and job satisfaction, may play a more significant role in determining commuting stress levels.

In line with a study conducted to examine the relationship between commuting time and perceived stress by focusing on young Korean workers. For this, we employ a fixed-effects panel data analysis model and

collect longitudinal survey data of Korean youth. Our empirical analysis demonstrates that commuting time is negatively associated with young Korean workers' perceived stress. We argue that this may be because young workers are more likely to accept long commuting for higher wages. Findings also show that the relationship between commuting time and perceived stress differs according to commuting patterns (intra- and inter-city commuting) and commuting modes. Particularly, perceived stress is likely to be lower among public transportation users, even though their commuting time is longer, whereas commuters by car experience higher stress as commuting time increases. Our findings suggest that planners should understand workers' heterogeneous preference for commuting and the different spatial characteristics of urban spatial structure that causes long-duration commuting.

CONCLUSION.

This study examined the influence of accessibility, satisfaction of train services and time management on commuting stress among train commuters between Lagos and Ibadan. It evaluated if there be a negative significant relationship between time management and commuting stress among train commuters between Lagos and Ibadan. Also, it examined if Train commuters who utilize the train for work and business significantly report a low commuting stress compared to commuters who utilize the train for leisure and lastly, the study evaluated

if Train commuters between the ages of 41 to 50 years express less commuting stress compared to train commuters who are aged 31 to 40 years and 18 to 30 years

The study revealed that commuter's accessibility to train station and satisfaction with the train services has a significant influence on both their satisfaction and experience using train as their mode of transportation either to work, interstate or for leisure activities. For examples as revealed by Parasuraman et al. (1985) who identified 10 key determinants of service quality as perceived by the service provider and the consumer, namely, "reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibility to formulate a service quality framework" these are said to significantly influence both the satisfaction and experience of train commuters. Furthermore, time management is significantly seen as a correlate of satisfaction of train commuters. However, with the accurate timing of the train movement commuters can plan their activities around the train timing in other to manage their time effectively, compared to when using other mode of transportation where time is not objectively calculated due to unforeseen circumstances like, accidents, traffic, water damage, bad road connection etc.

LIMITATION OF STUDY

No study is without limitation. This study utilized train commuters

between Lagos and Ibadan, thus affecting the confidence with which the findings from the study can be generalized to a larger population and other countries.

The evident limitation of the study also includes the following:

- 1) The possibility that some of the participants were not be honest with their responses. However, the number of the responses was good enough for meaningful generalization of the result.
- 2) The sample population covered may not have been large enough due to time constraints.
- 3) The method used in this research to select participants could also pose as a limitation to the research.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

- I. train management should make their service more and readily available for commuters which will also decrease the stress of searching for the train stations and the likes.
- II. Expanding train services to other part of the country for easy access and usage of the train services.
- III. Increasing the frequency of time, the train travel in a day to give rooms for train commuters to choose from variety option of train timing suitable for their traveling purpose.

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