

THE EFFECT OF STRESS AND PRODUCTIVITY DUE TO TRAFFIC CONGESTION AMONG WORKERS IN KUALA LUMPUR

Ilyas Syafiq D.R.^{1*}, Ahmas Buqhari², Onery Andy³

Institute of Medical Science Technology¹, Universiti Kuala Lumpur Malaysia², Politeknik Indonesia³

*Correspondence Email: ilyassyafiq@unikl.edu.my

ABSTRACT

Stress at work' is a concept which there are lots of potential causes of stress in a working environment that can affect the productivity of a worker. Traffic congestion is a condition in transport that is characterised by slower speeds, longer trip times, and increased vehicular queuing. The experience of workers during traffic congestion before attending work could induce stress towards them, hence being assessed in this study. This study aims to assess the relationship between traffic congestion and work productivity. This study was conducted among a total sample of 133 individual workers in Kuala Lumpur which are prone to road traffic congestion in city areas. Raw data were collected in an online standardized survey. Data analysis was done using Microsoft Excel and SPSS using multiple hypotheses testing formula including ANOVA test, Linear Regression Analysis and Correlation Analysis. The findings of this study concluded that the data from all of the tests show consistent results which there is significant relationship between Stress at Work (p -value <0.05) and Road Traffic Congestion (p -value <0.05), but Work Productivity (p -value >0.05) shows insignificance towards the two variables. Therefore, it can be concluded that road traffic congestion causes stress to workers in Kuala Lumpur, but the stress induced from road traffic congestion does not hinder their productivity at work.

KEYWORDS

Stress; Work; Productivity; Traffic; Congestion; Workers.



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INTRODUCTION

Traffic congestion is a condition in transport that is characterised by slower speeds, longer trip times, and increased vehicular queuing. It has become a major concern in present-day world which affected daily activities and lifestyles of the society especially

working-class people which need to go through the traffic while commuting to work. Traffic congestion has demonstrated unfavourable impacts upon society and economy in numerous studies (Vencataya, Pudaruth, Dirpal & Narain, 2018). It is inevitable for people to not be affected by traffic congestion especially office workers as they need to commute through the road to go to work. According to Weerasinghe, Karunarathna & Subashini (2020), unforeseen delays, painful experience on roads experienced by people ultimately hinders the vehicle speed and blocks the smooth vehicle movement in the city. This situation could affect the mood and stress levels of the workers before coming to work and probably affect their productivity the entire day of work. Previous research by Haider, Kerr & Badami (2013) depicted that frequent traffic congestion-related delays become an additional source of stress workers as the road and transit networks get increasingly congested.

In Malaysia, a lot of workers in Selangor area come to work in Kuala Lumpur which they need to go through heavy traffic jams every morning before coming to work. Traffic jams also affects the emotions of road users, not only affect the situation on the roads (Tukiar, Zainuddin & Rasid, 2020). Traffic congestion continues to persist especially at highway tolls even with faster speed-up lanes such as Smart Tag and Touch-n-Go implemented. This study analyses the possibility of traffic congestion in causing rise in stress levels before coming to work which could affect their productivity at the workplace.

RESEARCH METHOD

The research design for this study adopted a quantitative approach. This method was used to test the objectives by calculating the variables which then analysed using a statistical method. All data gathered from online questionnaire. The sample size for this research was 200 respondents.

The participants were selected using stratified random sampling method. The target respondents for this research were 200. Respondents were office workers which require to commute within 40km from their workplace in Kuala Lumpur.

This study adopted a quantitative approach using a questionnaire model by Weerasinghe, Karunarathna & Subashini (2020) and 7-days work productivity survey developed by the University of Michigan Health System. In administering the questionnaire, a pilot test involving a small number of subjects was conducted to determine if any modifications or additions need to be done for the questionnaire. The questionnaire was constructed using Google forms and administered to the subjects through social media platforms.

Questionnaires distributed to the study participants were collected to reach the sample size (n=200) for the study. The data was collected online via Google forms answered by the participants and later translated into the Microsoft Excel to tabulate the data collected. The data collected was analysed using SPSS ver. 26. Respondents with incomplete questionnaires or invalid data were not included in the data analysis. The results of the data were considered and analysed through the data collected. The data collected was calculated in SPSS to find out the correlation of the variables stress, traffic congestion and work productivity.

The research method used in the problem experiment includes analytical methods. Contains the type of method, time, place and tools of research materials. Picture captions are placed as part of the picture title (figure caption) not part of the picture. The methods used in completing the research are listed in this section.

RESULT AND DISCUSSION

The online questionnaire was distributed for a period of 6 weeks in various online platforms for 200 respondents. However, a total of 140 respondents participated in the questionnaire. 7 responses were discarded leaving with only 133 respondents fully completed all the questionnaires. The completed responses were entered into SPSS and analysed. The effective response rate after discarding the ineligible responses from the sample is 66.50%. Hence, the total sample of this study is 133 respondents. Cronbach's Alpha coefficient was used to ensure the reliability of the item scale for each construct. The Cronbach's Alpha values for each construct were greater than 0.7 indicating that the item scale for all of the constructs were reliable.

One-way ANOVA test output found that the significant value for variable Stress at Work is <0.001 and the significant value for variable Work Productivity is 0.785. The variable for Stress at Work is less than 0.05 and variable Work Productivity is greater than 0.05. Thus, it can be concluded that there is significant relationship between Stress at Work and Road Traffic Congestion while there is no relationship between Work Productivity and Road Traffic Congestion. This is in line with the research made by Weerasignhe, Karunarathna & Subashini (2020) which found that there is a linear relationship between road traffic congestion and employee's stress at work. However, this parameter suggests that there is no relationship between Work Productivity and Road Traffic Congestion which result is contrasted with other research made by Harriet, Poku & Emmanuel (2013) that Road Traffic Congestion can affect the worker's productivity.

Linear Regression Statistics for variable Stress at Work and Road Traffic Congestion showed that the R Square (0.317) of the variation of employees' Stress at Work is significantly related with Road Traffic Congestion due to its p-value of <0.001 which is less than 0.05. Furthermore, Regression Coefficient variable Stress at Work and Road Traffic Congestion showed that the marginal contribution of Road Traffic Congestion (0.671) in determining the effect of Stress at Work is to be statistically significant (Sig. = <0.001) in the regression equation. This data depicts that the workers in Kuala Lumpur were stressed because of road traffic congestion. This is supported by a past study by Olawale, Adebambo & Boye (2015) which results indicates that the efficiency level of workers will be reduced due to road congestion.

Linear Regression Statistics for variable Work Productivity and Road Traffic Congestion showed that the R Square (0.001) of the variation of employees' Work Productivity is not significantly related with Road Traffic Congestion due to its p-value of 0.785 which is more than 0.05. Furthermore, Regression Coefficient variable Work Productivity and Road Traffic Congestion showed that the marginal contribution of Road Traffic Congestion (-0.032) in determining the effect of Work Productivity is to be statistically insignificant (Sig. = 0.785) in the regression equation. The data from this study

showed that road traffic congestion did not give any effect to the productivity of the workers in Kuala Lumpur. In contrast, research made by Kamaruzzaman & Rumpa (2019) inferred that worker's productivity can be affected by the factor which is commuting to and from the workplace.

Correlation analysis for the Road Traffic Congestion and Work Productivity towards Stress at Work found that significant value for Road Traffic Congestion is <0.001 which is less than 0.05 while the significant value for Work Productivity is 0.359 which is greater than 0.05. It can be concluded there is correlation between Road Traffic Congestion with Stress at Work but there is no correlation between Work Productivity and Stress at Work. Vencataya, Pudaruth, Dirpal & Narain (2018) believe that being stress at work due to traffic congestion can cause people to perform poorly at work which result opposites with this research that work productivity is not affected by stress at work caused by traffic congestion.

Correlation analysis for the Stress at Work and Work Productivity towards Road Traffic Congestion found that significant value for Stress at Work is <0.001 which is less than 0.05 while the significant value for Work Productivity is 0.908 which is greater than 0.05. Thus, it can be concluded that there is correlation between the Stress at Work and Road Traffic Congestion but there is no correlation between Work Productivity and Road Traffic Congestion. Vencataya, L., Pudaruth, S., Dirpal, G., & Narain, V. (2018) also found out that traffic congestion induces a high level of stress and frustration especially in drivers as they are required to be more attentive and focused while driving in challenging conditions. Correlation analysis for Stress at Work and Road Traffic Congestion towards Work Productivity found that the significant value for Stress at Work is 0.359 while Road Traffic Congestion is 0.908 which both are greater than 0.05. Thus, there is no correlation between both variables and Work Productivity. It can be concluded from the correlation analyses is that there is significant relationship between Stress at Work and Road Traffic Congestion. In contrast, the variable of Work Productivity shows no correlation to both variables.

Data from all of the tests show consistent results which there is significant relationship between Stress at Work and Road Traffic Congestion, but Work Productivity shows insignificance towards the two variables. This data shows that the workers in Kuala Lumpur are stressed due to traffic jams they faced before coming to work but the stress induced did not affect their productivity at work. This result is contrasted with other research made by Harriet, Poku & Emmanuel (2013) that Road Traffic Congestion can affect the worker's productivity. A research made by Kamaruzzaman & Rumpa (2019) also contrastingly inferred that worker's productivity can be affected by the factor which is commuting to and from the workplace. The results of the workers having their work productivity to not be affected by stress would most probably because the workers in Kuala Lumpur have good coping mechanisms for stress which help the workers in maintaining their work productivity such as good stress management programme at work. However, the research on the coping mechanism in helping the workers to maintain the productivity from stress could be continued in another research for more extensive data.

CONCLUSION

This study has assessed relationship between traffic congestion and work productivity. As mentioned earlier, this study aims to investigate whether traffic congestion causes stress to people while going to work and affecting their productivity at work once they reach their workplace. In determining the possibility of traffic congestion in causing stress in workers, consistent results from ANOVA test, Linear Regression and Correlational Analyses found that there is significant relationship in Stress at Work and Road Traffic Congestion, meaning that road traffic congestion can induce stress to workers in Kuala Lumpur. Furthermore, in determining the relationship between the stress induced from traffic congestion and work productivity, the data from the tests shows that the stress induced from the traffic congestion shows insignificant relationship towards work productivity. Therefore, it can be concluded that road traffic congestion causes stress to workers in Kuala Lumpur, but the stress induced from road traffic congestion does not hinder their productivity at work.

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