

## Level of Knowledge and Awareness of Driver on Vehicle Tyres Among Kota Bharu Polytechnic Lecturer

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### ABSTRACT

Almost of the people need a vehicle to travel anywhere. The tyre is one of the important unit for a vehicle as a road transportation. This study focuses on the knowledge and awareness about vehicle tyre usage among Malaysian polytechnic lecturers. The study was conducted at Polytechnic Kota Bharu. Its purposes are to identify the further knowledge and awareness of vehicle tyre among the lecturers. Respondents were randomly selected which consisting of 220 polytechnic staffs in Kota Bharu. This study is a quantitative instrument with used a questionnaire for data collection. Data were analyzed by using Statistical Software Package For Social Science (SPSS) version 17 to obtain the percentage, mean and standard deviation. The findings of knowledge mean score of 3.423 and the standard deviation is 12.260. While for awareness, the mean value is 2.460 and the standard deviation is 3.530. In addition, there is a strong relationship between these levels of driver knowledge and awareness which related to the tyre usage. There is a significant relationship that shows clearly at 0.01, where the value is 99%. As a result of this study, it can build the guideline on the safety and care guide tyre to enhance knowledge and awareness on the tyres usage.

**KEYWORDS:** Knowledge, Awareness, Vehicle Tyre.

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### INTRODUCTION

Nowadays, road accident statistics have been increased. A variety of accidents which caused by several factors such as while peak vehicle usage, omission of humans and breakdown. Many people probably are not conscious when they should do the maintenance on their vehicle, replacing the old tyres that are worn out or 'bald' condition. The easy way just choosing the cheapest tyre or scratch tyre, but this alternative is made to be in high risky behavior for him selves. They believe that tyres information usage is not important for them. Indeed, it becomes one of the key factors to reduce road accidents. Users are being advised to understand the specification and the current state of tyre. If they have a lack of knowledge in tyres maintenance, it will really put them in one of the major factors causing road accidents. Actually, majority of users fail to monitor their vehicle tyres. Failing to ensure the air pressure which about the optimum limit in tyres will become a big mistake.

### LITERATURE REVIEW

Tyres and wheel assemblies provide the only connection between the road and the vehicle [1]. It is categorized as a safety item that must prevail which is the same function as the brake. There are three types of tyres namely summer tyres, winter tyres and all season tyres. According to [2], a tyre that failed the test tyre tread usually is due to conditions which are thinner than a height of 1.6 millimeters. In other words, the tyre is bald. But if the size of the tyre tread is still good, make sure that it must cover 70% of the tyre than the tyre wall did not break above 25 millimeters. In addition

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to tapping tyres, four tyres are categorized as unsafe which are imported used tyres, local used tyres, winter tyres and expired tyres (over four years). At that stage, it is quite thin and the risk of rupture in any situation especially when used with maximum speed. Users should be aware that any normally used tyres has reached the maximum consumption level equal or surpass the level of tread wear indicator (TWI) of thick tyres.

## METHODOLOGY

### Study Design

The study focuses on the quantitative survey field. This study aims on the knowledge and awareness about vehicle tyre usage among Malaysian polytechnic lecturers at Polytechnic Kota Bharu. The data are derived from the questionnaires.

### Sample of Study

The sample in this study is collected from administrators and lecturers who have been working in Polytechnic Kota Bharu. There are 220 respondents had been selected to answer the questionnaire respectively.

### Data Analysis

Data is obtained through the questionnaires analyzed by using Statistical Package for the Social Sciences (SPSS) version 17, whereas data from the quantitative was analyzed by using manual methods.

## RESULTS AND DISCUSSION

The pilot study was carried out to obtain the validity of questionnaire items that has been built well. Based on 220 sets of questionnaires which have been collected back, the value of Alpha score [3] which obtained with each part at certain construct item is shown in Table 1.

Table 1: Alpha-Cronbach score analysis

No.	Item	Alpha-Cronbach score	Cronbach Alpha based on standardized items
1	Item B	0.845	0.898
2	Item C	0.670	0.714

Based on Table 1, the result scores have met the standards of Alpha cronbach as recommended by [4]. The obtained score has also shown the questionnaire built is in good reliability, acceptable and good consistent level. Thus, there has no need to make any correction for the instruments study. This creates higher reliability result, especially from the questionnaire of knowledge is 0.845. Meanwhile, the Alpha-Cronbach for awareness has shown the value of 0.670.

### Driver Knowledge of Vehicle Tyres Usage

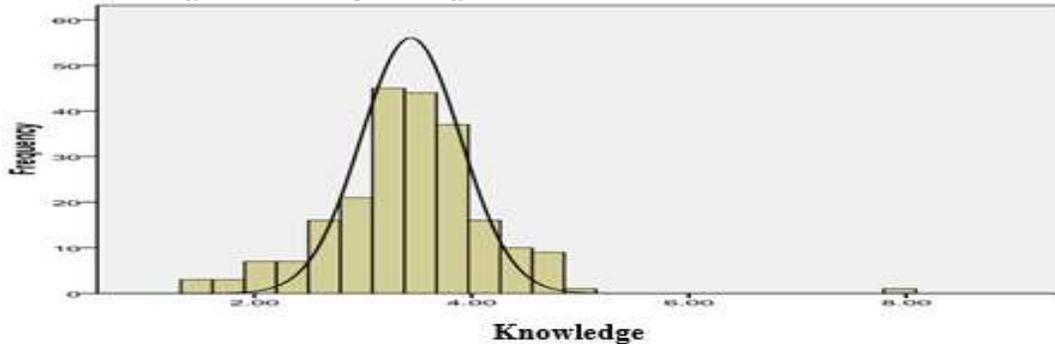


Figure 1: Mean score of driver knowledge with a scale of 1.00-2.49 = low, 2.50-3.49 = medium and 3.5-5 = high

The overall mean value scores from the analysis has been obtained at 3.422 for the driver knowledge, which range between 2.50-3.49 on a medium level. Question 11 has shown a medium level with a mean score at 2.914, which the item was a deeper analysis questionnaire. This is where the drivers have no knowledge about tyres (technical), and did not aware some properties that should they know about the sign and certain coding at sidewall tyres. Meanwhile, question 15 has achieved the highest level well where the analysis has obtained 4.314 mean score. This is due to the drivers which have already know about the size and tyre brand from sellers during the selling process to buy or change the tyres. Others, question 17 produces high level of mean score with a value of 4.191. It has shown that many drivers know the tyres as the main factors of accident contribution. Mean score statistic indicates the driver knowledge of the vehicle tyres usage in Polytechnic lecturer as shown in Figure 1.

**Driver Awareness of Vehicle Tyres Usage**

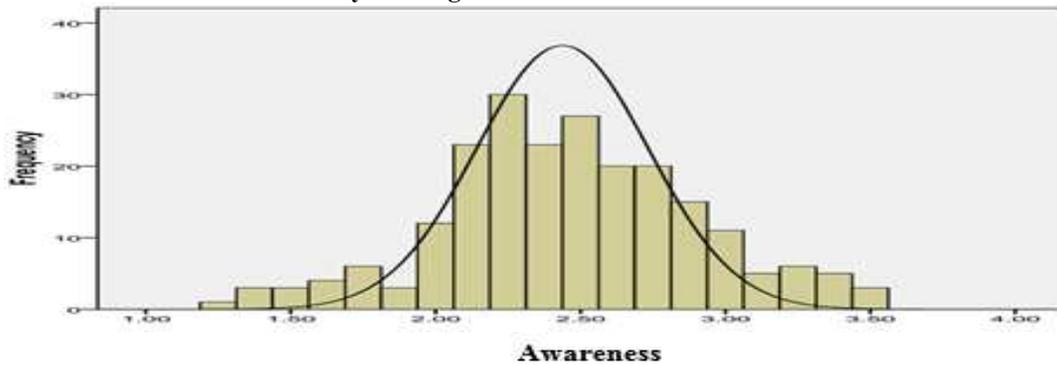


Figure 2: Mean score of driver awareness with a scale of 1.00-2.49 = low, 2.50-3.49 = simple and 3.5-5 = high

The analysis of the driver awareness against the tyre usage among the lecturers Polytechnic Kota Bharu has obtained the value of the overall mean score at 2.460 with a standard deviation at 0.781 of low level. Details analysis shows the questions of number 1 to 3 are at minimum levels with mean score average of 1.646 which only for three questions. This situation may be due to lack of awareness and understanding among the lecturers on the tyres of their vehicle. The lower mean score result might happen which caused by questionnaire from female respondents who did answer the survey. In addition, it may be also due to the attitude of respondents who do not conscious about the tyres condition. The question number 5 and 6 (I could differentiate between new tyres or tyres) and (I chose to use the tyres without tubes or tubeless) is the highest level of mean score with 3.768 and 3.564. This is where many lecturers need to recognize new tyres or used over the internet, newspapers and so on. Almost of the lecturers are using tubeless tyre, where it is better than tubes tyre usage. This may be also due to its great higher resilience. Meanwhile, question number 7 and 8 were at a low level with the mean score average of 2.173. Mean score graph for driver awareness of the use of the vehicle tyres in Polytechnic lecturers is shown in Figure 2.

**Correlation between Driver Knowledge and Awareness**

Table 2: Correlation between driver knowledge and awareness

	Mean	Standard deviation	N
Knowledge	3.4219	0.72118	220
Awareness	2.4597	0.44134	220
Knowledge	Pearson Correlation	1	0.310**

Sig. (2-tailed)		0.000
N		220
<b>Awareness</b>	Pearson Correlation	0.310**
Sig. (2-tailed)		0.000
N		220

\*\*Correlation is significant at 0.01 level (2-tailed).

These are some obvious relationship between the driver knowledge and awareness level in the tyres usage scenario. It shows that if more knowledge is provided for the driver, it will be enhanced to their awareness and respect to the vehicle tyres usage. The explanation can be seen in Table 2, where it shows the obvious significant relationship which particularly on level 0.01 that approximate to the value of 99%.

### Identify Driver Knowledge of Tyres Usage

There were 17 questions have been addressed in this research. Actually, the item of 15 questionnaires has obtained the highest mean values score at 4.314. Indeed, users have known that there are many different types and sizes of tyres in the market. According to [5], tread block is designed on tyres for make influence in fuel savings. Lighter tyres, fine and closely gap of tread block is designed to provide fuel savings levels and their performance is better than accumulated wealth more rough tyre. While items 17 has realised their mean value at 4.190 which users aware that tyres is contributed to accidents. Obviously, tyre is the important elements to ensure that somehow to avoid accident happening on the road which must keep it in safety and comfortable maintenance. While item number 1 has obtained the mean values at 3.050, which users has learned the right procedure of the tyre changing.

### Identify Level of Driver Awareness of Tyres Usage

There were 8 questions have been submitted in this section, where item number 5 shows the highest mean value at 3.768 score. Users can actually distinguish for new tyres or the reuse tyres of vehicles. According to [6] stated that users will think carefully before choosing any tyre to buy it. The consideration of price, quality, durability, safety and comfort aspects were measured as well. These factors are very important for the user to focus on accurate tyres quality with high price and available to perform good grasp and turn smooth on the road. The mean score of item number 6 was at 3.564. In this section, most of users very likely to choose the tyres without tubes (tubeless). They prefer for this type are due to its good quality and more exclusive tyre. Meanwhile, the lowest score in this part is item number 1, where they use the vehicle tyre until broken out. Most of the users did not like to use the vehicle until broken or damage. According to [5] on how to reduce the cost of tyre usage, but the important and critical aspect was the air pressure monitoring. Many of them were not conscious about it.

## CONCLUSION

The study of user attitude against to the vehicle tyres usage in Polytechnic Kota Bharu staff has been implemented successfully. The result of the experiments overall found that the level of driver knowledge has moderated on scale 2.50-3.49. This decision reflects that most of the respondents have not involved directly in technical areas, and half of them was some female. Researchers have related the findings to the problem statement which has been discussed before. As the result of this study, the researchers were able to conclude that:

- i) The user knowledge of tyre usage is at a medium level.
- ii) The user awareness of tyre usage is at low level.
- iii) There is a significant relationship between user knowledge and awareness of tyre usage.
- iv) The researchers should build a good guideline for tyre care and safety to enhance their knowledge and awareness insight of vehicle tyres usage.

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