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GENDER BASED COMPARISON OF RISKY PEDESTRIAN BEHAVIOR IN KARACHI AND LAHORE, PAKISTAN

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ABSTRACT

This research paper is written with an aim to compare the gender based street crossing and side walking behavior of pedestrians in the two major metropolitan and provincial capital cities of Karachi and Lahore. For this purpose two detailed observational studies conducted in Karachi and Lahore were taken for the comparison and the differences in the behaviors were studied. It was found that the behavior of male and female pedestrians is quite different even within the cities and in also in comparison with the other city. It was found that the behavior of female pedestrians in Karachi is a lot riskier than their male counterpart whereas, in Lahore the females and males pedestrians display more or less a similar walking pattern. Overall, the road crossing behavior of pedestrians in Karachi is riskier as compared

Keywords: pedestrian behavior, pedestrian mobility, pedestrian safety, side walking, road crossing

1. INTRODUCTION

Pedestrians are the most vulnerable road users who walk the road without any protection unlike the other road users. According to World Health Organization almost 22% of all the road user deaths are of pedestrians and two third of these deaths occur in the developing countries. Researchers have tried to investigate the cause of these accidents and how to

prevent them but the focus on the effect of demographics on the behavior of pedestrians has been a little. This research paper compares the side-walking and road-crossing behavior of pedestrians on the streets of Karachi and Lahore, Pakistan. These are the two major metropolitan cities of Pakistan which houses millions of people from the whole country. For the purpose of comparison two studies are being compared to assess the differences in

the behavior of pedestrians of Karachi and Lahore. The study on Karachi was undertaken by [1] and the one on Lahore was undertaken by a group of researchers from Lahore [2]. For the purpose of comparison only the similar measures were taken from both studies.

2. COMPARISONS

2.1 Road crossing behaviors

Risky road crossing behavior of pedestrians in Karachi is presented in Table 1. Risky road crossing behavior of pedestrians in Lahore is presented in Table 2.

2.2. Side walking behaviors

Risky side walking behavior of pedestrians in Karachi and Lahore are presented in Tables 3 and 4 respectively.

3. DISCUSSIONS

3.1. Road crossing

Male pedestrians in Lahore are almost two times more likely to not look at the traffic before the road as compared with Karachi. Behaviour of female pedestrians in both the cities is similar. So this risky behaviour was more apparent in the pedestrians of Lahore. Male pedestrians in Karachi were

1.4 times more likely to swerve the traffic around them while crossing while crossing the street as compared with those of Lahore. Similarly, female pedestrians in Karachi were 2.4 times more likely to swerve the traffic as compared with those of Lahore. So, this risky behaviour is more prevalent in the pedestrians of Karachi.

Not using zebra crossing behaviour was more prominent in the pedestrians of Lahore. It can be seen that male pedestrians in Lahore are almost 3 times more likely to not use the zebra crossing while crossing the street. Females of both the cities showed similar behaviour in not using the zebra crossings

Male pedestrians showed similar behaviour while female pedestrians in Karachi were 7 times more likely to cross the street by running as compared with the females of Lahore.

Male pedestrians in Karachi were 2 times more likely to cross one lane at a time and the females were almost 3 times more likely to do so. Therefore, this risky behaviour while road crossing was more prominent in the pedestrians of Karachi.

3.2. Side walking

Not looking for traffic before stepping into road from the side walk behaviour was more apparent in the pedestrians of Lahore

as can be seen that the male pedestrians in Lahore were 5.4 times more likely to not look at the traffic before stepping on road from the side walk. Female pedestrians in Lahore were also 1.5 times more likely to not look at the traffic while stepping on road from the side walk.

As far as not walking closer to the side walk behavior is concerned, it was found to be more prominent in the pedestrians of Lahore as compared to Karachi. Results show that male pedestrians in Lahore are 2.2 times more likely to not walk closer to the side walk. Female pedestrians show almost similar walking pattern for this behaviour.

Male pedestrians in both cities showed similar behaviour in contrast to the female pedestrians which were 2.8 times more likely to walk with their backs towards the oncoming traffic in Karachi in comparison with the females of Lahore.

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- 4.3 Risky side walking behavior of pedestrians in Karachi
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4. CONCLUSIONS

2.1 There are a lot of gender based behavioural differences in the walking behaviours of pedestrians even within the same metropolitan cities in contrast to the other cities.

2.2 It has been found by the comparison that the overall road crossing behaviour of pedestrians is safer in Lahore as compared with Karachi this can be attributed to the better conditions of the roads in Lahore as compared with Karachi. Roads in Lahore were found to be cleaner, wider and well furnished as compared with those of Karachi. This indicates that the safe road crossing behaviour is directly related with the quality and condition of the road.

2.3 Side walking behaviour of the pedestrians in Karachi was overall more safe as compared with that of Lahore. This can be because of the fact that side-walks in Karachi were wider, well painted and free from encroachments as compared with those of Lahore where almost 40% of total side walk width was occupied by the street beggars and vendors. Moreover, surface condition of side walk in Karachi was also better in contrast to those of Lahore.

5. REFERENCES

[1] Khan, F. M., Jawaid, M., Chotani, H., & Luby, S. (1999). pedestrian environment and behavior in Karachi, Pakistan. *Accident Analysis and Prevention*, 335-339.

[2] Minhas, K. S., Batool, Z., Malik, B. Z., Sanaullah, I., & Akbar, T. A. (2017). pedestrian environment and behavior in Lahore, Paksitan. *Journal of Transport and Health*, 181-189.

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Table 4.1

Behavior	% male	% female	P-value
Did not look for traffic before crossing	36	65	0.001
Caused traffic to swerve	28	59	0.007
Were not on zebra crossing while crossing the street	20	57	NS
Ran to cross the road	18	71	NS
Crossed one lane at a time	36	83	0.005

Table 4.2

Behavior	% male	% female	P-value
Did not look for traffic before crossing	71	70	NS
Caused traffic to swerve	19	24	NS
Were not on zebra crossing while crossing the street	56	52	NS
Ran to cross the road	20	10	0.004
Crossed one lane at a time	18	27	NS

Table 4.3

Behavior	% male	% female	P-value
Did not look for traffic before stepping on road from side walk	12	33	0.013
Were not walking close to side walk when walking on the road	29	53	0.07
Had their backs towards the oncoming traffic	32	80	NS

Table 4.4

Behavior	% male	% female	P-value
Did not look for traffic before stepping on road from side walk	65	48	NS
Were not walking close to side walk when walking on the road	65	55	NS
Had their backs towards the oncoming traffic	29	28	NS