

# Traffic congestion & long driving hours: Impact on stress, emotional and physical health among drivers in Sharjah

Alalool, A., AlHashaikeh, B., Khamis, H., Majdalawi, R., Ainawi, R.  
College of Medicine – University of Sharjah

## 1 INTRODUCTION

The health impacts of traffic congestion and long driving hours have lately grown to become a principal worldwide driving-related concern; and this is mainly due to the explicit increase in car ownership rates as well as automobile dependency worldwide. (Roswall et al., 2015)

Over the past ten years, the UAE has been titled ‘The most congested country in the Middle East’; and Sharjah, the third largest city in the UAE, is particularly known for its rush-hours; with its residents constantly spending long commuting hours in slow-moving, bumper-to-bumper traffic. (BMC Training, 2014)

## 2 PROBLEM STATEMENT

What are the emotional and physical health effects of driving in congested traffic and long driving hours among Sharjah residents?

## 3 METHODS

DESIGN Descriptive, cross-sectional study

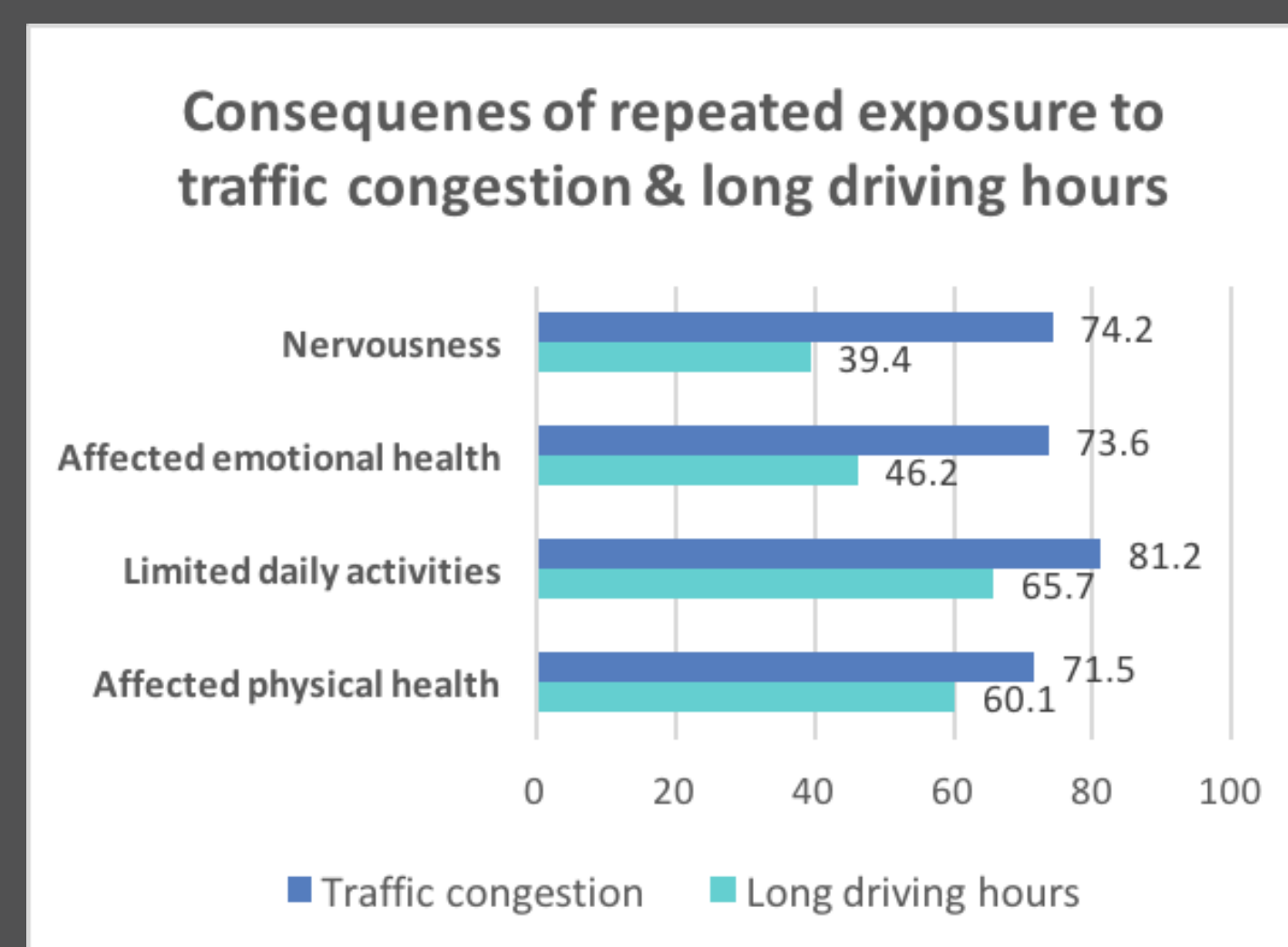
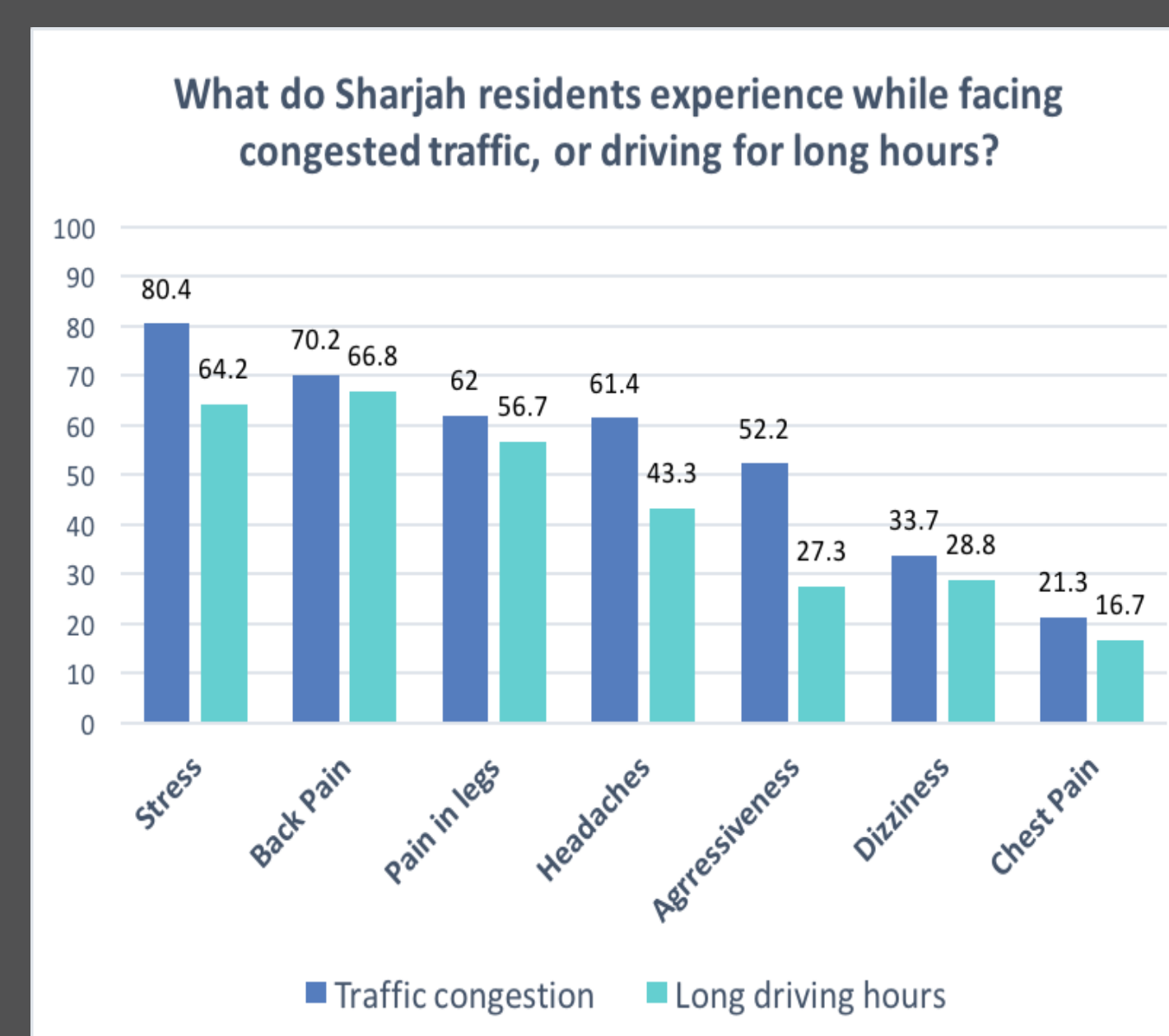
SAMPLE The sample was chosen based on convenience among Sharjah residents, specifically drivers (>18 years of age) holding a drivers permit, adding up to a total of 450 participants.

INSTRUMENT Self-administered questionnaires were distributed containing 39 questions of 3 sections: Demographics, driving attitudes, and health evaluation. Likert scale was used in assessing driving attitudes & behaviors.

ANALYSIS Percentages, means, and Chi square tests were obtained through data analysis using SPSS 22. Bar charts demonstrating our results were created using Excel.  $p$  value of <5% was considered statistically significant.

## 4 RESULTS

- Our sample size included 414 people; response rate attained was 92%; 61% were males.
- 58% drive everyday, and 66.7% feel like they spend way too much time driving.
- Residents drive an average of 3 hours and 10 minutes per day; significantly higher than the worldwide average. ( $p<0.0005$ )
- Male drive for longer hours than females. ( $p<0.0005$ )
- 86.5% feel like they suffer traffic congestion while driving in Sharjah.
- 82.1% agreed that they'd travel longer distances to avoid traffic congestion.



- Driving everyday correlated with greater back pain ( $p=0.022$ ) & pain in the legs ( $p=0.022$ ), in congested traffic.
- Driving more than 2 hours a day correlated with greater back pain ( $p<0.0005$ ), headaches ( $p=0.032$ ), and chest pain ( $p=0.010$ ) in congested traffic.
- Working correlated with greater back pain ( $p=0.003$ ), and pain in the legs ( $p=0.009$ ) while driving in congested traffic; and greater back pain while driving for long hours ( $p=0.021$ ).
- Sharjah motorists aged 25-45 experience greater physical health effects ( $p=0.016$ ), and limited daily activities ( $p=0.025$ ) due to repeated exposure to traffic congestion, and greater physical health effects due to repeated exposure to long driving hours ( $p=0.008$ ); compared to females.

## 5 DISCUSSION

- This study was able to highlight the diversity & distribution of the physical and emotional health effects experienced by Sharjah motorists during traffic congestion and long driving hours.
- Health effects were particularly more noticeable in traffic congestion as compared to long driving hours; and this was backed up by the fact that the majority of the sample preferred driving for longer hours to avoid traffic congestion.
- In accordance with studies from (Sorensen, 2013) & (Chang, 2013), it was found that driving for more than two hours on a daily basis directly multiplied the health effects experienced by the population with regards to their driving behaviors.
- With the fact that the daily driving average in Sharjah is evidently higher compared to elsewhere; this is why health effects due to driving in Sharjah are multiplied excessively.
- Males were found to suffer more profound health effects due to driving as compared to females; this could be attributed to the fact that males drive significantly more, as well as the fact that males are more likely to be working; which was also found to be directly correlated with greater affected health.
- Limitation: All health effects reported were subjective, as participants were not assessed clinically.

## 6 CONCLUSION

- As expected; the daily health distresses of traffic congestion and long driving hours, as well as their respective provoking factors were adequately proven.
- This recommends further studies to look into the health effects in a closer manner; as well as look for direct relations between driving behaviors and incidence of diseases; to emphasize the requirement for a strongly needed time to change in the city's traffic system, and closely related road regulations & protocols.

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