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Investigating the Road Rage Behavior and Problems of Auto Rickshaw Drivers: The Case of Lahore Pakistan

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To investigate the road rage behavior and problems of auto rickshaw drivers an openended questionnaire survey was conducted on 25 auto rickshaw drivers, 13 passengers and public relation officer of city traffic office, Lahore through face-to-face interviews. The study concludes that wrong driving, situational factors, and disrespect of auto rickshaw drivers are the major causes of road rage behavior. Majority of auto rickshaw drivers are illiterate; fall in the 15-20 years age group; run self-owned rickshaw; 09 to 16 hours daily; suffering from body pain, backache, hand pain, and skin problems in addition to hearing loss; unable to meet daily expenditure; but intend to continue this profession. Both passengers and traffic police are unhappy with them. The study recommends that government should organize special training courses for auto rickshaw drivers and improve transport system and economic indicators to help students to complete their education instead of becoming rickshaw drivers.

Keywords: Auto rickshaw drivers, Road rage behavior, Problems of auto rickshaw drivers

Introduction

Transportation vehicles such as buses, wagons, trucks, motorcycles and auto rickshaws play a significant role in the economic development of a country providing travelling facility and transfer of goods and services. The most common and convenient type of informal public transport facility is the three-wheeler auto rickshaw. In comparison with the formal crowded transportation, auto rickshaws provide safe and affordable transport and provide employment for poor people in developing countries.

Auto rickshaws are usually run by the young drivers who are not highly qualified and belong to middle class families struggling for better life through this profession to overcome their social, economic and financial problems.

These problems in addition to personal traits, cultural variations, environmental hardships and social dissimilarities encountered by these drivers make them selfish, careless and aggressive

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that lead to road rage behavior i.e., harmful activities, abusive wording and rude gestures (Sanson & Sansone, 2010).

The non-availability of cheaper fuel to auto rickshaw drivers as is the case in Pakistan, the indifferent attitude of their customers, and frequent payment of challan money to traffic authorities add to list of their problems (Mohan & Roy, 2003). Besides this, the auto rickshaw drivers are facing health problems like backache, sight and hearing impairment in addition to stress and anger (Skanberg & Ohrstrom, 2002).

Keeping in view the above situation, the current study was designed to investigate this issue to answer two basic questions. Firstly, what are the causes of road rage behavior of auto rickshaw drivers? And secondly, what are the problems of the auto rickshaw drivers? Obviously, the answers to these questions may provide fresh insights to regulate this transport facility and overcome the problems of hard-hit drivers.

Literature Review

Auto rickshaw is mostly used in the developing countries as a low cost and quickly available transport. But certain issues are associated with this transport mode as the drivers, passengers, and transport authorities all are suffering from this service. This section, therefore, explains the root causes of these sufferings.

Auto Rickshaw---The Facility

In order to avail better education, employment, and health facilities, people are migrating to big cities causing a pressure on infrastructure especially on the formal transport system of Pakistani cities leading to a large number of problems (Masood, Khan, & Naqvi, 2011; Aizaz, 2007). In the absence of an efficient public transport system (Awan, Ahmed, Bilquis, Malik, Cheema et. al., 2020) and easy access to auto finance from Pakistani banks, the people are shifting to informal modes of transportation such as motorcycles (Javid, Okamura, Nakamura, & Wang, 2013).

As a modern form of man-pulled cycle rickshaw, auto rickshaws are common in developing countries such as India, Pakistan, Nepal, Bangladesh and Sri Lanka (Kirkorowicz, Sapukotana, De-Silva, Noda, et al., 2013; Chhikara, 2012; Chaudhary, Nagargoje, Kubde, Gupta & Mishra, 2011; Masood, Khan, & Naqvi, 2011) where formal mass transit is difficult and unaccessible for most of the people owing to the poor road conditions. Most of the public transport follows fixed routes. For the people living beyond those routes, auto rickshaw provides the convenient door to door transport facility in narrow, busy, and uncarpeted streets and localities of big Asian cities (Shalaes & Mani, 2015). The auto rickshaws are available to everybody, at any time, and anywhere in the town at normal as well as at specific road fairs (Chanchani & Rajkotia, 2012; Kumarage, Bandara & Munasinghe, 2010) round the clock, providing livelihood through self-employment (Amerongen, 2011), emergency medical access to low-income people (Cervero

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& Golub, 2007), and source of healthy competition in the transport industry (Potter, Binns, Elliott, & Smith, 2008).

In Lahore and other cities and villages, Qingqis, (Chingchi, chand gari) a three-wheeler motorcycle rickshaw with three forward-facing and three rear-facing passenger seats, initially imported from a Chinese company Jinan Qingqi Motorcycle Co. Ltd., has emerged as the innovative and the most popular form of autorickshaw. Starkey, Batool, Younis, Rehman and Ali, (2021), Awan, Ahmed, Bilquis, Malik, Cheema, and Qamar, (2020) and Starkey, Batool and Younis (2019), have noted that this rickshaw is now being manufactured in Pakistan over 70,000 units annually providing alternate transport facility at the one hand and employment opportunity at the other (Starkey, Batool, Younis, et. al. 2021).

While describing the real cause of the widespread of motorcycle rickshaw, Chaudhry (2021) has noted that in order to divert passengers towards the heavy burdened Metrobus and the Orange Line train, the bus service of the Lahore Transport Company has been stopped on more than 30 routes of the provincial capital with a population of over 15 million, and only 55 buses are now running on the feeder routes. Owing to this acute shortage of public transport, motorcycle rickshaw has become a major public transport in the city where, despite a ban, its number is growing rapidly as a prevalent option.

This popular source of short-distance transport is mainly used by poor and lower middle class of the society and is run by poor, under-aged, untrained and non-licensed drivers who take every risk to boost income through overloading and violation of all regulations, in the absence of a realistic transport system in big cities like Lahore (Chaudhry, 2021; Starkey, Batool, Younis et. al., 2021; Awan, Ahmed, Bilquis et. al., 2020; Starkey, Batool and Younis (2019) as a reflection of incoordination and corruption of responsible government departments (Chaudhry, 2021).

This growing popularity of the auto rickshaw has led to its increased production in the country and Wikipedia (2023) has listed New Asia automobile Pvt, Ltd; AECO Export Company; STAHLCO Motors; Global Sources; Parhiyar Automobiles; Global Ledsys Technologies; Siwa Industries; Prime Punjab Automobiles; Murshid Farm Industries; Sazgar Automobiles; NTN Enterprises; and Imperial Engineering Company as the major manufacturers of auto rickshaw.

No doubt, auto rickshaw is a source of pollution to the environment, but this drawback could be overcome through introducing compressed natural gas and liquefied petroleum gas as fuel (Lukic, 2007).

Auto Rickshaw Drivers---The Social Rating

The auto rickshaw drivers belong to middle class (Garg, Gayen, Jenaat et al., 2010), they are mostly males (Perera & Torabi, 2009), matriculate (Kumarage, Bandara & Munasinghe, 2010), but perceived as illiterate (Perera & Torabi, 2009), a reason for disrespect. Approximately

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38 % of drivers of auto rickshaws in Sri Lanka, with their ages between 35-44 years, are addicted to smoking (Perera, Fonseka, Ekanayak & Lelwala, 2005) and 53 % are addicted to alcohol consumption that causes different diseases (Amarasena, Ekanayaka, Herath & Miyazaki, 2003).

The Road Rage Behavior and Its Contributing Factors

Rodrigo, Perera, Eranga, Peris, and Pathmeswaran (2015) report a study where 98.7% participants reported being victims of road rage behavior. The road rage (i.e., rude and aggressive) behavior is reflected through harsh wording during driving (Shaikh et al., 2005) and defiance and use of physical acts which harm others as in the case of accidents that may lead to serious injuries and deaths for which the drivers are usually held responsible (Sansone, Lam & Wiederman, 2010; Roberts & Indermaur, 2008; Smart & Mann, 2002) though passengers too may exhibit the same (Smart & Mann, 2002). It is the extensive type of aggression which includes threats, verbal abuses, dangerous physical acts and conduct of criminal activities with the intention of the drivers to harm the other people and use of vehicle as the element of the weapon (Laing, 2010). Aggressive driving includes over-speeding, violating the traffic signals, changing the lane suddenly and competing other people without any reason (James & Nahl, 2008), which depicts the drivers as selfish, negligent, careless, and harmful for others.

Road rage behavior has been rooted in mental disturbance of both the parties i.e. victims and guilty (Fong, Frost, & Stansfeld, 2001; Butters, Mann, & Smart, 2006). To count for the reasons, the driving itself irritates the most and may become painful than other activities and involves lot of stress which is harmful for both the drivers and passengers that may lead to discourtesy (James & Nahl, 2008) and aggression (Neighbors, Vietor & Knee, 2002) and one-third of road traffic injuries are the result of such behavior (Galovski, Malta & Blanchard, 2006).

The drivers who fail to achieve their driving goals (such as financial targets), become frustrated (Millar, 2007) and try to achieve such goals at the cost of others showing aggressive behavior (Smart & Mann, 2002). Personality traits labeled as 'antisocial' such as consciousness seeking, impulsiveness, unrealistic thinking, deficient problem-solving skills, and concern for prosperity (Ross & Antonowicz, 2004) are also taken as contributing factors. Just to add in the list, indifferent attitudes such as enjoying over-speeding in a struggle to override the competitors on the road (The Nation, 2018; Galovski, Malta & Blanchard, 2006), listening music and phone calls, and losing concentration (The Nation, 2018; Javid & Faraz, 2017), also seem to be responsible for this unethical and indifferent behavior and careless driving of bad conditioned rickshaw on broken roads playing havoc to the helpless passengers (The Nation, 2018) leading to the killing and injuring hundreds of people in 136,758 traffic accidents and a high level of environmental pollution in Punjab province during 2018-2020 (Chaudhry, 2021).

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Besides this, the attitude of traffic police, irritating road conditions, and solitary feelings of drivers (Ross & Antonowicz, 2004) resulting from cultural patterns exhibiting discriminatory passengers' attitude (James & Nahl, 2008) causes road rage behavior.

Problems of Auto Rickshaw Drivers

Auto rickshaw drivers are found to be feeble due to the musculoskeletal disorder caused by unhealthy driving posture (Szeto & Lam, 2007; Mansfield & Marshall, 2001), constant vibration of body (Toren, Oberg, Lembke, Enlund, & Anderson, 2002), adjusting passengers in the front seat (Shaik, Gotru, Swamy & Sandeep, 2014) and suffering from pain of backbone, neck, shoulders, knees, ankle, and they feel stress. These drivers face constant and prolonged noise pollution and in addition to hearing loss (Khan & Khan, 2003) may be the victim of different physical as well as psychological diseases and can also lose their lives (Chakraborty & Basu, 2015; Rodrigo, Perera, Eranga, et. al., 2015) in road accidents (Balogun, Shenge, & Oladipo, 2012) as a result of disobedience of traffic rules (Javid & Faraz, 2017; Khanal, & Sarkar, 2014). In most of the cities, proper parking places for auto rickshaws are also not available (Shlaes & Mani, 2013). The worst of all above is economic conditions. They even don't afford to purchase and maintain auto rickshaw. They mostly rely on borrowing and restrictions they face to pay principal and interest installments, fuel charges, and repair expenses, lead to stress, the basic cause of rage behavior (Mohan & Roy, 2003). As auto rickshaw drivers are not highly qualified (Kaushal, 2019; Shlaes & Mani, 2013), they fail to maintain a workfamily-life balance (Kaushal, 2019; Ranjan, 2015; Agarwala, 2007;) caused by a mismanagement of heavy workload, the increased mental demands, low level of work autonomy and support, that leads to many negative outcomes for instance stress, burnout, depression and lower work contributions which maximum auto rickshaw drivers are facing as a real challenge in their life (Ranjan, 2015) and fall prey to survival dangers.

Last but not the least, commuters too face problems such as rude behavior, overcharging, rooking for longer routes, and safety and security threats while traveling on auto rickshaws (Vaidya, Gupta & Singhal, 2014). As a consequence of the mismanagement of the affairs, corruption and hazards to environment and human health are increasing every day as the turning over of the rickshaw due to different reasons (47.2%) and head on collision (38.4%) have led to a total of 356 Qingqi rickshaw related injured patients presented in six months study period (Awan, Ahmed, Bilquis, et. al. 2020).

Despite the gravity of the situation described above, Iqbal (2017) had reported that the Supreme Court of Pakistan, accepting the plea of All Karachi Qingqi Rickshaw Welfare Association, allowed motorcycle-rickshaws---popularly known as Qingqi---to ply on roads across the country provided they were produced by manufacturers approved by the government.

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Research Methodology

It was an open-ended questionnaire survey conducted on 25 auto rickshaw drivers, 13 passengers and public relation officer of city traffic office, Lahore. The first two types of respondents were conveniently taken from Shahdara, Railway Station, Canal Campus Bridge, Johar Town, and DHA. Three self-constructed open-ended questionnaires were used to interview auto rickshaw drivers (16 items), passengers and public relation officer of city traffic office (3 items each).

Results and Discussion

This study aims to explore the causes of road rage behavior and problems faced by auto rickshaw drivers through interviews and the results are discussed in the sequential flow.

Auto Rickshaw Drivers

The Demographics

Table 01 below shows the demographics of 25 auto rickshaw drivers interviewed from Shahdara, Railway Station, Campus Bridge, Johar Town, and DHA areas of Lahore where 53% of drivers fall in the 15-20 years age group. This is an alarming situation as this is the age when young individuals must be in educational institutions. This tendency may be a consequence of economic situation these people are facing and a high dropout from schools e.g., 52% in Punjab, the highest rate in Pakistan (Alif Ailaan, 2015). The parents are supposedly unable to allocate their income for the education of their boys despite the fact that Government of the Punjab is providing free books and other facilities in high schools. Majority of them are illiterate (44%) in line with Perera and Torabi (2009), and among the literate drivers, highly qualified drivers are matriculates (24%) only, whereas 32% of these drivers are under matriculation. These findings are consistent with, Shlaes and Mani (2013) and Kumarage, Bandara and Munasinghe (2010) and support the previous argument regarding poor economic conditions and a high dropout rate.

The ownership analysis reveals that majority of them (64%) run self-owned rickshaw whereas 28% run rented rickshaw and 8% run rickshaw taken on installments. Majority of the rented rickshaw drivers (85.7%) pay Rs.300/day rent whereas 14.3% pay Rs.350/day. These findings reveal poor state of affairs (Mohan & Roy, 2003) of the auto rickshaw drivers.

Table 01Demographics of Auto Rickshaw Drivers

Demographic information		0/ 200
Aspects	Categories	—— %age
Area of Lahore	Shahdara	27
	Railway Station	24
	Campus Bridge	16
	Johar Town	19
	DHA	14

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Age brackets	15 - 20 years	53	
	21 - 25 years	25	
	26 - 30 years	17	
	31 and above	05	
	Illiterate	44	
Education	Primary	12	
	Middle	20	
	Matriculation	24	
	Own rickshaw	64	
Ownership of auto rickshaw	Rent basis	28	
	Installment basis	8	
Amount of rent for rickshaw	Rs.300/day	86	
Amount of fent for fickshaw	Rs.350/day	14	
December consists of outs midrahess	04	44	
Passenger capacity of auto rickshaw	05 to 08	56	
	No idea about rounds	24	
	01 to 05	12	
Travel rounds of auto rickshaw	06 to 10	20	
	11 to 15	12	
	Depend upon passengers	24	
	Run rickshaw occasionally	8	
Dairing house	Maximum 8	44	
Driving hours	9 to 16	56	
D C : 1 (1 C :	Satisfied	80	
Professional satisfaction	No satisfied	20	
Duofassian aantinuity	Want to continue	76	
Profession continuity	Want to discontinue	24	

Majority of auto rickshaws running on roads (56%) have 05 to 08 seats and 44% can accommodate 04 passengers. Majority of these drivers (24 %) have no idea about how many rounds they complete daily. Another 24 % say that it depends upon availability of passengers. Only 12% drivers complete the maximum15 rounds daily. Most of them (56%) drive 09 to 16 hours daily whereas 44% drive 08 hours per day. Though 80% of these drivers are satisfied with this profession but those who intended to continue it are 76%. This tendency reflects that despite the difficulties and safety issues of this profession (Vaidya, Gupta & Singhal, 2014; Garg, Gayen, Jenaat et al., 2010), people are ready to continue this profession most probably due to economic problems and job market situation.

The causes of road rage behavior and problems of auto rickshaw drivers given in the following sections as the basic questions to answer in this study may be viewed in the light of demographics of these drivers just discussed.

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Causes of Road Rage Behavior

Wrong driving is considered by 40% of auto rickshaw drivers to be the major cause of road rage behavior, another 40% goes for situational factors, but remaining 20% drivers hold 'disrespect' responsible for it. As given in demographics, majority of auto rickshaw drivers are illiterate or under matriculation young boys (Shlaes & Mani, 2013) who are unable to think realistically and lack analytical abilities and fail to solve driving problems (Ross & Antonowicz, 2004). The most dominant characteristic of such people could be an indifferent attitude not liked by general people. This reflection of disliking is perceived as disrespect by these drivers that causes frustration (Millar, 2007) and mental disturbance (Butters, Mann, & Smart, 2006). Owing to that, they drive carelessly that may result in accidents (Javid & Faraz, 2017).

As a consequence of the above, 64% of drivers show anger, 24% do not, whereas according to 12% of them it depends upon the situation. This anger is reflected as over-speeding, violation of traffic signals, sudden change of lane and un-necessary speed competition on the road (James & Nahl, 2008; Galovski, Malta and Blanchard (2006) causing road rage behavior that, according to 68% drivers, results in accidents. Similarly, when talked about over-speeding, 88% of them labeled it too as the cause though only 04% drivers run rickshaw at fast speed. Whatever the cause may be, these accidents result in injuries and deaths (Awan, Ahmed, Bilquis et. al., 2020; Rodrigo, Perera, Eranga, et. al., 2015; Sansone, Lam & Wiederman, 2010; Galovski, Malta & Blanchard, 2006).

After answering the first question of the study, now follow the arguments that help answer the second question.

Chaudhry, 2021; Starkey, Batool, Younis et. al., 2021; Awan, Ahmed, Bilquis et. al., 2020; Starkey, Batool and Younis (2019) as a reflection of incoordination and corruption of responsible government departments (Chaudhry, 2021).

Problems of Auto Rickshaw Drivers

Only 28% auto rickshaw drivers could easily manage their expenditure out of their road income, 48% are facing hardship, whereas 28% could not meet. The demographics reveal that 28% drivers run rented auto rickshaws and they have to pay Rs.300-350 as daily rent. These and others, who run their own rickshaws, face repairs, damages and obsolescence as additional out flow of their income (Mohan & Roy, 2003).

Similarly, body health problems are listed as, bad effect on overall body (28%); body pain, backache, hand pain, and skin problems (12% each); no effect on body (20%); and no idea about health problems (4%). The literature reveals that auto rickshaw drivers are exposed to unhealthy driving posture (Szeto & Lam, 2007), constant vibration of body (Toren, Oberg, Lembke, et. al., 2002), and discomfort due to over-loading (Awan, Ahmed, Bilquis et. al., 2020;

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Shaik, Gotru, Swamy & Sandeep, 2014). These conditions lead to musculoskeletal disorder that causes the health problems reported by these drivers.

According to 88% drivers, noise pollution has affected their hearing. The reason behind is the constant and prolonged noise pollution that causes hearing loss (Khan & Khan, 2003), leading to physical as well as psychological diseases (Chakraborty & Basu, 2015; Rodrigo, Perera, Eranga, et. al., 2015), and may cause road accidents (Awan, Ahmed, Bilquis et. al., 2020; Balogun, Shenge, & Oladipo, 2012).

They have rated the behavior of traffic polices as, good (28%), bad (28%), satisfactory (16%), situational (16%), teasing (8%), and illegitimate (04%). As pointed out below by the second and third category of respondents, the number of auto rickshaw is growing fast as an alternative and easily available option (Shalaes & Mani, 2015) in the absence of a sound transport system in the city (Javid, Okamura, Nakamura, et al., 2013) leading to problems pointed out by passengers (Vaidya, Gupta & Singhal, 2014) and traffic office. It is very difficult for traffic wardens to regulate the flow of traffic in the presence of large number of unruly auto rickshaws. When they take remedial measure, rickshaw drivers face problems owing to their inability to abide by traffic rules.

At the end, the area analysis reveals that auto rickshaw drivers from Shahdara are found to be the most aggressive and problem-hit followed by those from Railway Station and Campus Bridge. The most relaxed and easy going auto rickshaw drivers are found in DHA followed by Johar Town. Obviously, Shahdara and Railway Station regions fall in the 'north Lahore', a thickly populated and less privileged area against DHA and Johar Town and sufferings of the inhabitants are might be reflected in their behavior (Iqbal, 2017; Millar, 2007; Mohan & Roy, 2003).

Passengers

The second category of respondents consisted of 04 passengers conveniently interviewed each from Shahdara, Railway Station, Campus Bridge, Johar Town, and DHA areas of Lahore. Majority of them were males (70%) and students (51%) followed by workers (30%), regular employees (13%) and others (6%). Only (23%) of them use auto rickshaw as first preference. Passengers have rated the reasons to use it as, no alternative (23.1%), seat availability (23.1%), ease of availability (15.4%), and no specific reason (38.4%). They have rated difficulties in using auto rickshaw as, extra charges (23.1%), sharp-edged speed breakers (23%), fear of strangers (15.4%), pollution (15.4%), no problem (15.4%), and sitting with men i.e., in case of women (7.7%).

The area analysis for passengers is interestingly consistent with that for drivers where passengers from Shahdara are found to be the most affected followed by those from Railway Station and Campus Bridge. The most relaxed and easy-going passengers are found in DHA

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followed by Johar Town. All of these findings are complementary to those discussed previously in sections related to the road rage behavior and problems of auto rickshaw drivers.

The PRO City Traffic Office

The PRO responded that the city transport does not correspond to the rapid increase in city population. Resultantly, the number of auto rickshaw is growing as a substitute causing problems in the flow of traffic i.e., a bus may carry 70 passengers whereas such 70 passengers may need 30 to 40 auto rickshaws giving rise to the noise/smoke pollution in addition to road accidents especially in thickly populated areas of Lahore.

The officer explained that government is keen to overcome mass transit issues. After the metro bus, orange line train project is in progress. Additional fleets of busses are also being injected in the town.

These findings are consistent with Shalaes and Mani (2015) who report the rapid rise in the number of auto rickshaws in the absence of a sound transport system in big cities of developing countries and (Javid, Okamura, Nakamura, et al., 2013) who describe problems passengers face due to this tendency and support previous arguments as in the case of passengers.

In short, auto rickshaw drives are facing, as well as creating problems, leaving a large space for governmental initiatives and letting to answer the second research question.

Future Directions

Keeping in view the constraints for the researchers, the study was delimited to investigate the road rage behavior and problems of auto rickshaw drivers only from Shahdara, Railway Station, Canal Campus Bridge, Johar Town, and DHA area of Lahore thereby leaving space for the inclusion of additional aspects of issue to be investigated on extended samples.

Conclusion

The study concludes that majority of auto rickshaw drivers fall in the 15-20 years age group. Most of them are illiterate and among the literate drivers, highly qualified drivers are matriculates only. Majority of them run self-owned rickshaw and those who take on rent pay Rs.300-350/day. Most of them drive 09 to 16 hours daily and intend to continue this profession. Wrong driving, situational factors, and disrespect of auto rickshaw drivers are reported to be the causes of road rage behavior. As a consequence, most of them show anger that ultimately leads to accidents. Most of rickshaw drivers are unable to meet the daily expenditures out of their road income. Their body is affected with rickshaw driving and they are suffering from body pain, backache, hand pain, and skin problems in addition to hearing loss. They are also facing problems created by traffic police and vice versa. Most of the passengers don't like auto rickshaw ride but use it as an alternative option and face extra charges, sharp-edged speed

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breakers, fear of strangers, pollution, and sitting with opposite gender as major problems. The level of road rage behavior and intensity of problems of auto rickshaw drivers is found to be high in thickly populated areas of Lahore.

Recommendations

On the bases of conclusions, the study recommends that auto rickshaw drivers are a big reality of the day. Special training courses may be launched, especially in thickly populated areas of Lahore, to educate drivers how to eliminate the causes of road rage behavior and overcome their own problems. This may improve their driving behavior and flow of the traffic and help reduce the chances of accidents and the problems faced by passengers and traffic police. Government should take measures to establish and maintain a sound transport system in the provincial capital to overcome the problem of auto rickshaws. Initiatives like metro bus, and city buses as pointed out by city traffic office are successful. Orange-line train project should be completed soon. Above all, measures should be taken to improve economic indicators in the province as it would help the government to convince parents to send their children to educational institutions and overcome the high rate of dropout thereby decreasing the tendency to become auto rickshaw drivers.

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