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Pedestrians' Non-Compliance with Road Safety Regulations in Dhaka City

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ABSTRACT

Since the Dhaka City's population is increasing, there is an urgency for sustainable transport policy for Dhaka to retain and expand the modal share of walking trips, which share the bulk of all short trips made. However, pedestrian facilities are perhaps the most neglected and unattended ones in transport planning of Dhaka city. Day by day, the rate of fatality is increasing in an unabated manner. If the rate has to be controlled, it is imperative to know the various factors which result in the violation of traffic regulations by the pedestrians. This paper aims to know the various underlying reasons behind the pedestrians' non-compliance with the road safety regulations using both qualitative and quantitative tools of social research. The findings of the study suggest that the existing road crossing facilities (overpass, zebra crossing) are inadequate as per demand. Poor monitoring and maintenance of the overpasses have made them a hub for hawkers, beggars, addicts which demotivates the pedestrians in using them. Failure to provide and maintain road signs and markings, lack of education of road users, poor enforcement of traffic regulations etc. are some of the other factors which result to traffic rules violation by the pedestrians. The study provides a modest suggestion to the government that they should think of giving road safety issue a priority in the policy agenda. Moreover, necessary steps should be taken to increase the current road crossing facilities along with the formation of a watchdog body that will monitor the violations from time to time. Lastly, mass awareness building programs have to be initiated for educating both the pedestrians and the drivers regarding the road safety regulations.

***Keywords*:** Traffic rules, violation, traffic jam, Dhaka City, pedestrians, intersection

INTRODUCTION

Dhaka city has been the centre of political & administrative activities since the Mughal era. Being the hub of all business & commerce, Dhaka saw a steep rise in population since the early 1900s, and this trend is continuing. According to a United Nations report, this capital city is the 11th most populous city of the world with a population just under 1.7 crore. The report projected that Dhaka would become the 6th most crowded city by 2030 with a population of over 2.7 crores (Daily Star 2014). These soaring populations are now putting a strain on the limited

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resources that the city has to offer, including on the transportation system. Thanks to the ever-increasing community, the travel demand is also increasing very rapidly in the city, causing enormous pressure on the existing infrastructural facilities. This has resulted in traffic congestions, lack of traffic safety and most alarmingly on the safety of pedestrians.

Albeit walking is considered as the most sustainable and eco-friendly transport mode, the emphasis is being given by the policymakers on private car, bus and pedestrians in the respective order in transportation planning of Dhaka City due to some incomprehensible reasons. The order should be reversed to minimize the transport problem to some extent (Saha et al. 2013). Under the Strategic Transport Plan, the surveys of people's movement in metropolitan Dhaka showed walking as one of the dominant modes with a share of 22% of total person trips (STP 2005). This large number of pedestrians has to cross the road in different places. Hence, they should be provided with the best logistic support so that they can cross the road with convenience. However, the most vulnerable group in the transport system here in Dhaka city is the pedestrians in case of a safety issue (Saha et al. 2013).

Although traffic rules for the pedestrians are mentioned in the ‘Road Transport and Traffic Act' of the country, these rules are followed only in a handful of instances. Even more interestingly, in most cases, traffic rules are being violated by the pedestrians and thus jeopardizing their safety. Jaywalking, where a pedestrian crosses or walks in the intersection or road unlawfully or without regard for approaching traffic, is probably the most significant violation occurring daily in Dhaka. Violation of traffic rules by the pedestrians in the intersections of the city not only hampers the traffic network but also results in pedestrian casualties. Day by day this fatality is increasing at an alarming rate, which can be clearly understood by the data of Accident Research Institute, BUET. Of all accidents that occurred from 1998 to 2008 in Dhaka city, pedestrians involvement in road accidents is about 48.55% (ARI 2008). In the case of fatal accidents, the scenario is much alarming where pedestrian involvement is 73.8%. Moreover, while crossing the road, 50% of the total pedestrian accident has occurred during the above mentioned period (ARI 2008).

If the pedestrian fatality rate has to be minimized, then effective measure has to be there for efficient and safer movement for pedestrians. For ensuring such traffic safety, it is imperative to know the reasons behind traffic rules violation by pedestrians in different intersections of Dhaka during road crossing. Moreover, for pedestrians, it is necessary to follow the traffic rules.

The principal purpose of this study is to understand the patterns of the road crossing behaviour of the pedestrians in major intersections in Dhaka city. The study is an attempt to map out the reasons behind the traffic rules violation by the pedestrians and also provide a possible way out of the problem with the help of the data drawn from observation, questionnaire survey and experts' opinions.

METHODS

This study has been conducted, adopting both qualitative and quantitative tools of social research. Data were collected from both primary and secondary sources. Observation, questionnaire survey and KII (Key Informant Interviews) were used for gathering primary data,

while secondary data were collected from various sources which include books, journals, article, newspaper, periodicals and websites as per the requirement of the study.

Pedestrian behaviour pattern has been collected through direct observation. The pattern of rule violation has been observed purposively in five different intersections, namely Shahbag, Banani, New Market, Farmgate and Sonargaon intersections since the rate of violation in these intersections are comparatively high. For the sake of observation, morning peak period and evening peak period for these intersections was taken from 9 a.m. to 10 a.m and from 5 p.m to 6 p.m respectively, which are just the terminal hours of the office period. As New Market is a shopping area, its morning peak hour was taken from 9.30a.m to 10.30a.m. Another source of primary data was interviewing pedestrians through survey questionnaire adopting semi-structured questions. In total, 150 pedestrians (from the 30 intersections mentioned above) were interviewed of which 105 were male (70% of total respondents), and 45 were female (30% of the total respondents). It needs to be mentioned here that the sample size was taken 150 purposively. However, a greater sample size could have helped in enriching the findings of this study. In addition to observation and interviewing respondents, 4 KII were conducted to meet the research objective. Police Inspectors of Ramna Model Thana, New Market Thana, Officer in Charge (OC) of Raman Model Thana and an Assistant Professor of Accident Research Institute (ARI) were the key informed personnel's who were approached for giving their valuable input.

LITERATURE REVIEW

The topic 'pedestrians' non-compliance with road safety behaviour' in the field of social research is not a new one. Scholars have shown a keen interest in this particular field, and so several studies have dealt with the behaviour and movement of pedestrians at junctions and other crossing locations. Some of those existing literature was reviewed to get some insights into those previous research works.

Rosenbloom et al. (2004) conducted a study applying roadside observations for investigating the differences in pedestrians' behaviour by observing two entirely different urban places in terms of religion. Results showed that young and male pedestrians tend to commit violations. Another study conducted by Bernhoft and Carstensen (2008) also supports the above, and the concluding remarks of that study were that younger pedestrians appreciate sidewalks and crossing facilities less than older pedestrians. Age and gender differences in road crossing decisions within a theory of planned behaviour analysis including intention, situation and risk perception effects on pedestrian were tested by Hollad and Hill (2007). Another study which was conducted by (Avineria et al. 2012) also showed that age differences have significant effects on pedestrian behaviour at crosswalks and crossing speed is mostly explained by age and gender. On the question whether age has any impacts on road crossing decisions, Lobjois and Cavallo (2007) concluded that due to a time constraint all age group prefer a shorter time gap for higher speed of vehicles which lead to various unsafe decisions. Rosenbloom et al. (2008) carried a study on crossing behaviour of children and found that the most prevalent risky behaviour was 'not looking', followed by the combination of 'not stopping' and 'not looking' before crossing. They further found that children committed more risky behaviours when they were accompanied by an adult, especially when not holding hands with the adult. Another study was carried out by

(Lavalette et al. 2009) to determine what role environmental factors have in pedestrians' violation of rules while crossing roads and thus to create a hierarchy of these factors which create constraints for pedestrians. The study found that in some instances, the rate of violation increases owing to the absence of crossing signals and fewer number of lanes of traffic, although it is not uniform. Hierarchical regression models for road crossing behaviour was developed by Evan and Norman (1985) with the help of completed questionnaires, which included scenarios of three specific potentially dangerous road crossing behaviours. Pedestrians opined that crossing behaviour was modelled with the subjective norm, measures of attitude, self-identity, perceived behavioural control and intention. Cinnamon et al. (2011) carried a study through observation at high-risk pedestrian injury intersections in Vancouver, Canada and found considerable variability in road-rule violations between different intersections and also within intersections at separate observation periods. Martin (2006) found that high, unsafe crossing behaviour was due to the use of cell phones, which caused the distraction of drivers or pedestrians.

Hameed (2001) suggested that pedestrians waiting times and number of crossing attempts are strongly related to violation of traffic laws. Moreover, pedestrians behave eccentrically from one side to the median, then from the median to the other side of the road, in case of divided roads. A recent study by Jannat (2013) found that the generalized condition of pedestrian facilities in Dhaka city is very dissatisfactory. About 73% intersections lack foot over bridges and underpasses while about 70% intersections have no apparent cross making, which prompts the pedestrians to violate the existing traffic rules during road crossing. From the field survey conducted by Saha, Tithi, Islam & Mitra (2013) in the selected intersection of Dhaka city, it was found gender difference, age difference and level of education influence pedestrians in case of complying or not complying with the existing traffic rule during road crossing. Jashim and Ahmed (2010) found similar co-relations of age and gender with violation of traffic rules by the pedestrians. Khadem (2011) found that traffic rules violations are mainly caused by the deficiency of the traffic control device, which affects safety. The study addressed that pedestrians are not, and breaches of vehicles within the pedestrian crossing points are increased due to the non-existence of pedestrian crossing.

Review of the literature shows that few studies have so far been conducted in Bangladesh for knowing the reasons for non-compliance of traffic rules by the pedestrians. Although some of the studies did find few relevant factors behind such non-compliance like lack of over bridges, underpass, the urgency of pedestrians etc.; however for reducing the ongoing causality rate of the pedestrians, knowing those limiting factors are not enough. Instead, a comprehensive study is needed that will unbundle most of the underlying reasons (if not all) of traffic rules violation by the pedestrians. Hence, this study will help to fill this void in the literature by identifying the significant causes behind the tendency of violating traffic rules.

THEORETICAL PERSPECTIVES

Although there is no direct theory that better explain the reasons behind the pedestrians' non-compliance with road safety regulations, the following theories from the behavioural school of thought and social-psychology have been selected which will help to illustrate the findings of this study.

Rational Choice Theory

Rational-choice theories of illegal behaviour explain offences in terms of the costs and benefits while committing violations, and indicate that the intention to commit illegal behaviour is inversely related to the perceived cost of the act (Clarke & Cornish 1994). Possible reasons for the violation of traffic laws are described by Rothengatter (1997) in terms of costs and benefits, such as being in a hurry, seeking excitement, trying to prove one's expertise, or being in a bad mood. Pedestrians are a rational being, and they always seek their gain or interest. That's why they try not to abide by the traffic rules on behalf of their interest, such as time, energy, and so on.

Planned Behavior Theory

The planned behaviour theory seems to be suitable for understanding and predicting the behavioural intentions of pedestrians. In psychology, the theory of planned behaviour (abbreviated TPB) is a theory that links beliefs and behaviour. The people' attitude towards the illegal mid-block crossing is positive (Diaz 2002). Usually, people are not conscious about existing traffic rules; that's why when they violate traffic rules, they do not consider it as violence.

Theory 'X' Assumption

Douglas Mcgregor in his book, 'The Human Side of Enterprise' (1960) had examined theories on the behaviour of individuals at work, and he had formulated two models which he called "Theory X" and "Theory Y". X theory refers to those people who don't like to work and take responsibilities, rather avoid it. Moreover, they are not self-motivated and want to be directed, and so most people ought to be forced with the threat of punishment to work towards organizational objectives.These people are not willing to follow traffic rules and thus violate traffic rules. So they pass through the road very quickly saving their time and energy. In this case, strict steps are necessary to be taken against these sorts of people to get a safe city.

'Looking-Glass Self' Theory

'The looking-glass self', a social psychological concept was coined by Charles Horton Cooley in 1902. The looking glass theory refers to people shaping their self-concepts based on their understanding of how others perceive them. Because people conform to how they think others think them to be, it's difficult, or arguably impossible, to act differently from how a person thinks he or she is perpetually perceived. In the looking-glass theory, the self must have three major components that are unique to humans (Rousseau 2005). There are three main elements of the looking-glass self theory which are—(1) we imagine how we must appear to others, (2) we imagine and react to what we feel their judgment of that appearance must be, and (3) we develop our self through the judgments of others.

Theory of Cultural Lag

According to Ogburn, '*cultural lag is a common societal phenomenon due to the tendency of material culture to evolve and change rapidly and voluminously while non-material culture tends to resist change and remain fixed for a far longer period.*' Due to the opposing nature of these two aspects of culture, an adaptation of new technology becomes rather difficult. According to the theory of cultural lag, there is a great difference between infrastructural-technological innovation and social or mental development (Brickman & Brickman, 1997). In the tidal wave of technology, traffic rules and other logistics must be upgraded where people usually are reluctant to obey. Although traffic rules have been upgraded, people's minds are yet to cope-up with the existing laws, so, they violate traffic rules.

FINDINGS

This section contains the primary data that have been obtained through observation, interviewing the sample population and the Key informed personnel. These findings are presented in three sub-sections below.

Direct Observation

In Sonargaon intersection there is no overpass for pedestrians, but there are two zebra-crossing for crossing road. Through observation, it was found that most of the time, vehicles are standing on zebra-crossing, blocking the space to a crossroad for the pedestrians. Moreover, there is one traffic police who maintains duty at both points, which makes it difficult for him to maintain a balance between rush hours from one signal to the next one. Most of the pedestrians in this junction are workers who usually go to Kawran Bazar for its proximity from the junction. Most of them were seen carrying a heavy load in their head, which made them impatient to wait for a signal and use zebra-crossing for crossing the road. Hence, they often use the unmarked crosswalk for crossing the road violating traffic rules. Furthermore, pedestrians have to wait longer period for signal due to unavailability of an overpass in this intersection. Besides, the sign of zebra-crossing is not as bright as the colour is fading away in most places.

Two hospitals and a public university surround the Shahbag intersection. There are three overpasses (near to BIRDEM-BSMMU, National Museum and Shishu Park) for pedestrians. It was found through observation that among the three overpasses, the overpass connected to BIRDEM-BSMMU is highly used than the other two overpasses near to Museum and Shishu Park. The rate of overpass use is higher during peak hour from 9:00 AM to 10:00 AM. Both adult male and female use overpass more and their ratio are almost the same. However, in the evening hours from 4:30 PM to 5:30 PM, pedestrians tend to violate traffic rules more. Female pedestrians were found to use overpass less than their male counterparts. Interestingly though, the overpasses were seen to no effective use in this intersection. Instead, most of the pedestrians preferred crossing the road diagonally than using even zebra-crossing. Moreover, the flower shop

owners are using the overpass like their private property. Again, it was noted that stairs of both sides of the overpass near to Shishu Park are being narrowed by bi-cycles, baggage, baskets and heap of flowers. As the stairs of the overpass are narrow, the pedestrians don't prefer to use that overpass. Furthermore, the other overpass located between BSMMU-BIRDEM hospitals is being grabbed by hawkers, drug addicts and street beggars. These realities provide little scope for pedestrians to use it.

It was observed from the New-Market intersection that students tend to break traffic rules in morning peak hour than that of the evening. Moreover, the child workers of New Market area were found to violate traffic restrictions more than that of other occupants. Even adults with children were seen crossing roads without using overpass. They prefer unmarked crosswalk or middle of the street for crossing road taking immense risks. Some pedestrians with a heavy load in their head were seen using the little gap between fences on the divider of the road instead of using the underpass. Another interesting observation in this intersection was that some traffic policemen were found breaking traffic rules as they used unmarked crosswalk instead of using overpass for crossing the road. Furthermore, it was found that the rate of violation during the morning session was higher than that of evening hours. Moreover, female pedestrians were found more to follow the traffic rules in the evening period that the males.

From Farmgate intersection, it was captured that there was less violation of traffic rules under the main overpass of that area. However, the rate of violation was found higher in the north side of the main overpass near to police box despite the existence of an overpass. Almost all workers with heavy load were seen violating traffic rules while they were crossing the road. In the afternoon period, students were found doing the same. As the overpass is a bit distant from the bus stop, the pedestrians were found very much reluctant to use that. Only one traffic police were seen to maintaining one of the busiest intersections of Dhaka which often gets very much taxing. Again, it was found that guardians with female students prefer more to use overpass than crossing the road. Al-Raji Hospital is near this intersection, and it was found that most of the patients of this hospital prefer unmarked crosswalk rather than overpass due to height issue. Moreover, some of the pedestrians were found crossing the road through railing instead of using the overpass. However, the most dominant reason behind the violation of traffic rules in this intersection is heavy traffic.

From the observation in Banani intersection, it was found the pedestrians have to walk 10-15 yards from the bus stop to get on the overpass, which is time-consuming for them. Hence, they use unmarked crosswalk instead of using the overpass. Almost all foreigners, as well as the service holders, preferred using overpass. However, working-class pedestrians were reluctant to use overpass due to the absence of an escalator. Surprisingly though, the escalator was found to be underused by the pedestrians during the peak hours. University students were seen to use overpass more during morning peak hours than that of the evening. More users of overpass come from the side of Banani thana. Among the pedestrians in Banani, there is less working class than that of Farmgate intersection. Law enforcement officers were not seen to play their role properly despite having duty on the maintenance of traffic rules.

Public Opinion

From the questionnaire survey of 150 pedestrians, it was also found that there is a variation in the road crossing preference of the pedestrians. About 100 respondents (51%) opted for the option of overpass due to safety issues. They expressed that they are aware of the safety of their own lives; hence, they use overpass rather than using unmarked crosswalk while crossing the road. However, 11% preferred zebra-crossing as a way of passing the streets. And 38% of respondents preferred unmarked crosswalk. Mainly the respondents from Shahbag, Banani and Sonargaon intersections said that they preferred unmarked crosswalk as it was a short-cut, comfortable and more convenient for them despite the possibility of high-risk involvement.

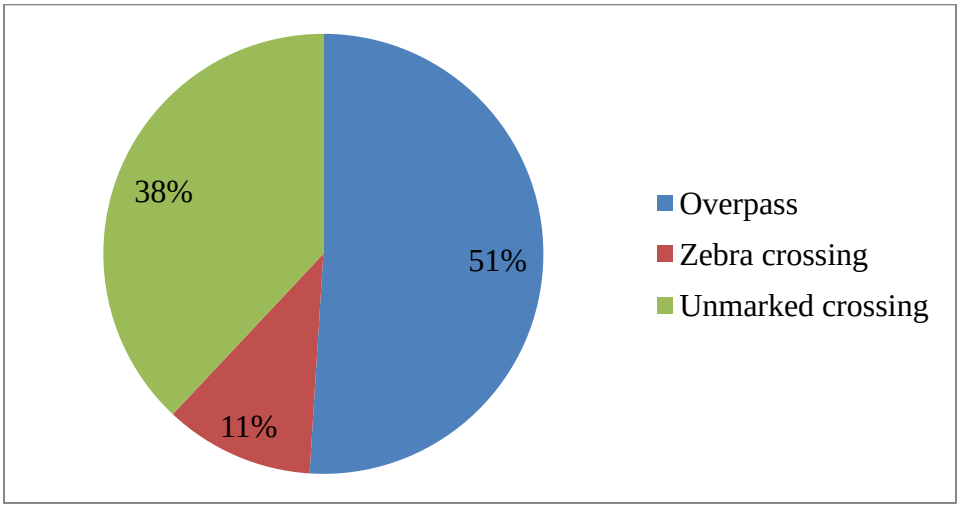

Figure 1: Pedestrians' Preference for Road Crossing

Figure 2 shows the various reasons for the respondents using overpass. However, 77% of the respondents have shared that they don't use overpass as it is time-consuming. Security concerns, height issues, distance-related problems, a heavy load of the pedestrians, being influenced from others (seeing the law-defying culture) were some of the other insignificant causes which made the pedestrians reluctant in using the overpass (Figure 3).

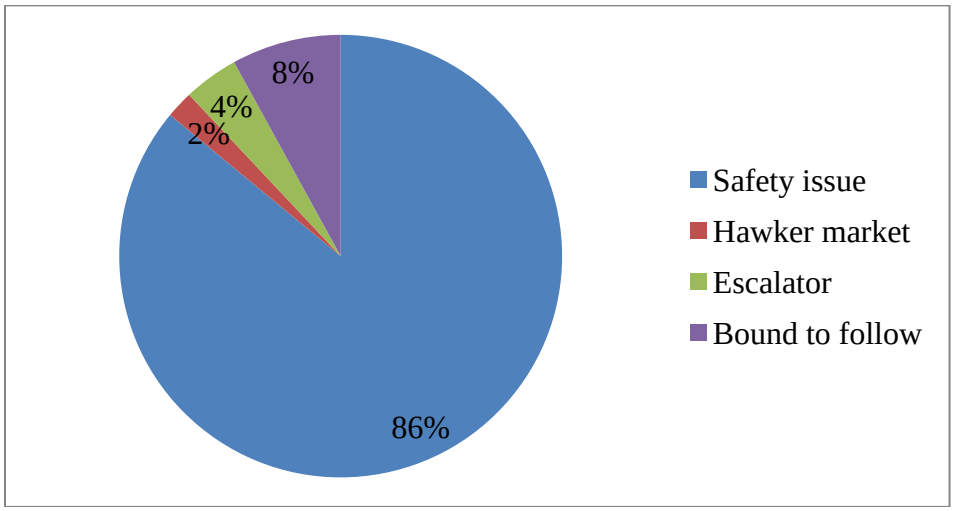

Figure 2: Reasons for Using Overpass

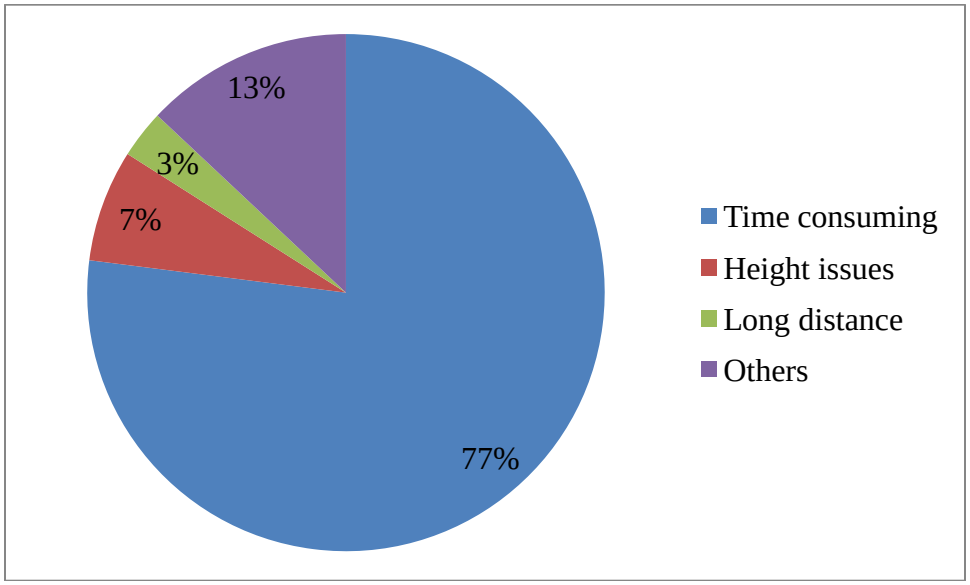

Figure 3: Reasons behind not Using an Overpass

Again, it was found that most respondents 71% of the total sample size are not much familiar with the existing traffic rules, whereas only 5% respondents were found to be much familiar with the existing traffic rules. Hence most of the pedestrians more often violate traffic laws unknowingly. Figure 4 below further illustrates these statistical facts.

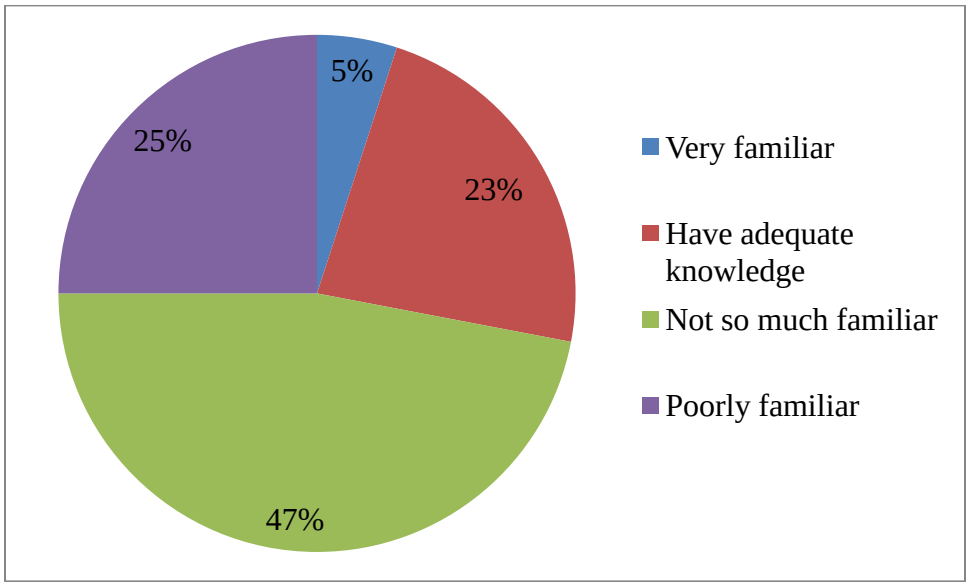

Figure 4: Respondents' Familiarity with Existing Traffic Rules

When the respondents were questioned about the role of traffic police in maintaining road safety, a mixed response was found. Most of the respondents believed that the traffic polices are not playing their specific roles.

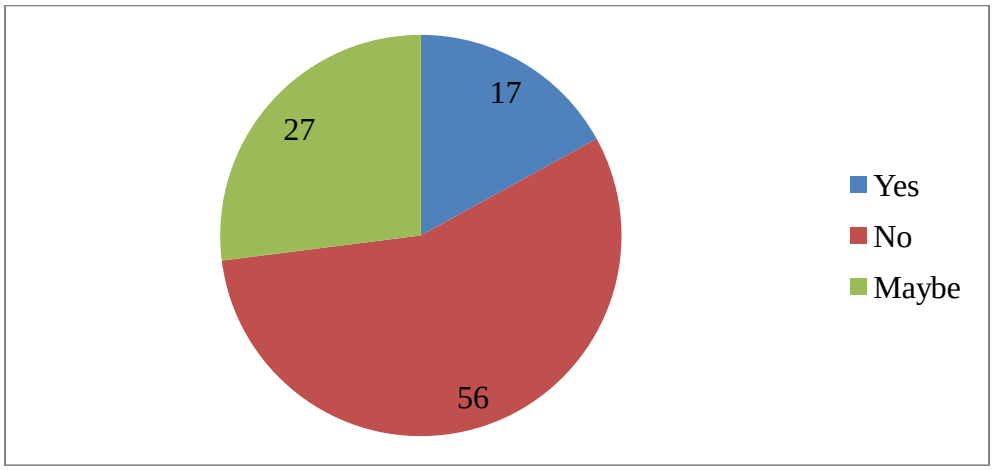

Figure 5: Traffic Police's Role in Managing Road Safety

About 56% of respondents replied negatively about the role of traffic police in maintaining road safety for the pedestrians, while 27% of respondents don't know whether the traffic polices playing their assigned role or not. Only a few respondents (27%) opined that the traffic polices playing their roles quite well in this regard.

Key Informant Interviews

After the completion of direct observation and public opinion survey, some experts' in this field were interviewed for getting their opinion. According to an official of DMP, '*floating populations in Dhaka city are higher in number, and more often they don't know about the traffic laws. Most of them hardly know about the foot-over bridges. They usually come to the city for their purpose, and most of the time, they are in a hurry. Hence either knowingly or unknowingly they breach the existing traffic laws'.*

The Police Inspectors of both Ramna Model Thana and Newmarket Thana when interviewed, felt the importance of overpass in Dhaka city for ensuring road safety, which would also help to minimize traffic congestion and road accidents. They also agreed with the fact that the existing overpasses are insufficient as per requirement. However, one of them opined that '*overpasses can't be established in each intersection with the existing resource constraints; however the City Corporation and Roads and Highway Department (RHD) can incrementally solve this problem'.* He also added that '*overpasses are being grabbed by hawkers, drug addicts and street beggars as the pedestrians are not using it regularly'*. However, the PI from the Newmarket Thana whereas directly ruled out this kind of allegation and stated that '*DMP is monitoring the overpasses from time to time and so such allegation is baseless*'. It has to be mentioned here that DMP usually takes direct actions against traffic rules violator through arranging mobile courts in different intersections in Dhaka city simultaneously. In those mobile courts, the chief magistrates fine the violators a certain amount of Taka (ranging from BDT 20 to BDT 200). Both of the PIs felt that in the short run, these initiatives work very well; however, in the long run, this won't prove to be effective enough.

They also suggested that it is high time DMP felt the sense of urgency in coordinating with the concerned authority. Although there is a provision of penalty police can't do anything directly against the violators. Regarding monitoring, the OC of Ramna Thana said that '*DMP is monitoring the whole city, but the awareness programs and legal actions are not being taken in all intersections simultaneously owing to the shortage of human resources, technology, logistics and budget. But DMP has long term programs and initiatives for raising social awareness. They use leaflets, miking, posters, TVC etc. to enhance public awareness towards road safety. However, besides the enforcement of laws, social awareness is a pre-requisite for ensuring pedestrians safety; they have to realize the value of their life and also think about the interest of others. Police alone can't ensure road safety unless the politicians, doctors, students and concerned authorities coordinate with them. The awareness building process should start from family followed by school, college and other educational institutions'.*

According to an expert from ARI, traffic rules violation by the pedestrians is the prime cause of road accidents, mainly in Dhaka city. Due to the ignorance of the existing traffic laws by the pedestrians' accidents are taking place in different intersections in Dhaka city. Among the three major factors which he believes are responsible for most of the road accidents in Dhaka city, pedestrians error is the most significant one. In Bangladesh, both drivers and pedestrians have a habit of ignoring traffic signals. Even the traffic police do not follow the actual traffic signals, which allow drivers and pedestrians to break the rules freely. In most cases, it is seen that the traffic police allow the vehicles to move during a "red" signal and stop them during a "green" signal. Thus, the new generation often gets confused about traffic signals and is

becoming habituated to the wrong system. Foreigners are also surprised by seeing this complex system.

ANALYSIS

The findings suggest that the pattern and variation of traffic rules violation by the pedestrians in five distinctive intersections in Dhaka city were quite different. It was found that the pedestrians' facilities (overpass, zebra-crossing), as well as a pattern of violation, vary from one intersection to another. The most significant factor that prompts the pedestrians to non-comply with the existing road safety regulations is the limited number of the overpass. In addition to this, the existing overpasses are not being at a desirable place for the use of pedestrians. Moreover, a typical scenario of the overpasses located at New Market, Farmgate and Shahbag intersection is that they are under the grabbing of hawkers, beggars and drug addicts. The stairs of the overpass near to Shishu Park in Shahbag intersection are under the control of the flower shop owners, which made the overpass narrower for the pedestrians. Furthermore, most of the cars in the Sonargaon intersection were seen to stand on the zebra-crossing during the signal. Lack of security and poor maintenance due to the absence of proper monitoring is also creating crippling conditions for female pedestrians in particular for using the overpass during evening hours. All these factors demotivate the pedestrians and thus force them to use the unmarked crosswalk for crossing the road. From the survey findings, it was found that 51% of the respondents use overpass while only 11% and 38% of the respondents use zebra-crossing an unmarked crossing. The rational choice theory of behaviour explains this phenomenon better, which states that pedestrians are a rational being; they always seek their personal gain or interest. That's why they try not to abide by the traffic rules on behalf of their interests, such as time, energy, and so on.

The study also found that railings on the divider are not that much effective. The pedestrians of New Market intersection were seen using the little gap between railings on the divider for crossing, despite the involvement of high risks. Furthermore, the height of the railing on the divider under the overpass (near Shishu Park) in Shahbag intersection is quite reachable to cross the road. The study found that female pedestrians more often comply with road safety regulation than their male counterparts. Another interesting finding of this study is that higher the level of education of the pedestrians, lower is the tendency to violate the traffic regulations for road crossing.

From the survey findings, it was found that 72% of the respondents are unfamiliar with the existing road safety regulations, whereas only 28% of the respondents were found to be familiar with it. Such a high rate of unfamiliarity with road safety regulations result in the violation of traffic rules. The theory of planned behaviour explains this case. The theory states people' attitude towards the illegal crossing is positive (Diaz 2002). Usually, people are not conscious of existing traffic rules; that's why when they violate traffic rules, they do not consider it as violence. Another comparatively shocking finding from the study is that a good number of respondents were found to violate traffic rules during road crossing due to their mindset, which can be related and explained better with the theory of cultural lag. Although traffic rules have been upgraded, people's minds are yet to cope-up with the existing laws, so, they violate traffic rules. Some of the respondents opine that they violate traffic rules during road crossing seeing

others doing the same. When such an unlawful behaviour gets socially recognized and appreciated, then such behaviour no more is regarded as an unlawful one. Looking glass-self theory explains this sort of behaviour of the pedestrians, which states that people shape their self-concepts based on their understanding of how others perceive them.

Another significant reason for non-compliance with the road safety regulations has been the minimum level of penalty for doing so. Douglas Macgregor suggested that to manage such X people who behave irresponsibly, and strict measures should be there since these type of people like to be directed. While laws exist to fine them for jaywalking, the traffic police are mostly silent observers of these violators and allow them to cross the streets dangerously all the time. Actually, the traffic police have no given authority to fine the violators of traffic rules while crossing the road. No discipline is maintained on the road by drivers, as the law enforcers do not check and take appropriate action against them. The police only check the validity of car documents and driving licenses and are reluctant to check other matters. The traffic police must motivate people and spread awareness about safety issues through various day to day campaigns and programs. A country's development and civility are judged by its road discipline, compliance of traffic rules by pedestrians, road conditions, the status of taxi cabs, public transportation, etc. In Bangladesh, there is minimal road discipline or control, the condition of roads is terrible, and there is a severe lack of pedestrians' facilities.

CONCLUSION AND RECOMMENDATIONS

Improvement of road safety for pedestrians is a multi-disciplinary task and does not occur by itself. Road safety malaises or road accidents are problems that cover different sectors (social, economic and health) which can only be tackled effectively if the state takes a leading role and responsibility with due commitment. There are a plethora of traffic laws for controlling pedestrians' road crossing behaviour and achieving road safety for pedestrians. However, it is a matter of irony that most traffic laws are not in force. Hence the lack of enforcement of traffic laws provides scope to the pedestrians violating the existing traffic laws indiscriminately. There are specific punishable measures against the violators, but even the traffic police themselves don't know about those laws. Therefore to minimize the pedestrians' violation and for compelling them to follow traffic laws, strict enforcement of the existing laws is a pre-requisite. Along with that, some more initiatives have to be taken which include-

- A watchdog body should be established that will monitor the violations from time to time
- Traffic rules and regulations should be monitored from time to time to see whether they are being enforced properly or not
- Existing overpasses should be provided with security provisions, so that female pedestrians do not feel threatened to use those during evening hours.
- The government should take necessary initiatives for increasing the pedestrians' facilities (overpass and escalator) incrementally

- There is an urgent need for improving the existing signal system. During rush hour, the timing of the signal may be increased for more vehicles to pass along, as is the case in other countries
- Proper training and education should be provided to both the pedestrians and law enforcers
- People should be motivated, taught and made habituated to use the foot overpass or zebra-crossing for their safety. Those who violate it should be fined as per rules. Actions against pedestrians who use unmarked crosswalk should be taken on the spot which will make others aware of the consequences of traffic rules violations

Lastly, it can be said that we should focus very seriously to develop an appropriate response to this human-made epidemic, and some essential requirements should be there. Hence, considerable effort is needed to establish a comprehensive data system with valid and reliable data that will help the government to identify the major safety problems in Dhaka city. For this, the government needs to give road safety issue a priority in the policy agenda and work on setting specific targets like other countries (e.g. zero vision in Sweden) as well as monitoring outcomes from time to time. Therefore, institutional and professional capacity must be built both at national and regional levels.

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