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An Assessment of Road Safety Knowledge of Drivers and Community

An Impact Evaluation of the Project Intervention

Polin Kumar Saha

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Acknowledgements

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Abstract

The end line study was initiated by the Research and Evaluation Division of BRAC. Underlying the aim of BRAC road safety programme is to achieve zero fatal road accident; the community centric existing knowledge was evaluated. The end line survey assessed the participants from the community based organisations, community road safety groups, students and drivers of both motor and non-motor vehicles. The respondents of end line survey were same as the baseline study area that had been intervened over one year project duration. The study intended to understand the project impact on individuals and group level knowledge, attitude level of drivers and community members towards achieving road safety. In order to map changes over time between baseline and end-term periods, the end line study included two groups of respondents - intervention (treatment) and control groups. The findings were represented mostly of quantitative nature. The project intervention had achieved positive results in some indicators of road safety awareness; e.g. license and other necessary papers of vehicles, driver training, fitness of vehicles, traffic rules, traffic signs and symbols, and frequency of road accident. On the other hand, the map changes were not found satisfactory in case of obeying the traffic rules and regulations of the drivers, addiction in smoking or drug and the tendency of receiving mobile call during the drive. The students were much aware on traffic rules or other related road safety matters. On the issue, they gathered knowledge from their teachers mostly rather than parents. But the implications of the student knowledge were not seen at the field level. The overall community centric knowledge and awareness on road safety had been increased and, at some individual cases, they moved alone for road safety issues as their proven ownership to maintain the roads at the community level. Finally, the community deserved an administrative support jointly with their efforts in further advancement of road safety.

1. Introduction

Considering the present context of road safety issues in Bangladesh, BRAC road safety programme initiates community centric approach by involving community members, educational institutions and vehicle drivers to increase knowledge and thereby change behaviours to ensure road safety. The programme intervention's underlying goal is to achieve zero fatal road accident by creating awareness campaign. The intervention of the programme launches actions with the aid of different stakeholders with different plans of activities to achieve the intervention's objectives. The programme intervention includes road safety education to the students and teachers for roadside educational institutions; road safety training for motor and non-motor vehicle drivers, training to the community group etc. To attain this goal, programme has taken initiative to make aware by giving training and workshop to students, teachers, both motor and non-motor (rickshaw and rickshaw van) drivers and form a committee named Community Road Safety Programme (CRSP) through different interventions to avert casualty and other kinds of damages.

The study intends to understand the current status of individual and group level knowledge and attitude level of drivers and community members regarding road safety. This study however has some specific objectives to answer the core research question on the ground of which this research stands. Broader objective of the study is to assess road safety awareness of people living beside and using roads in the project areas by involving community with a view to reduce road crashes.

The specific objectives of the study are:

1. Assessment of the level of knowledge, behaviour and partial attitude of motor and non-motor vehicle drivers,
2. Assessment of the knowledge level of students,
3. Assessment of the knowledge of the community people from bazaars, market or common residents.

2. Methods

The study conducted end line survey with the same indicators of baseline survey of the project that were categorised into motor drivers, non-motor drivers and students. The study was carried out in two spots selected randomly out of four areas in the project intervention. The selected spots were in two districts - Sreepur to Barmi Bazar road (approx 9 km) under Gazipur district and Teknaf bus stand to Shamlapur Bazaar (approx 32 km) under Cox's Bazar district. The key findings over the changes had been assessed between the intervention (treatment) and control group of baseline and end line survey in the project area. The data from control group was analysed in parallel with the treatment group to understand the actual impact of project intervention in the project area.

The sampling of the study is shown as follows -

Group	Population Size (Nos)	Sample (Treatment + Control)
Gazipur		
Motor	350	236
Non-motor	350	236
Student (class VI and VIII)	1200	190
Cox's Bazar		
Motor	350	236
Non-motor	350	236
Student	1200	190
Gazipur and Cox's Bazar		
Community people	34 Interviews, 12 observations, 4 FGDs and 4 case studies	

Margin of error 5% and confidence interval at 95%

The study predominantly used quantitative method by taking consideration of describing a few issues as included in survey questionnaire. Since intervention messages and activities are different, instruments is used to collect data from different stakeholders. The status of knowledge and behaviour towards road safety were gathered using survey questionnaire. A qualitative survey questionnaire was administered for assessing mainly knowledge level of the community people with a view to understand the initial phase of group intervention considering socio-demographic information of the local members. Assessment of community people was done qualitatively through focused group discussion (FGD), close observations, case studies and some in-depth interviews that would help to examine how the objectives of group formations were met.

Because of the semi-structured data nature, the raw field data had been edited with necessary clarification and code. After coding all the collected data, data cleaning was also executed finally when the entry had been finished. STATA software was used for quantitative data entry and analysis.

3. Results (Major Findings)

The comparative findings between two periods of studies are shown as follows:

3.1 Assessment of students

3.1.1 Students' knowledge about roads and vehicles

The students were asked about the general characteristics of road and vehicles. An increased numbers of students were aware of the different segments of road and its uses for the vehicles. Regarding the issue, the changes of the student knowledge were found statistically significant over the period. The per cent of students at baseline and end line group was shown in the following table who had knowledge on roads and vehicles (Table 1).

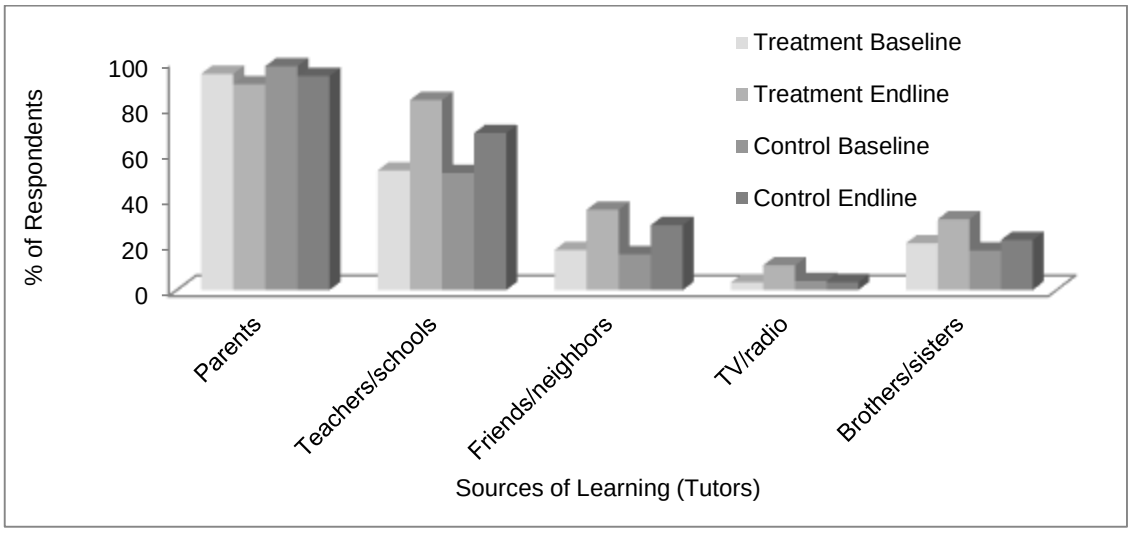
Table 1. General knowledge level on road and vehicles

Indicators and answers	Treatment		Control		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Knowledge about walking space in different segments of the road	88.15	94.10	97.78	79.18	0.000***
Knowledge about vehicle movement through different segments of the road	93.33	95.49	97.78	82.59	0.000***

3.1.2 Student learning on road safety issues

Most of the students learned from their parents on how to walk and cross the road, but this source of teaching decreased over the period. On the issue, an increased trend of students learning from their teachers or schools including friends, neighbours, TV, radio, brothers and sisters was observed (Figure 1).

Figure 1. Student learning on road safety issues



Attending road safety discussion

In the project area, a great portion of the students participated in any of road safety meeting or discussion locally during intervention. In comparing with the baseline, these changes were found statistically significant (p=0.00). The % of students of baseline and end line group was shown in the following table who had participated local meeting or any other discussions on road safety (Table 2).

Table 2. Participation in road safety local meeting/discussion

Indicators and answers	Treatment		Control		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Participation in road safety local meeting/discussion	8.52	88.19	4.44	8.87	0.000***

3.1.3 Traffic signs and symbols

Regarding traffic signs and symbols used in road, the study assessed the knowledge level of the students. In case of specific use of each sign or symbol, the knowledge of the students had increased over the intervention period in project area. Even the students' knowledge on these road signs was changed positively, but all the changes were not statistically significant. In the following table 3, any '*' denoted p value indicated the significant changes of the student knowledge over the period. It was mentioned that the positive changes of the student knowledge were not statistically significant in any case of their practices on these road signs. The % of students of baseline and end line group was shown in the Table 4 who had knowledge on traffic signs/symbols (Table 3).

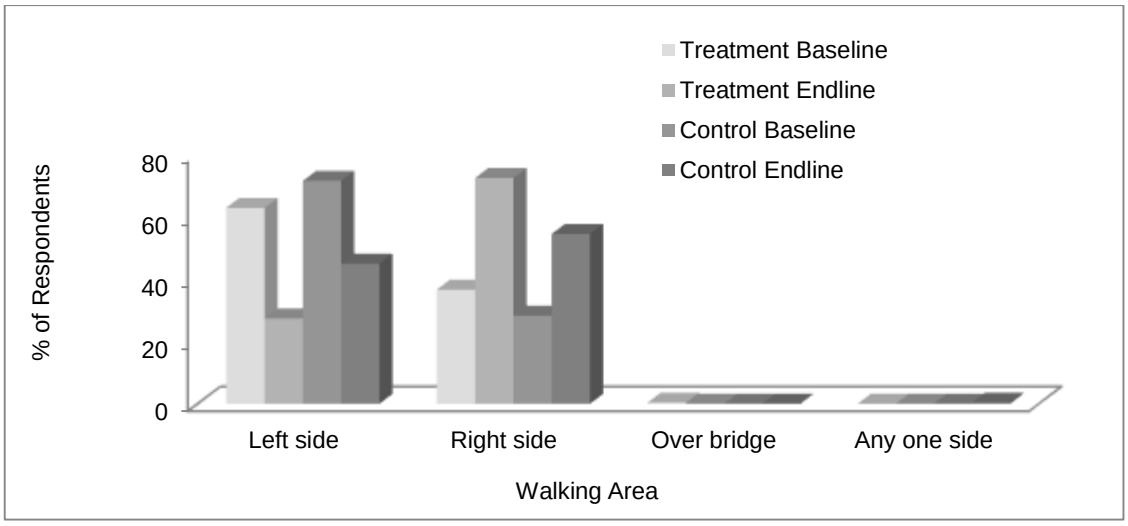
Table 3. Students' knowledge and practices on traffic signs/symbols

Indicators and Answers		Treatment		Control		Diff in Diff
		Baseline	End line	Baseline	End line	P>|t|
Meaning of these signs	Yellow light	26.30	46.53	26.11	31.74	0.014*
		11.48	35.42	16.67	20.82	0.000***
		35.56	59.38	42.22	42.66	0.000***
		67.04	68.06	73.89	65.19	0.101
		43.33	51.39	39.44	35.84	0.062
		44.07	54.51	47.78	35.49	0.000***
Practices of these signs		47.41	63.19	48.89	58.70	0.341
		67.78	69.79	72.78	68.26	0.266

3.1.4 Student practices

About 73% students knew that they should walk on right side of a road when there was no footpath. This right process of their walking was greatly increased after the intervention of the project (Figure 2).

Figure 2. Knowledge regarding walking passage when there is no footpath



Crossing the road

A great proportion of the students thought that they should see around at first during crossing the road. Even, this was a bigger portion of the students, but the trend was decreased over the period while stop, listen and walk in a straight were considered as the increased trend during the project intervention. The % of students of baseline and end line group was shown in the following table who had knowledge on crossing the road (Table 4).

Table 4. Knowing how to cross the road

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Knowing how to cross the road	Find out safe place	49.26	47.22	37.78	38.23
	Stop-See-Listen	55.8	61.34	60.18	57.11
	Walk straight	42.96	43.06	55	42.66

Note: Multiple responses counted

Walking with friends/others

After the project intervention, most of the students (about 82%) knew about a right process of walking on road with their friends and others. On the road, they followed one by one when walk in a group. The % students of baseline and end line group were shown in the following table who had knowledge on walking process with others (Table 5).

Table 5. Knowing how to walk with friends/others

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Knowing how to walk with friends/others	Side by side	40.74	26.74	37.78	52.90
	One followed by one	64.81	82.29	62.22	53.58
	Don't know	-	0.69	-	0.34

Safe road sides for crossing

Most of the students knew increasingly over the intervention period that there were some safe sides of a road which through they should cross the road. These locations were included in the following table including the highest about 59% students preferred "Zebra crossing", indicated on a road, for their safe crossing. The % of students of baseline and end line group was shown in the following table 6, who had knowledge about safe crossing (Table 6).

Table 6. Safe road sides for crossing

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Which road places are safe for crossing	Points far from the junction of three or four roads	12.22	24.65	13.33	16.72
	Points far from the bend	16.67	18.75	21.67	20.14
	Points far from the standing vehicle	22.59	26.39	15.00	25.94
	Zebra crossing	49.26	59.03	68.89	43.34
	Don't know	17.41	12.15	7.22	19.45
	Over bridge	12.59	17.71	16.11	20.82

Note: Multiple responses counted

Engaging people in reducing road accident

Based on the students' perception, the study identified the different category of road users who should be aware first to reduce road crashes. Among these categories, students were the first preference while the priority for others would be pedestrians, children, drivers, all people and business man. All of these priorities were in the increased trend over the period except all people and drivers while these were decreased according to the student comments (Table 7).

Table 7. Earlier awareness of the people in reducing road accident

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Who should be aware first in reducing road accident	All	44.81	34.38	45	31.74
	Pedestrians	50.37	55.56	56.11	56.31
	Older people	15.19	25	15	16.38
	Children	42.22	53.13	45	36.52
	Students	52.96	72.92	64.44	60.75
	Business man	2.96	9.03	6.11	3.07
	Drivers	71.85	52.43	75.56	56.66

Analytical summary of student assessment

In general, the road safety knowledge of the students was increased with most of the indicators of knowledge assessment, i.e. road dividers, vehicles, traffic signs/symbols, use of footpath, crossing road and walking in a group. After the project intervention, students have changed mindsets to their tutors where they are used to learn road safety knowledge. In making awareness of the people, students were found more concerned on road safety knowledge than before where the concerning issue is about the respective group of people who should be aware of road safety knowledge.

In comparing between the treatment and control group, the changes of treatment group are significant in most of the cases for similar development trend. Regarding the road safety issue, the particular groups of student respondents were trained up through schools and the community people, so that the knowledge status of these students were found at satisfactory level compared to the control group of respondents. In some specific cases, the results were interesting to find with the increased level of student knowledge throughout the project intervention. For example, teachers or schools were found as the most important tutors of the trained students whereas their parents were most significant to them at beginning of the project. More examples: when the students were not trained up, mostly found in their walking on left side on road, didn't know how to cross the road safely and, on walk in side by side in a group. All of these unsafe processes of the student knowledge had been improved and assessed positively at the end line period of evaluation, since the majority of the student respondents participated at local/meeting or attended in class discussion on road safety issues.

Effects of the project intervention

The outcome of the project was accomplished throughout several initiatives of the project intervention among the teachers and students in some selected schools. To make aware of the students on road safety issues, the intervention initially completed one full day workshop and two days training for head teachers and assistant teachers respectively. These trained teachers then delivered their road safety knowledge to the students with some extracurricular activities, i.e. quiz test, rewarding students, or other interactive sessions among students in the class. As the impact of these interventions, the study noticed an example that most of the students (about 90%) got full marks of the quiz test on road safety issues.

3.2 Assessment of the non-motor drivers

3.2.1 Vehicle, license and training

In case of non-motor vehicles in the project area, Rikshaw was more popular than the Rikshaw-van while the Rikshaw was increased over the period (Table 8).

Table 8. Type of vehicles and ownership

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Types of vehicle	Rikshaw	87.11	94.96	83.92	80.17
	Rikshaw-van	12.89	5.04	16.08	19.83
Ownership of the vehicle	Own	63.67	71.85	47.84	50.63
	Samity	0.39	0	0	0.42
	Others' ownership	21.48	18.07	28.24	31.22
	Garage	14.45	10.08	23.92	17.72

The Table 10 showed that self ownership of their vehicles had been increased from the baseline period whereas, other personal ownership and garage ownership were decreased over the period.

License and training

The respondents were more aware about their license and training during survey. About 31% respondents had license for their vehicles which was increased from the baseline period. Among these license holders, about 81% held with the self ownership. Most of the drivers (about 96%) got training during the intervention of the project and this increasing trend of receiving training had been changed significantly over the period (Table 9).

Table 9. License and training

Indicators and answers	Treatment (% of respondents)		Control (%of respondents)		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Have license	28.13	31.09	22.35	14.77	0.051
Ownership of license	77.78	81.08	38.6	42.86	0.937
Get training for safe driving	0.39	95.80	1.18	5.91	0.000***

3.2.2 Checking and fitness of vehicles

In case of checking vehicle before start driving, drivers' checking status was in the better condition with some of the parts of vehicles, e.g. wheel, wheel pump, bell, chain and fork; but the checking of brake and bearing were decreased over the period of intervention. The % of respondents of baseline and end line group was shown in the following table who had checked vehicle parts before starting drive (Table 10).

Table 10. Checking vehicle parts before starting drive

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
What things should be checked out before start driving	Wheel	78.13	87.39	70.2	87.34
	Brake	84.77	78.57	85.88	80.17
	Wheel pump	76.56	86.97	89.02	81.43
	Bell	43.36	53.36	33.33	59.07
	Chain	57.81	64.71	71.76	68.35
	Don't know	-	0.42	0.39	0.42
	Bearing	31.64	26.89	25.88	33.33
	Fork	16.02	16.39	20	13.08
	Battery	-	2.1	-	-

Note: Multiple responses counted

Keeping vehicle papers

In case of carrying vehicle papers during driving, drivers' carrying tendency to the papers was increased with the driving license, tax token and national ID; but a great portion of the respondents (about 23%) did not know about the papers what they should carry with them during drive, even this type of respondents were decreased over the period (Table 11). The % of respondents of baseline and end line group was shown in the following table who carried vehicle papers with them during the drive.

Table 11. Carrying vehicle papers during the drive

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
What papers should be kept during driving	Legal license	66.02	73.11	68.24	54.01
	Tax token	8.59	11.34	6.67	10.13
	Don't know	26.95	23.11	24.31	37.55
	National ID	1.56	4.2	7.45	6.33
	Mobile No.	-	0.42	0.39	0.84

Note: Multiple responses counted

3.2.3 Traffic signs and symbols

Regarding traffic signs and symbols used in road, the study assessed the knowledge level of the respondents. In case of specific use of each sign or symbol, the knowledge of the respondents had been increased over the intervention period in project area. Even the drivers' knowledge on these road signs was changed positively, but all the changes were not statistically significant. In the following table, any '*' denoted p value indicated the significant changes of the driver knowledge over the period. It was mentioned that the positive or negative changes of the driver knowledge were not statistically significant in any case of their practices on these road signs (Table 12). The % of respondents of baseline and end line group was shown in the following table who had knowledge on traffic signs and symbols.

Table 12. Drivers' knowledge and practices on traffic signs/symbols

Indicators and answers		Treatment		Control		Diff in Diff
		Baseline	End line	Baseline	End line	P>|t|
Meaning of the signs		3.52	26.05	10.98	14.77	0.000***
		0.78	14.71	0.78	6.75	0.005**
	yellow light	15.63	33.61	9.80	40.08	0.019*
		4.30	29.41	7.45	26.58	0.186
		-	14.71	0.78	6.75	0.002**
		16.41	42.62	23.92	32.49	0.003**
		19.92	34.03	29.41	21.10	0.000***
		57.42	59.66	56.47	48.10	0.094
Practices of these signs		36.33	44.54	24.31	34.60	0.730
		10.16	33.19	9.41	27.43	0.306
		12.50	37.39	16.86	35.02	0.209
		41.80	38.24	41.96	33.33	0.415
		2.73	23.11	4.71	22.36	0.508

3.2.4 General driving practices and accident related issues

The study assessed the drivers' general knowledge on the acceptable driving speed in highway and use of lane for driving. In comparing between baseline and end line periods, drivers' knowledge on those issues had been increased over the intervention period; but these changes were not statistically significant except regarding the knowledge of bus speed in highway and local town. The % of respondents of baseline and end line group was shown in the following table who had knowledge on vehicle speed and lane (Table 13).

Table 13. Drivers' general knowledge on speed in highway and lane

Indicators and answers	Treatment		Control		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Bus speed in highway	0.39	2.52	1.18	0	0.010**
Truck speed in highway	0.78	2.94	0.39	0.42	0.111
Bus/Truck speed in local town	0.78	7.56	1.18	0.84	0.000***
Why road is divided by lane?	31.64	50.00	40.39	48.95	0.117
How many lanes exist in a road	58.98	73.11	61.57	74.68	0.865

Practices in highway

The respondents' driving in highway had been significantly increased during the intervention period. The drivers' tendency to use of light at night was slightly decreased over the time while their right process of driving in a roundabout was significantly increased from the baseline period. Victim in road accident was almost unchanged during the project intervention (Table 14).

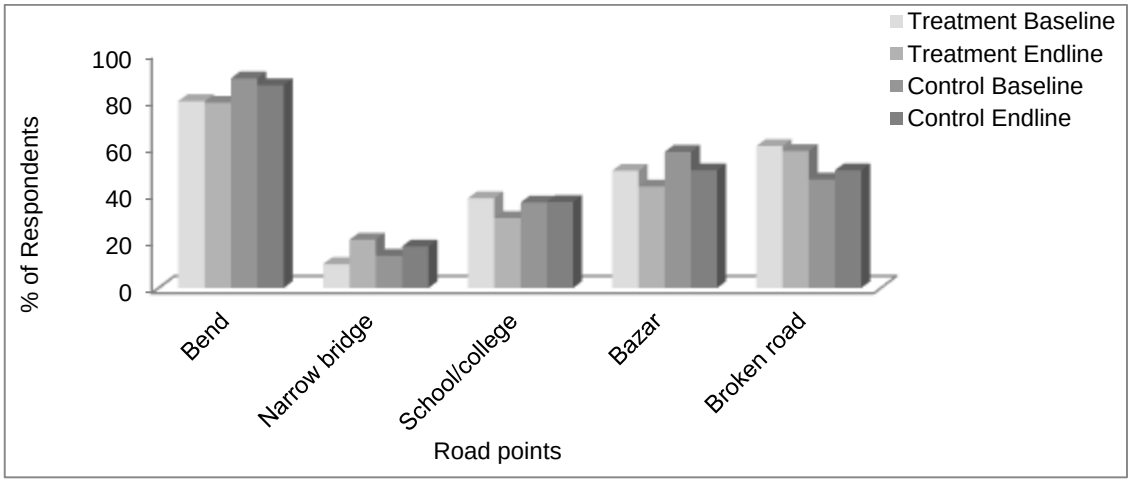
Table 14. Some practices on highway

Indicators and answers	Treatment (% of respondents)		Control (% of respondents)		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Driving in highway	17.58	61.34	76.47	83.54	0.000***
Use of light at night during drive in highway	100.00	98.32	100.00	98.73	0.698
How to drive in a roundabout	53.52	66.81	68.63	64.56	0.005**
Victim in road accident	25.00	25.63	29.02	30.38	0.898

Risky road points

According to the respondents, the study found that the narrow bridge was increased as the risky road points for stimulating road accidents. On the other hand, bend, school and college, Bazar and broken road were considered as the decreased trend of road accidents matters (Figure 3).

Figure 3. Risky road points where accident usually occurs



Reasons of road accident locally

In case of identifying the reasons of road accident, an increased number of the respondents thought that the peoples' ignorance of rules of walk was the main reason for road accident. The second important cause was about the lack of walking space beside a road. The non-motor drivers interestingly gave a less important to high speed as the cause of road accident. The % of respondents of baseline and end line groups was shown in the following table, who were aware of road accident in their places (Table 15).

Table 15. Reasons of road accident locally

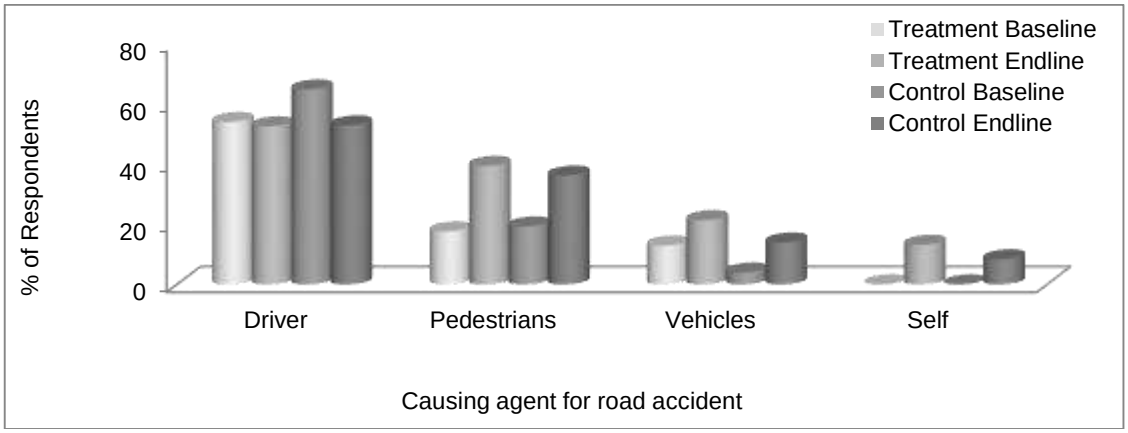
Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Reasons of road accident locally	Don't know the rules of walk	49.61	61.34	52.94	60.76
	Careless driving	33.59	43.28	47.45	46.41
	Don't know the rules of crossing road	22.66	37.82	38.04	37.13
	No walking space beside road	36.33	44.12	27.45	39.66
	Drying home appliances on road	0.39	13.87	2.75	16.88
	High speed	42.58	35.29	62.75	45.15

Note: Multiple responses counted

Liabilities for road accidents

Most of the respondents blamed to other drivers for road accidents, but this blaming was decreased over the period of intervention where self blaming had been increased after the intervention. Blaming to pedestrians and vehicle fitness were also increased during intervention (Figure 4).

Figure 4. Blaming others for road accident



Reasons of blaming for road accident

In case of blaming others, an increased trend of the respondents thought that the driving without maintaining rules was caused by them. The second important cause was about the carelessness of the drivers which was greatly increased over the period of intervention (Table 16).

Table 16. Reasons for blaming

Indicators and answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
Reasons for blaming them	Drive without maintaining rules	11.33	52.46	8.24	14.75
	Drive without knowing rules	5.08	6.56	14.12	19.67
	Carelessness of drivers	1.17	39.34	1.57	9.84
	Pedestrians don't know the rules	18.36	1.64	22.75	34.43
	Carrying excess goods/passenger	2.73	21.31	1.96	1.64
	High speed driving	38.28	8.20	28.24	36.07
	Untrained driver	3.13	-	10.20	6.56
	More vehicles	1.56	13.11	1.96	-
	Broken road	12.89	3.28	4.31	4.92

Note: Multiple responses counted

Analytical summary of non-motorised vehicle drivers

In general, the road safety knowledge of the non-motor drivers was increased in some specific areas of road safety issues, i.e. routine checkup of vehicles, keeping vehicles papers, traffic signs/symbols, and road lane and dividers. Non-motor drivers were found with an increased trend of their vehicle ownership and license over the intervention period. The respondents were aware of the risky spots of a road and the reasons as why the road accidents occurred in their locality. It was true that the non-motor drivers had changed their attitude in learning road safety knowledge, but their practices of road safety rules and regulations were not found at satisfactory level.

In comparing between treatment and control groups, the respondents were found as same as they had been victimised in road accident over the project intervention. This trend indicated that the outcome of project intervention had no positive influence over the respondents. But this condition was better than the control group, since the

victimised respondents of this group had been increased slightly from the baseline period. The changes of treatment group were not always positive and significant statistically. For example, the respondents were found more in driving on highway than the baseline period, even they were much aware of road safety issues after intervention. Project intervention influenced the respondents to have their license during driving and their tendency in getting license had been increased over the period. Positive changes also found in case of ownership of their vehicles. It observed that the economic condition of the respondents was better than before. The traffic signs were not used on the local roads; that is why, the respondents were not familiar with those symbols, even they knew better of these signs compared to before and control group as well. Regarding speed limit of different types of vehicles on highway, the knowledge of the respondents had slightly been increased while most of them were still unaware of the vehicles' speed on local road, or highway. Basically, this was happened to the respondents, because, their perception was found in a way that the bus-truck speed limit was not their concern rather than the regular drivers of these vehicles. Driving on highway of the non-motor drivers had been increased which was alarming indeed in the road safety issues. They did not care about the rules of their driving on highway while the tendency of more income probably existed as a reason behind violating these rules. Most of the respondents had emphasised on ignorance of traffic rules of the people which was a main reason of road accident in their locality. High speed was considered to them as a less significant causal effect on road accident locally. Overall, the non-motor drivers found with their thoughts that the traffic rules-regulations and its continuous applications should be a great concern to get the success of the road safety issues.

Effects of the project intervention

The outcome of the project was accomplished throughout several initiatives of the project intervention among the non-motorised drivers and community. In the project intervention, some CRSGs (Community Road Safety Group) had been formed initially who ultimately selected the non-motorised drivers in making them aware of the road safety issues. The CRSG groups were also given training on road safety issues for a long day. Community people closely interacted with the Rickshaw or Rickshaw-van puller in some ways of operating different activities regularly. All the selected drivers were given a reflective sticker for driving at night, so that the vehicles attached with these stickers could be identified from a distance. The knowledge of the non-motorised drivers had also been influenced positively with the support of other CBOs (Community Based Organisation) and NGO leaders in the project areas. In this regard, these types of community people also received training and workshop initiated by the project team.

3.3 Assessment of the motor vehicle drivers

3.3.1 Why driving profession

In case of coming in driving profession, drivers' motivational sources had been changed over the intervention period. Drivers now get more inspiration from their relatives and local people compared to the baseline while family members and self driven factors were found as the key sources of their overall motivation to come in this profession (Table 17).

Table 17. Sources of motivation to come in driving profession

Indicators and answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
Sources of motivation to come in driving profession	Family	44.26	32.77	38.14	28.69
	Relatives	11.06	27.31	8.05	24.05
	Local people	8.51	21.01	10.17	23.63
	Self	34.04	19.33	43.22	21.10
	Friend	2.13	0.42	0.42	0.84
	Ostad	-	0.42	-	1.69

Note: Multiple responses counted

Reasons for coming in driving profession

After intervention in the project area, the study found that the key opportunity of the driving profession were instant income and job independency as considered by them as the main reasons for coming in this profession. Even these factors were also the important reasons to the drivers before the intervention period (Table 18).

Table 18. General reasons for coming in driving profession

Indicators and answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
General reasons for coming in driving profession	More income	-	33.61	-	26.16
	To get rid of unemployment	11.49	-	13.98	-
	To get instant income	34.04	60.92	27.97	55.27
	To be settled, getting no opportunity in other income	10.64	-	7.63	-
	To be with freedom	20.43	35.71	14.83	35.71
	Self satisfaction	12.34	-	9.32	-
	Poverty	10.64	-	15.25	-

Note: Multiple responses counted

3.3.2 Vehicle, license and training

CNG driven vehicles were increased rapidly during intervention in the project area. Most of the drivers drive CNG types of vehicles; even they drove other types of vehicles (e.g. auto rickshaw, bus) before the intervention period. But over the period, the CNG vehicles had been decreased in the control area (Table 19).

Table 19. Types of motor vehicles of the respondents

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Types of vehicles	CNG	59.15	97.06	60.17	27.43
	Auto Rikshaw	25.53	0.42	20.34	-
	Bus (long route)	8.09	2.1	0.85	8.44
	Bus (local)	7.23	-	18.64	27.85
	Chander gari	-	-	-	2.53
	Microbus	-	0.42	-	0.84
	Truck	-	-	-	30.8
	Kavard van	-	-	-	1.27
	Pick-up	-	-	-	0.84

Ownership of vehicle and process of training

In the project intervention area, self ownership of the vehicles remained almost unchanged over the period. Company vehicles had been increased slightly while the leased vehicles were decreased by 4% roughly (Table 20).

The study found the BRTA (Bangladesh Road Transport Authority) and broker which were the ways of getting license of the drivers. These ways of managing license had been increased over the period where the respondents without having licenses had been drastically fallen in the period of intervention.

Drivers had preferably choices on *Ostad* for taking their first lessons of driving. Compared to the baseline, this choice had been greatly increased at time of project intervention while other trainers of the respondents like helper, trained driver and cousin had been decreased over the period.

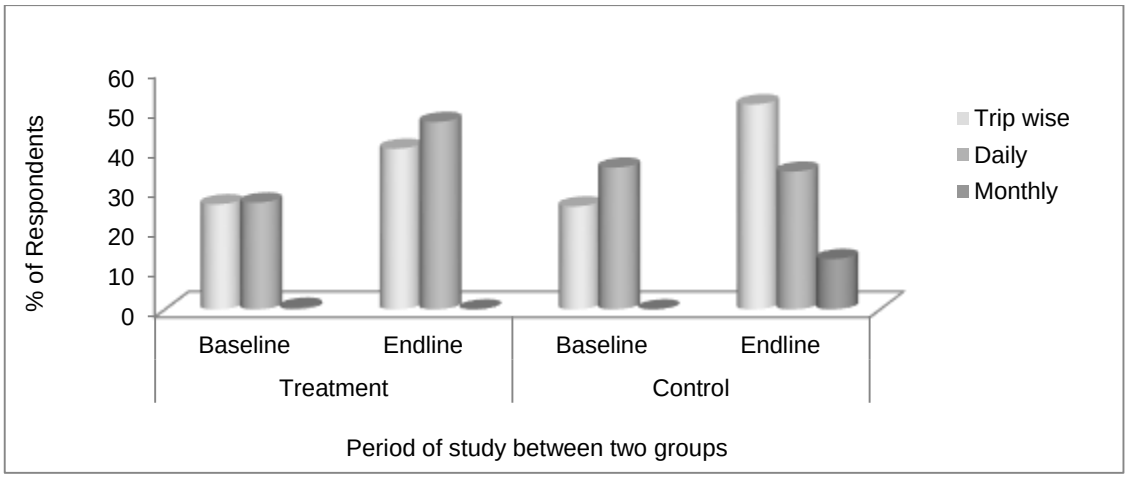
Table 20. Ownership of vehicles

Indicators and Answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	End line	Baseline
Ownership of vehicle	Self	47.23	46.64	39.83	15.19
	Company	1.28	5.88	2.97	13.08
	Lease	51.49	47.48	57.2	71.73
The process of getting license	Exam through BRTA	18.72	57.14	28.81	82.58
	Broker	1.28	35.71	0.85	16.77
	No license	80	7.14	70.34	-
	Ostad	-	-	-	0.65
Received lessons of driving from-	*Ostad*	65.96	85.29	75.42	64.14
	Helper	16.17	5.04	13.98	32.91
	Trained driver	5.96	7.56	-	3.80
	Cousin	5.53	2.10	3.39	1.27
	Others	6.38	2.1	7.21	1.26

3.3.3 Trip, earning money and rest

The motor drivers earned money in two ways mostly e.g. trip-wise and daily basis, and these earning systems had been increased over the year of project intervention (Figure 5).

Figure 5. Different ways of earning money from driving



Reasons for additional trip

Drivers think about the spending more time in driving beyond their as usual schedule daily. As the reasons, they focused on additional income within the extra time spent for their driving. But their perception on this matter had been decreased slightly over the period while other factors (e.g. treatment expenditure, loan repayment, buying special something etc) had been increased from the baseline period (Table 21).

Table 21. Reasons for additional trip with the vehicles

	Indicators and answers	Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
Why to think for additional trip	In case of sickness of family members	9.69	14.05	3.05	19.50
	To buy something special for family members	21.94	33.51	10.98	39.62
	To repay loan	23.98	34.59	21.34	27.04
	To start with any business	2.04	3.24	4.88	5.03
	Force from vehicle owner	2.04	3.24	74.39	16.98
	For additional income	80.1	75.68	1.83	61.64
	To repay installment for buying vehicle	-	-	-	1.26
	Pressure of passenger	-	1.62	-	-

Note: Multiple responses counted

Daily rest time of drivers

Most of the drivers said that they should take rest around four hours a day while almost all of them were flexible in taking their rest during the whole day with the vehicles. The

deserved rest time had been increased over the intervention period. The % of respondents of baseline and end line group was shown in the following table, who raised their points of view of taking rest everyday (Table 22).

Table 22. Rest time of the respondents

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Should take rest in a day (hr)	1-2	40.00	2.52	33.47	4.64
	>2-3	36.17	1.26	48.73	9.28
	>3-4	19.15	1.26	16.53	5.06
	4+	4.68	94.95	1.27	81.0
	Average time	2.86	8.21	2.79	7.18
Average rest time per day (hr)	1-2	49.36	2.1	70.76	6.33
	>2-3	28.51	2.1	19.92	1.27
	>3-4	16.60	5.04	5.51	3.8
	4+	5.53	90.74	3.81	88.61
	Average time	2.61	7.84	2.15	7.70

3.3.4 Traffic laws, signs and symbols

The study assessed on ten road safety rules which were violated by the drivers during driving. The per cent of respondents aligned with the violating ten rules of road safety issues was mentioned in the table where all the rules were being violated more than the baseline period. Among all the rules of violations, drivers mostly ignored the permissible speed limit in the respective road. The next prioritised violation was synchronised in case of carrying excess passengers, crossing the road, keeping license, parking, carrying goods, keeping other papers except license and maintaining insurance (Table 23).

Table 23. Status of not possible to obey the specific rules

Indicators and answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
Status of not possible to obey the specific rules	Speed under limit	46.38	63.45	47.03	64.14
	No carry of extra goods	10.21	21.01	13.56	34.6
	No carry of extra passengers	44.26	44.12	37.29	40.08
	No illegal crossing	4.26	34.03	13.14	30.8
	No illegal parking	10.21	23.53	13.98	20.68
	Keeping license	39.57	32.35	39.83	22.36
	Insurance	4.68	8.4	4.66	9.28
	Necessary papers	14.47	13.45	12.29	15.61
	Seat belt	9.79	6.72	8.05	5.91
	Using mobile phone	45.53	41.18	50.42	41.35

Note: Multiple responses counted

Reasons of not obeying the rules

As the reasons for not obeying the road safety rules, the study found a tendency of the respondents mostly to their access of additional trip. To take this advantage, drivers violate most of the rules on road. Among other reasons, carrying extra passengers for extra money, urgent phone call, costing of license and passengers' force were greatly

raised by the voice of the respondents and all of these reasons were increased from the baseline period except receiving phone call during drive (Table 24).

Table 24. Possible reasons of not obeying the rules

Indicators and answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
Reasons for not possible to obey the rules	Lack of arrangement for using seat belt	10.21	-	8.05	-
	Getting license is expensive	27.23	34.45	24.58	29.54
	Necessity to receive urgent mobile call	45.96	35.29	49.58	40.08
	Keeping papers is useless	10.64	-	5.93	-
	In advanced of taking serial	18.3	53.78	13.14	40.51
	Passengers' force in increasing speed	17.45	33.19	24.15	33.33
	Carrying extra passengers to earn extra income	27.23	39.92	22.46	34.6
	Urgent need	-	1.68	-	1.69

Note: Multiple responses counted

Drivers' knowledge regarding punitive action for violating traffic rules

The study assessed the drivers' knowledge on punishments of the respective road safety rules. In comparing with the baseline findings, the study observed the increased level of driver knowledge as they perceived in all the specific rules over the period. But all the changes were not statistically significant due to the intervention in project area. Considering the significance level of the changes, the study found five rules of road safety issues which were mostly perceived by the respondents, e.g. unlimited speed, not maintaining insurance, not maintaining necessary papers except license, not using seat belt and receiving phone call during drive. The % of respondents of baseline and end line group was shown in the following table, who had knowledge about the punishment when violate rules (Table 25).

Table 25. Drivers' knowledge about the respective punishment when they violate the traffic rules

Indicators and answers		Treatment		Control		Diff in Diff
		Baseline	End line	Baseline	End line	P>|t|
Drivers know about the respective punishment when they violate the rules	Unlimited speed	65.96	95.38	74.15	89.03	0.003**
	Carrying excess goods	74.89	92.02	74.58	87.34	0.372
	Carrying excess passengers	79.15	92.02	80.51	86.92	0.165
	Illegal crossing	73.19	92.44	81.36	94.09	0.146
	Illegal parking	72.34	90.34	80.08	94.09	0.388
	Not keeping license	90.64	98.74	92.8	100.00	0.733
	Not maintaining Insurance	40.85	85.71	67.37	89.45	0.000***
	Not maintaining necessary papers	88.09	97.48	93.64	94.51	0.008**
	Not using seat belt	17.02	68.49	39.83	78.06	0.021*
	Using mobile phone	68.09	87.82	80.08	89.87	0.044*

Note: Multiple responses counted

Knowledge on traffic signs/symbols

Regarding traffic signs and symbols used in road, the study assessed the knowledge level of the respondents. In case of specific use of each sign or symbols, the knowledge of the respondents had been increased over the intervention period in the project area. But in reality, almost all of these changes were not statistically significant except a symbol regarding 'side road' (denoted as * of p value in table). That means the drivers were more familiar with this symbol in driving in the road. The % of respondents of baseline and end line group was shown in the following table, who had knowledge traffic signs and symbols (Table 26).

Table 26. Drivers' knowledge on traffic signs/symbols

Indicators and Answers	Treatment		Control		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
	15.74	34.45	14.41	29.11	0.460
	5.11	20.17	4.66	17.30	0.556
What is the meaning of yellow light	28.94	63.03	37.71	64.56	0.242
	36.60	55.46	40.25	60.76	0.797
	7.23	19.75	9.32	20.25	0.724
	75.32	83.61	81.36	83.12	0.202
	76.17	86.13	77.12	85.65	0.777
	3.83	14.71	2.97	18.14	0.258
	28.09	48.74	40.68	46.41	0.019*
	77.02	84.45	83.05	83.12	0.141
	61.70	76.89	66.10	73.84	0.210
	51.06	59.66	51.27	56.96	0.653
	38.30	69.33	35.17	65.40	0.897

3.3.5 Checking and fitness of vehicles

In case of checking vehicle before start driving, drivers' checking status was in the better condition with some of the parts of vehicles, e.g. wheel, light, battery and engine; but the checking of brake, gear and dash board were decreased over the period of intervention (Table 27). The % of respondents of baseline and end line group was shown in the following table, who were used to check vehicle parts before start driving.

Table 27. Checking vehicle parts before start driving

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
What things should be checked out before start driving	Wheel	91.06	94.12	87.71	94.09
	Brake and gear	93.19	84.87	92.37	91.56
	Light	30.21	45.8	42.8	43.04
	Battery	42.13	43.28	32.63	43.04
	Engine	81.28	85.29	84.75	91.56
	Dash board	3.83	1.26	2.54	8.02

Note: Multiple responses counted

Keeping vehicle papers

In case of carrying vehicle papers during driving, drivers' carrying tendency to the papers was increased with the driving license and blue book; but the carrying of tax token, fitness certificate and insurance certificate were decreased over the period of intervention (Table 28).

Over the findings, the study observed that license and blue book were considered as the most important paper to the respondents. Because, most of the time these papers were checked by administrative authority during the drive. As per respondents, polices usually file a court case when they don't get mainly license and blue book from respondents. That is why, the respondents preferred to carry these papers with them rather than keeping other papers, e.g. tax token, fitness papers etc. The % of respondents of baseline and end line group was shown in the following table, who had knowledge about vehicle papers (Table 28).

Table 28. Carrying related papers during driving

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
What papers should be carried during driving	Legal driving license	82.55	85.29	80.51	90.3
	Registration/blue book	45.96	56.3	51.27	73.84
	Tax token	30.64	25.63	33.47	42.62
	Fitness	41.7	34.87	50.85	50.63
	Insurance certificate	31.49	26.89	34.75	44.73
	Rout permit	57.87	34.87	61.44	56.12
	Don't know	2.13	5.46	1.27	1.69

Note: Multiple responses counted

3.3.6 General driving practices and accident related issues

The study assessed the drivers' general knowledge on the acceptable driving speed in highway, use of lane and driving in a roundabout. In comparing between baseline and end line periods, drivers' knowledge on those issues had been increased over the intervention period; but these changes were not statistically significant except regarding the knowledge of truck speed in highway. The % of respondents of baseline and end line group was shown in the following table, who had knowledge about vehicle speed and road lane (Table 29).

Table 29. Drivers' general knowledge on driving issues

Indicators and answers	Treatment		Control		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Bus speed in highway	6.38	7.98	6.78	11.39	0.397
Truck speed in highway	4.68	7.14	3.81	13.50	0.031*
Bus/Truck speed in local town	11.06	19.75	12.29	24.89	0.418
Why road is divided by lane?	48.09	72.69	60.59	76.37	0.146
How many lanes exist in a road	74.89	92.44	85.17	96.62	0.148
How to drive in a roundabout	59.57	72.69	63.56	74.68	0.742

Practices of road safety issues

During drive, drivers' practices on smoking, addiction and receiving mobile call were increased after the intervention in the project area, but these changes were not statistically significant. On the other hand, respondents were fewer victims in road accident over the intervention period and this per cent of the respondents was significantly decreased. The % of respondents of baseline and end line group was shown in the following table, who had knowledge about some safety issues on a road (Table 30).

Table 30. Drivers' practices on some road safety issues

Indicators and answers	Treatment		Control		Diff in Diff
	Baseline	End line	Baseline	End line	P>|t|
Smoking habit	59.57	71.01	66.95	70.04	0.172
Other addiction	2.13	5.88	0.42	4.22	0.986
Addiction as the reason of accident	91.06	97.06	88.56	95.78	0.707
Mobile call during drive	88.51	92.86	92.37	91.14	0.130
Physical sickness as the reason of road accident	98.72	97.48	100.00	97.05	0.307
Victim in road accident	28.94	21.43	24.58	33.76	0.004**

Knowledge regarding risky road points/zones

According to the respondents, the study found that the bend and narrow bridge were increased as the risky road points for stimulating road accidents. On the other hand, school and college, Bazar and broken road were considered as the decreased trend of road accidents matters (Table 31). The % of respondents of baseline and end line group was shown in the following table, who were aware of risky road points for an accident.

Table 31. Various locations of road are vulnerable for road accident

Indicators and answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Various places of road are risky to road accident	Bend	82.55	89.5	94.07	85.65
	Narrow bridge	22.13	26.05	31.78	27.85
	School/college	60.85	41.6	54.66	51.05
	Bazar	68.94	60.08	77.12	56.12
	Broken road	10.64	0.84	8.05	0.42

Note: Multiple responses counted

Drivers' sudden mistake to accelerate road accident

In accelerating road accident, drivers' mistakes were considered as the decreased trend over the period, e.g. increasing speed, carrying excess goods and passengers, using mobile phone during drive. On the other hand, the increased trend of the respondents thought that overtaking and lack of regular checking of vehicle parts were drivers' mistakes in accelerating road accidents. The % of respondents of baseline and end line group was shown in the following table, who were aware of drivers' mistakes for road accident (Table 32).

Table 32. Drivers' mistakes in accelerating road accident

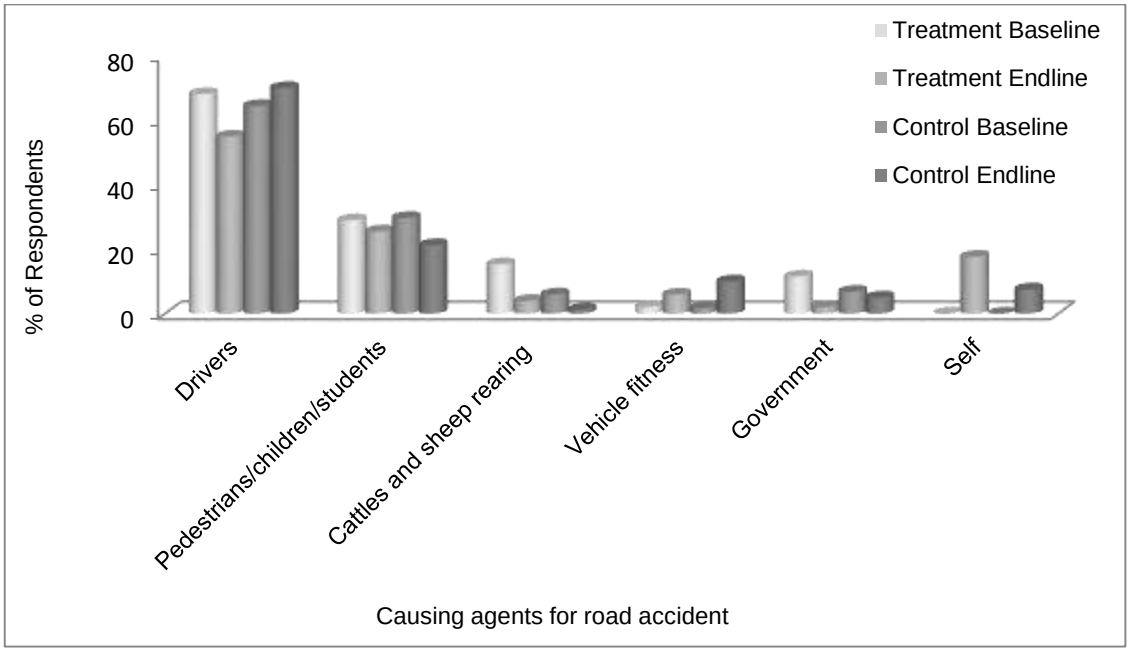
Indicators and Answers		Treatment		Control	
		Baseline	End line	Baseline	End line
Drivers' mistakes in accelerating road accident	Increasing speed	69.79	66.81	74.15	68.35
	Carrying excess goods and passengers	27.23	25.63	13.56	28.27
	Overtaking	71.06	76.47	67.37	72.57
	Lack of regular check of vehicles	16.17	21.01	19.92	23.21
	Using mobile phone during drive	13.19	4.62	12.29	4.64
	Others	5.54	-	10.17	-

Note: Multiple responses counted

Blaming others for road accident

Most of the respondents blamed to other drivers for road accidents, but this blaming was decreased over the period of intervention where self blaming had been increased after the intervention. Blaming to vehicle fitness was also increased during intervention (Figure 6).

Figure 6. Blaming for road accident



Reasons of blaming others

In case of blaming others, most of the respondents thought that the high speed was caused by them. The second highest cause was the driving without maintaining rules and regulations which was greatly increased over the period of intervention (Table 33).

Table 33. Reasons for blaming others

Indicators and answers		Treatment (% of respondents)		Control (% of respondents)	
		Baseline	End line	Baseline	End line
Reasons for blaming them	Don't know the rules on walk or crossing the road	28.09	15.69	30.51	17.50
	Careless driving	2.98	13.73	5.93	13.75
	Cattles are on road	17.87	3.92	7.20	1.25
	High speed	29.36	29.41	24.58	27.50
	Vehicle fitness	8.94	11.76	3.39	13.75
	Drive without maintaining rules	14.89	27.45	18.22	16.25
	No repairing broken road	14.89	3.92	5.08	3.75
	During overtaking	6.38	3.92	4.66	12.50

Note: Multiple responses counted

Analytical summary of the motor driver assessment

In general, the road safety knowledge of the motor vehicle drivers was increased in some specific areas of road safety issues of project intervention, i.e. routine checkup of vehicles, vehicles papers, traffic signs/symbols, speed limits, and road lane and dividers. The respondents were aware of the risky spots or zones of the road and the reasons as why the road accidents occurred in their locality. The motor drivers had changed their attitude in learning road safety knowledge, but their practices of road safety rules and regulations were not found at satisfactory level on road.

In the project areas, CNG driven three-wheelers were found as the prime motor vehicles for survey. Therefore, the findings were based on the information of driver for light motor vehicles rather the heavy motor vehicles. But the major vehicles of control group were buses. As a result, the comparison between two groups was not realistic with some measuring indicators. However, an interesting thing was mostly observed that the tendency of getting license was tremendously improved among the motor drivers. That was meant that the project intervention made them aware of road safety issues including their vehicle license. Throughout a project intervention, their licenses were obtained through BRTA examination which was found as an increased trend from the baseline period. But the driving training conducted by traditional *Ostad* (usually untrained driver).

Trip wise income was increased among the drivers. In reality, this process of income promotes the drivers to drive recklessly and accelerate road accident just concentrating to their daily income as much as possible by doing more trips. Daily income was also about half of the driver's income which was a better option of road safety than their trip-wise income. But the contract of monthly income should be promoted among the drivers to ensure road safety gradually.

Taking rest of the drivers was a vital for safe driving. In some ways, the project intervention motivated drivers that the increased number of drivers was found with a

higher rest period per day than the rest time of baseline period. At the time of baseline, very few respondents were not aware of the punishable rules that must be obeyed in the road. But now, about half of the respondents had become aware of these rules. This number of drivers also violated these rules in road and they mentioned that their intention of more income with more trips was a concern behind the violations. Passengers also insisted drivers to drive their vehicles with high speed. Overall, the respondents were aware of many rules and regulations on road safety issues, but they did not found with the higher practices of these rules, i.e. addiction or smoking habit during driving, using mobile phone etc. But the study found that the road accident had been reduced in the project areas throughout the impact of project intervention.

Effect of the project intervention

The outcome of the project was accomplished throughout several initiatives of the project intervention among the motorised drivers. All the selected drivers were given training on road safety issues for a long day. Additionally, a pocket booklet is given to the entire trained drivers in order to carry out the booklet with them during driving. The contents of booklet included necessary traffic rules, safety issues as well as a message for keeping drivers' health during driving.

3.4 Close Observations of the project areas

The road condition of Bormi Bazar is very bad that ultimately accelerates the road accident in locality. Roads have become uncarpeted along with many holes of water and mud. Even very little rain makes the road unable to use for both pedestrians and vehicles. Most of the roads are found broken, because heavy vehicles (large truck) carry goods using the road, even this road structure is not suitable for these types of large vehicles. When roads are full of mud and rain water, vehicles cannot move using this way, or sometimes vehicles move forcefully and as a result, the vehicles go with the malfunctioned.

According to the common people, they always see such road condition round the year. It seems that the concerned authority is not interested to take care of these roads that ultimately connected to the incidence of local road accidents. As per community observations, the local vehicles are going with its functions down gradually due to the bad road condition. Drivers say that the maintenance cost of their vehicles have been increased recently in comparing with the cost before. The situation is caused by the present road condition. The fitness of the vehicles does not exist in good condition if they run on this road.

Traffic signs are not seen on this road. Sometimes speed breakers are seen without its identity color. So that the speed breaker endorses the road more vulnerable towards road accident rather than its purposes in reducing road crashes.

Bormi is a famous place for a big bazaar (local big market). The local people give the most priority for their time in the weekly business day. This weekly market day is an identity of the Bormi people. People come to the weekly market from long distance to deal with their business. So, people of this bazaar frequently face the difficulties with such road structure. As they think that they are becoming vulnerable day by day because of the local road structure.

Pedestrians of the local road walk in a scattered way as they do not know how to walk and cross the road. Most of the time, local markets gather on road side which is the

most offensive matters during the occasion of the weekly big market. Parking of vehicles is seen without obeying traffic rules. Drivers are always seen with a tendency to drive speedily while overtaking is a common matter for them. Drivers use mobile phone while they drive.

It is observed closely that community people are not interested to work on road safety issue; because they think that they have no cash income on this service. They do not want to understand that they have some own spaces to work on the road safety issues whereas, most of them think that all responsibilities should be implemented by the government, or administration only.

Most of the roads are very narrow without traffic symbols and lanes. Even some traffic signs are seen somewhere, but the pedestrians are found careless about the traffic rules. Some big trees are seen in the middle of the roads, which position of trees creates very dangerous moments for the drivers. It is frequently heard that the road accident takes place on this side. Bend is very common in beach areas, but no traffic signals are seen in most of these areas. Sometimes traffic signs do not exist in the right position on the road; that is why, these signs are not visible from other sides, or far from the road.

Most of the drivers are found very young and not trained up on driving properly. At best they took 1-3 days training from their seniors. Young drivers prefer to drive Auto, CNG vehicles, *Tom-Tom* and *Nosimon-Koriomon* which are found mostly as the popular vehicles locally. The drivers of these vehicles do not care about traffic rules on the road. Vehicles carry excess passengers beyond the capacity. Playing song loudly is a common practice in the local vehicles. Because, young drivers always try to make fun and enjoy with their driving, which are very immature thinking about their driving. It is understood from their behaviours that they are unaware of the road safety issues. The unawareness of the drivers is also assumed because of their lack of training and license in driving.

Students are observed around their school. In reality, they walk on the road without maintaining the walking rules either in a group or single. They walk in a scattered way in the road and sometimes they sit and gossip together very closely to the roadside, which seems very risky practices to face road accidents. When they spend time together on road, they are careless about horn of the vehicles and they do not want to give side to the vehicles. However, about the issue, students discuss with their parents and teachers, but their practices are not seen in the road safety issues at a satisfactory level. Sometimes domestic animals are seen on walk and sleep in the middle of road.

The local community road safety group (CRSG) seems to be very inactive in working together on the road safety issues. They are not interested, because the service is not salaried. They think that a concerned authority should pay something monthly to get them inspired to contribute on the issue. Committee members say that BRAC authority committed to pay some bursaries after three months of their starting work. But they have not given the payment based on their commitment. Therefore, the CRSGs lost their motivation and the committee members do not organise monthly meeting, even a meeting organised in 3 to 4 months interval where all members are not sincere to be present. But a few members show their keen interest to work on the issue if the administration is to be interested to help and connect them. According to their overall expression, it can be said that some community groups should be aware and much cooperative initially to make other people workable on the issue. These groups are recognised namely as the vehicles owners association, labour union and local administration.

Local people say that any accidental crime is negotiated between the parties (victim and criminal). It is usually happened with the exchanging of small amount money to the victim. Sometimes, only BDT 20,000 is given to the victim in road crashes. These types of negotiations are forced by the owners and labour union of the vehicles. These groups of people manage the local administration with a matter of money. But drivers have never seen to be convicted or get the legal punishment when they crash on the road.

3.5 Focused Group Discussions (FGDs)

The study conducted some FGDs with the help of community people. Over those discussions, the findings were divided into some key thematic areas under the sub titles. The discussions consisted of comments, suggestions or future planning as perceived by the community in general-

3.5.1 Reasons of local road accident

1. Competitive overtaking
2. No speed breakers on the road where necessary
3. Broken road with holes
4. Untrained driver
5. Drivers' tendency to high speed always
6. Narrow road
7. Taking drugs during drive
8. Vehicles are beyond the control when carry excess passengers and goods
9. Use of mobile phone on driving
10. No footpath in most of the roads
11. Use of headphone during walk
12. Immature driver (under aged)
13. Not leveled and straight road
14. Sometimes roads are collapsed by excess water falls from hills
15. Too much bend on road without any indications/signals
16. Playing songs loudly inside the vehicles
17. Family problems/unhappiness
18. Drivers' tendency to follow beautiful women/females on road
19. Trees are grown in the middle of road
20. Dense fog
21. Believe in myth

3.5.2 Drivers' mistakes in increasing the road accident

1. Receive phone call during drive
2. Call others intentionally while drive
3. Addiction in drug
4. Illegal overtaking
5. Smoking during drive
6. Drivers' tendency to talk with female when drive
7. Driving in spite of sickness
8. Unrest driving during holiday season (i.e. Eid vacation)
9. Tendency to high speed driving
10. Carry excess passengers and goods
11. Lack of regular checking of vehicles before start driving
12. Unnecessary stops or parking on the road
13. Boarding and escaping passengers on running bus

14. Not obeying the traffic rules
15. Immature/incapable driver
16. Playing songs loudly inside vehicles
17. Unhappiness in family

3.5.3 Necessary initiatives in reducing road accident

1. Increase self awareness, especially for pedestrians
2. Proper law enforcement
3. Law enforcement in prohibition of smoking, drug addiction and using phone call during drive
4. Arrange training for all the existing and new drivers
5. Protect unnecessary stops on road side
6. Rout permit should be given considering the road capacity in respect to the vehicle
7. Road carpeting is needed as regular basis
8. License should be given legally and need basis
9. Increase awareness of Government including local authority
10. Increase awareness of owners association
11. Increase monitoring road safety from the Government
12. Increase various forms of discussions on road safety with the administration
13. Increase traffic police and traffic signals
14. Cleaning road when needed
15. Footpath should be free for walk
16. Prohibition of unfit vehicles on the road

3.5.4 Regarding road safety issue, community's thinking in case of building awareness to the prioritised groups of community people

1. Drivers
2. Children and their guardians
3. Self
4. Pedestrians
5. Ward member and union porishod chairman
6. Police and administration
7. Owners association
8. Drivers association
9. Mosque Imam
10. Family head

3.5.5 The process of building awareness as the community people suggest

1. Television Channels
2. Message delivery in form of songs, drama or any other video in local bazaar/market
3. Organising a discussion forum in local bazaar/locality in weekly/monthly/quarterly
4. Movement together (joint action) with administration and local road safety group
5. Discussion by Mosque Imam in every Friday
6. Information delivery through mobile message
7. Information delivery through teachers, political leaders, local representative or honorary rural personnel
8. Organising quiz competition in regarding the issue
9. Poster, facebook and cultural events
10. Organising refreshers training among the drivers and follow up them at time interval
11. By increasing staff in road safety programme

3.5.6 Responsibilities of local academic institutions

1. Discussion in the class daily or through weekly/monthly seminar
2. Organising meeting, rally and other forms of discussion
3. Discussion with the guardians
4. Forming road safety committees with the students
5. Conduct road safety events in usual school programmes or national programmes participated by the students

3.5.7 Social responsibilities of the community people are practiced in reducing road accident

1. Cutting branches of trees on road side which are obstacles for smooth vehicle movement
2. Filling-up holes on road side
3. Arranging different forms of events and discussion with others
4. Discourage people to rear sheep/domestic animals on road
5. Help children/disable/older people to cross the road
6. Discussion with drivers when driving rules goes wrong by them
7. Discussion with the community road safety groups when less activities are seen among them.

Conclusion and Recommendations

The study attempts to understand the impact of project intervention in the study areas. Basically, the duration of project intervention is much stipulated time frame to see the well-framed achievements targeted in the project. However, the impact study concludes the following remarks as the way forward towards achieving further advancement of road safety in the future-

- The current knowledge status of individual and group level and attitude level of drivers and community members have been increased from the baseline period. But all of these increased trends of different indicators are not found statistically significant.
- To understand this project outcome considering the project objectives, the study impact however should be monitored with a close monitoring and observation or within the framework of a longitudinal survey.
- Broader objectives of the study are fulfilled in the most cases in assessing the road safety awareness of individuals living beside the roads and using the roads in the project areas. But the project reflection towards the community is not found up to the satisfactory level.
- The establishment of platform towards growing the community ownership is a motto of an overall project vision, but the ownership of the community is found in cases of very few individual initiatives mostly rather than the unity of community work.
- To some extent, local road crashes have been reduced over the project intervention.

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Annexure

Community ownership/empowerment

Case 1

Bacchu Mia, age 50, is living in Bormi Bazar under Sreepur *Upazila* of Gazipur district. He is a business man and self motivated in delivering different types of social services. For his interest, he has become a member of local community road safety group. According to him, most of the members of the community road safety group are less educated and business professional. With the business minded behaviour, they think why they will invest their busy time in some projects; what the benefits for them if they work in road safety issues. That means that they are thinking about the issues with a cash return in against of their time investment, if possible. They do not try to understand that the road safety work is not only for them; it is urgently needed for their families and the whole community to get the long term benefits.

However, the committee members have received training on road safety awareness from the BRAC road safety programme. After receiving this training, they start to realise the importance of their daily life related to the road safety issues. Bacchu Mia is an example who is found with more aware than other members in a group. He always tries to organise people under a platform, either inside or outside the road safety group, and do some work for the community's interest of road safety by his leading efforts. For example- Once Bacchu Mia clean mud in front of his shop. As he says, "we always are struggling with such busty mud on road, especially in the rainy season. The structure of our local road is very bad and that is why, a little rainy day makes a large amount of mud on our road, so that all types of vehicles' movement are forced to stop in those days, otherwise, may fall in danger during their driving." In other efforts of Bacchu Mia, he has taken an initiative to divide a road from a school play ground. The school, situated at the Bormi junction of four roads, which is very adjacent to the Bormi main road. As its position, the school is very risky for the students when they play on ground. Bacchu Mia realises the issue from his road safety awareness and he makes a divider (bamboo wall) between the main road and school with his other members of the group.

Bacchu Mia observes about the work of other group members. For road safety, he says that our team members, Nuruzzaman Dolon bhai and one of his friends frequently level the road in front of their house, so, that the vehicles can move smoothly on this road.

Bacchu Mia and his team members are spreading the message of road safety awareness among the local people. As their initiatives, they talk to local Imam of Mosque and all of them discuss about the issue on every Friday in Mosque.

Case 2

Mohammad Harun, age 37, lives in a village of Jahajpura, on way to Teknaf to Shamlapur Bazar road of Cox's Bazar district. He is not an active in professional services, because he faced a road accident one year ago. After his experiencing in road accident, he has become more aware of road safety issues than before. From his own interest, he communicates the local road safety group who has received BRAC training. Harun discusses with the group about his experiences on road accident and make them aware that why and how to make other people aware on the issue. But Harun faces some problems when he talks to others about the issue. According to him, most of the people show their disinterest to work with Harun, because people think that they have no instant cash income if they work with Harun. Since Harun is a victim in accident, so he always wishes to do something for the community which will be a long term benefit for all. But other people have no such interest since they are not victim like Harun. Anyway, after a period of months, Harun and community road safety group start work jointly to deliver various information to the community. For example, they talk to motor drivers for keeping their valid license and in some cases, they are able to convince them that why they should carry the license always.

In Teknaf region, very young boys drive auto and CNG vehicles without having their license. In fact, they are not trained up in a proper driving. They usually drive with listening song through headphone and sound box inside the vehicle. As he says, this type of innocent drivers and driving are very risky in those forest roads. Because, the Teknaf roads are very zigzag, narrow with many old trees on the road side. Because of this nature of road, vehicles fall in road accident frequently. When Harun sees such types of driving with a loud song, or when drivers are using mobile phone during drive, he forcefully protects them from doing such violent driving. Harun says that he has become successful in many cases to stop this irresponsible driving, even he has to struggle with some reckless drivers on road.

Sometimes Harun sees that labour union and administration are doing a crime jointly on a way towards settling a negotiation between victim and criminal. This negotiation is usually happens by passing the criminal who should be punished by judgment. In those incidences, Harun is seen to protest on such illegal negotiations between victim and criminal.

Harun always focuses on road infrastructure which is usually blamed for road accident. As a cause of road accident, the poor road infrastructure is equally comparable with the criminal drivers. He intentionally makes the people aware of how to maintain the road at an individual case. He discusses with the community to take care of their front side road individually.