

Changing Status of Urban Pedal Rickshawalas after the Mass Introduction of *Toto* in Raiganj Municipality : A case study

¹Hiru Barman, ²Sarif Jaman, ³Dipak Mondal & ³Dr. Tapas Pal

¹MA(Geography), Raiganj University

²Dhupguri, Jalpaiguri

³M.Phil Scholar, Dept of Geography, Raiganj University

³Assistant Professr, Dept of Geography, Raiganj University

Introduction

Rickshaw or bicycle rickshaw is a man-made manned three wheeler vehicle, which is a traditional vehicle in Asia, especially in Southeast Asian countries. Although, it's structure and size are different in various places and countries. In earlier days, rickshaws were not three-wheeled, they were two wheels and a man would drag it like a wheelbarrow, and such rickshaw is also called 'Hatetana Rickshaw' and basically it was seen in Kolkata. In recent, cycle rickshaw has been initiated to machine-drive by adding electric motors. According to Wikipedia, Electric rickshaws are also known as electric Tuk-Tuks or e-rickshaws or Toto which have been becoming more popular in some cities since 2008 as an alternative to auto rickshaws and pulled rickshaws because of their low fuel cost, and less human attempt compared to pulled rickshaws. It is an eco-friendly and do not add CO² to the carbon dioxide level in air. It is gaining popularity in India since 2011 due to their low maintenance cost, no noise pollution and easy to drive. It's importance is immense in many cities and town in India as well as Indian transport economy. So, we have selected the Raiganj Municipality for my research work on Changing Status of Urban Pedal Rickshaw walas after the Mass Introduction of E-Rickshaw (Toto).

Objectives:

The objectives of this research are:

- To find out the social aspects of Toto drivers of Raiganj municipality.
- To find out the cultural behavioral aspects of Toto drivers of Raiganj municipality.
- To search out the health status of Toto drivers of Raiganj municipality.

Research Questions:

- What is the present status of Urban Rickshawalas?
- What are the advantages and disadvantages have been observed in urban area due to increasing electric rickshaw?
- How health status is present among urban rickshaw walas?
- Whether have driving experiences among Toto drivers?

- What is the present socio-economic condition of urban rickshaw walas?

Delimitations:

The whole research is confined within the humanistic approach, modern revolution of urban rickshaw, pollution, tourism, issues, local initiatives, developmental statistics etc.

Methodology of the study

Variables of the Study: E-Rickshaw (Toto) drivers and pedal rickshaw drivers are the two main variables of this study.

Population of the Study: E-rickshaw or Toto drivers and pedal rickshaw pullers are the population of the study.

Sample and Sampling Technique: The whole research is based on random sampling method.

Data Source: Both primary and secondary data are used for this study:

Primary Source: Primary sources is also first-hand sources from where primary data is collected by a researcher using various method like surveys, interviews or experiments.

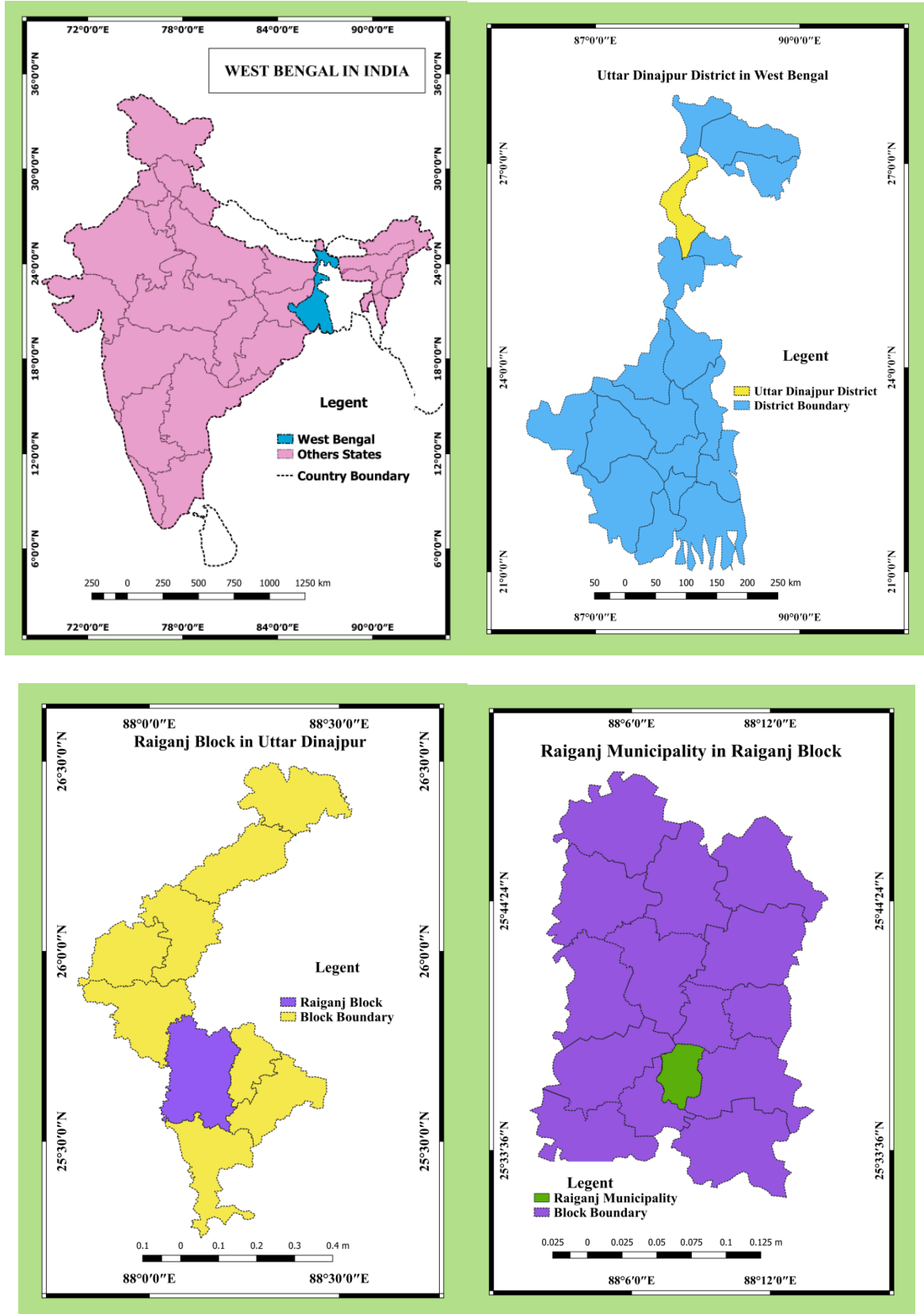
Observation and Questionnaire method: Direct field observation has been used to get the actual field data for this research work. About 50 numbers of Toto drivers and 25 numbers of pedal rickshaw drivers are selected as sample for this study respectively. All the data are collected from field survey using open-ended and close-ended questionnaire method.

Secondary source: The secondary data have been collected from various published journals, articles, governmental publishing journals and also Raiganj Municipality administrative buildings.

Perception study and interview: The technique of photography has used to collect the actual data. Toto drivers and Rickshaw drivers have interviewed for data information.

Techniques and tool: Some cartographic techniques like pie chart, bar graph has used to data analysis and interpretation. To generate some maps QGIS version 3.4.4 software have been used for this study.

Map 1: LOCATION MAP OF THE STUDY AREA



Data Analysis and Interpretation

A Brief Description on Socio-Cultural aspects of urban Toto (E- rickshaw) drivers: Culture is the strategy of survival and the humans is the only one cultural creature. So, there see some special features of culture among rickshaw drivers of any particular space and region. Following I am discussed the socio-cultural behavioral aspects of Toto drivers and rickshaw drivers of my selected research region as per collected field survey data with the help of some photographs, tables and cartographic diagrams:-

Table 1: Caste variability among Toto drivers.

Caste variable	Frequency (No. of selected variable)	Percentage (%)
SC	17	34
UR	19	38
OBC-A	9	18
OBC-B	5	10
TOTAL	50	100

Source: Field survey, 12th April, 2019

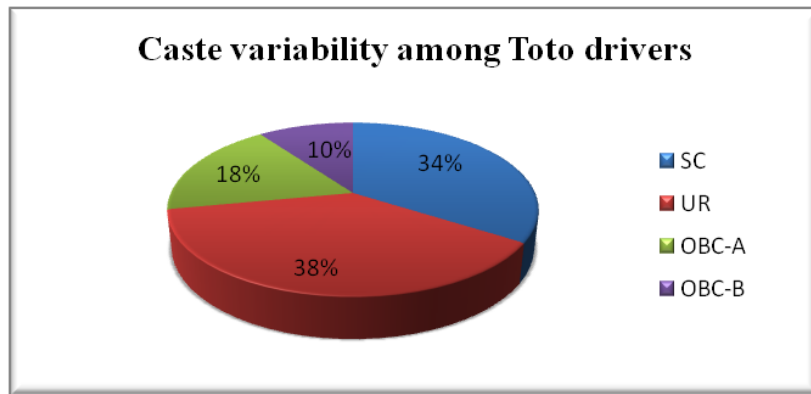


Figure 1: Variability of caste system among Toto drivers.

From above the table and diagram it is interpreted that there caste Variability among the selected Toto drivers is very much significant in the study area. Percentage of SC (34%) and UR (38%) categorized drivers is very much closed to each other but the number of UR category of drivers is comparatively high. And the number of OBC-B category of Toto drivers is low (10%).

Table 2: Distribution of Age among the Toto Drivers

Age Group	Frequency (No. of selected variable)	Percentage (%)
Below 32 yrs.	18	36
32 – 47 yrs.	22	44
47 – 62 yrs.	8	16
Above 62 yrs.	2	4
Total	50	100

Source: Field survey, 12th April, 2019

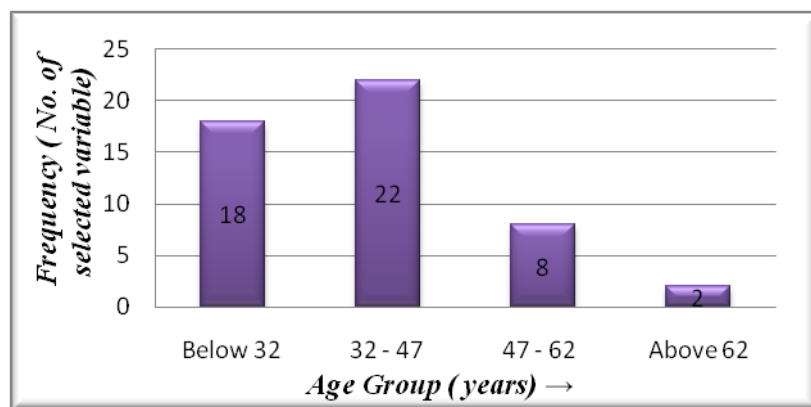


Figure 2. Distribution of Toto Drivers on the basis of age group

From the above table and diagram it can be interpreted that among the total number of selected Toto drivers, a very lower amount of driver i.e. just 4 % having their age is above 62 years, while a maximum number of Toto drivers i.e. 44 % fall into the age group of 32 – 47 years. So, it can say that there young i.e. mature number of Toto drivers is higher in the study area.

Table 3 : Educational Qualification of Toto Drivers

Educational Qualification	Frequency (No. of selected Toto Driver)	Percentage (%)
Illiterate	11	22
Primary School	9	18
Below Metric	23	46
Metric	2	4

12 th Standard	4	8
Graduation	1	2
Total	50	100

Source: Field survey, 12th April, 2019

The represented diagram and table shows the educational qualification among urban Toto drivers in the study area. The results reveal that most of the Toto drivers (46%) have their educational qualification below metric level. Just 8% and 2% have completed their education up to 12th standard and graduation respectively. So, it can say that Higher education is not found among the Toto drivers.

Table 4 :House Ownership of Toto drivers

Housing Facility	Frequency (No. of selected Toto Driver)	Percentage (%)
Own	45	90
Rent	5	10
Total	50	100

Source: Field survey, 12th April, 2019

As per collected field survey data the represented diagram shows that

90% Toto drivers have their own house and rest 10 % Toto driver not have their own houses they are basically take houses to pay rent. According to them they take houses by paying rent because of having maximum distance of their own home places from this town.

Table 5: House type of urban Totowalas

House Type	Frequency (No. of selected Toto Driver)	Percentage (%)	If Pucca	
			After introduction of Toto	Before introduction of Toto
Pucca	15	30	5	10
Semi-Pucca	7	14		
kacha	28	56		
Total	50	100		

Source: Field survey, 12th April, 2019

Maximum number of Toto driver (56%) have their kacha type of house. while only 30% of the driver has their pucca house and 6.2.5.b. diagram shows that only five Toto drivers made their pucca house after introduction of Toto in their Toto driving occupation. Thus, it can be said that the economic structure of these Toto drivers has increased slightly.

Table 6 : E-Rickshaw (Toto) ownership

Toto Ownership	Frequency (No. of selected Toto Driver)	Percentage (%)
Own	36	72
Rent	14	28
Total	50	100

Source: Field survey, 12th April, 2019

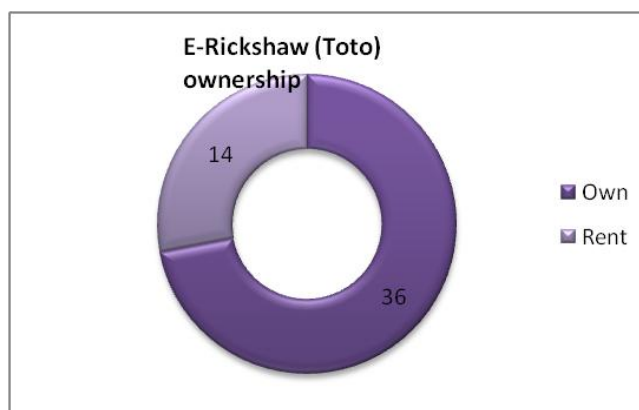
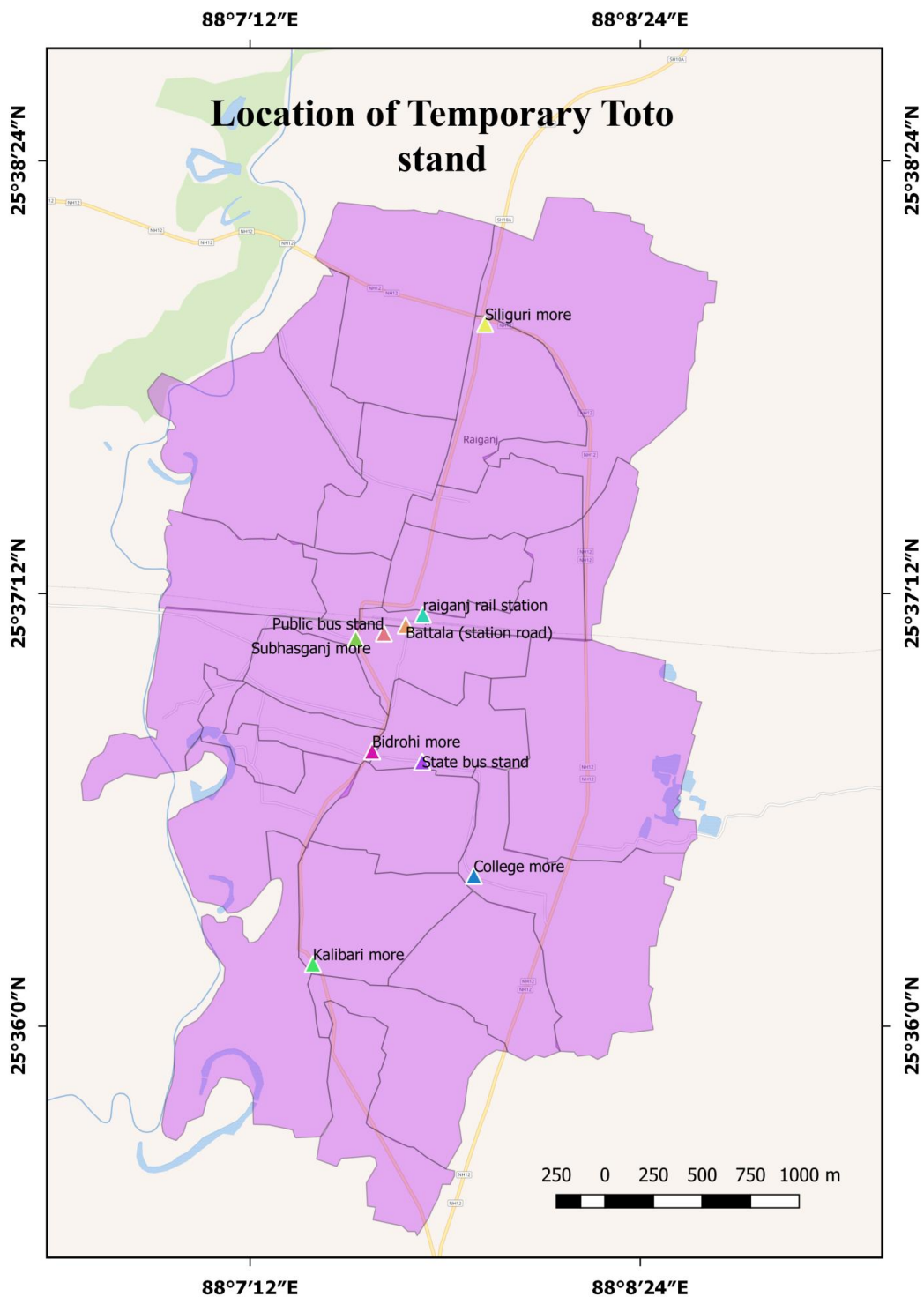


Figure 3: E-Rickshaw (Toto) ownership of Toto drivers

From above diagram it can be interpreted that there a huge amount of Toto driver (72%) has their own E-Rickshaw (Toto) while the amount of rental Toto is very low (only 26%). i.e. self ownership is more dominant in the study area.30% of Toto driver had pedal rickshaw before introduction of Toto in Raiganj Municipality and rest 70% of people chose this Toto driving occupation after introduction of Toto. Temporary particular Toto stand:According to field survey it is know that there has no particular stand for Toto in Municipality area. The Toto drivers created their stand for getting more passengers where human movement is high for different activity purpose such as education, health, offices, business etc. Following the location of these temporary stands is shown with the help of a map:-

Map: Location of Temporary Toto Stand



Some Toto driving routes in Municipality area are mentioned bellow: Siligurimore to Barodwuari, Siligurimore to Hospital, Raiganj to Bajitpur, Siligurimore to SatsangaAsrom /Ukilpara, Rail Station to Hemtabad, Bus stand to Hospital, Bus Stand to Collegemore, Kalibarimore to Collegemore, Rail station to Bangalbari, Bas Stand to Bhatghora(Subhasganj). As per data analysis there hasunauthorizedToto which include amount of 28% as well as licensed Toto (72%) in Raiganj municipality area. The number of unauthorized Toto has gradually increasing in municipality area which results in traffic problems have increased.

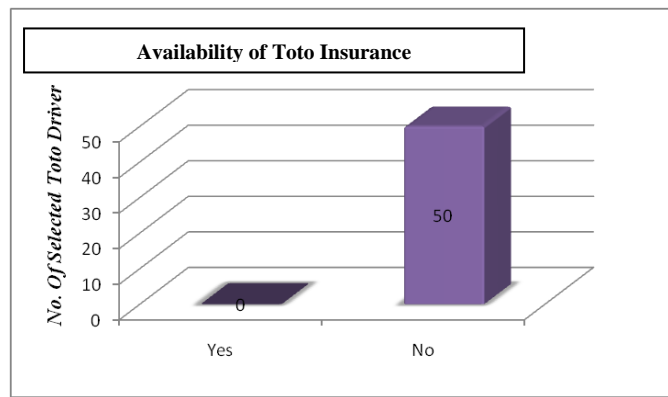


Figure 4 : Availability of Toto Insurance among Toto drivers

From above the diagram it can be interpreted that there have no any insurance policy for E-Rickshaw or Toto among Toto drivers as well as Toto owners. According to field survey the represented diagram shows 94% Toto driver not involved with any Toto union committee while only 6% are involved.

Table 7. Per day income of Toto driver

Income in Rs. (Class group)	Frequency (No. of selected Toto Driver)	Percentage (%)
Below 350	25	50
350- 500	12	24
Above 500	13	26
Total	50	100

Source: Field survey, 12th April, 2019

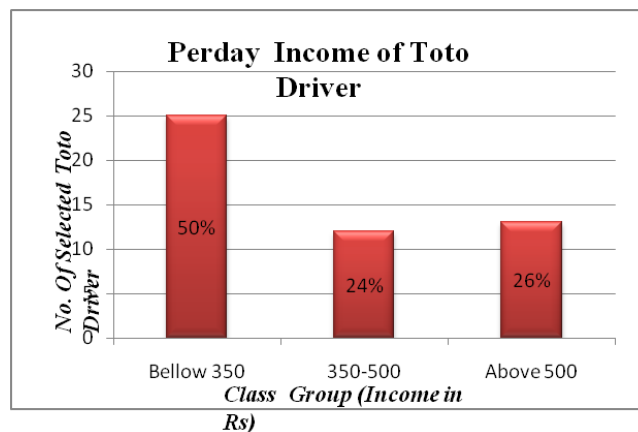


Figure 5 :Per day income of Toto driver

The represented diagram shows that 50% Toto driver have their per day incomes below 350 Rs. And Just 26% Toto driver have their per day income above Rs. 500

Table 8: Per day Expenditure of Toto driver

Expenditure in Rs. (Class group)	Frequency (No. of selected Toto Driver)	Percentage (%)
Below 100	1	2
100-200	12	24
Above 200	37	74
Total	50	100

Source: Field survey, 12th April, 2019

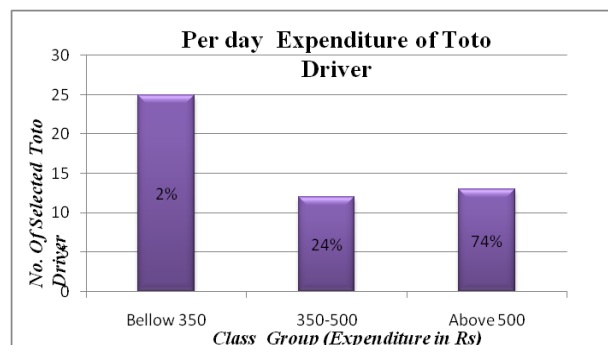


Figure 6: Per day Expenditure of Toto driver

According to field survey the represented diagram shows maximum number of Toto driver i.e. 74% Toto driver have their per day expenditure above 200 rupees. And the rest is in below Rs. 200. Another uses of Toto:Toto or E-Rickshaw not only carries passengers but also it has various or multipurpose uses.



Plate.7: Package water jar carried by Toto from Raiganj municipality.

Now Toto is used in different business purpose also. A hawker type vendor who carrying goods to give to the shops using freight Toto.



Plate.8: Use of freight Toto to sell the goods in different shops at College More



Plate.9: Freight Toto Using For Businesses at Debinagar Bazaar



Plate.10: Use of Toto for business at Mohanbati Bazaar



Plate.11: Political add during Election time.

❖ Toto also play a role as a cord of communication. Different business related advertisement through various banner are found in the Toto's back side.



Plate.12: Advertisement by Toto Rickshaw

Impact of E-Rickshaw or Toto: E-rickshaw or Toto has some positive and negative impact. These are mentioned below-

Positive Impacts: Reducing of times, Using in own various family purpose work, Reducing of Unemployment
Reducing of Theft, Can be reached soon at the destination, Patient can be arrived straight at home. Etc.

Negative impact: Toto not only have positive impact, it has various problems. Its increasing rate of number creates lots of problems. Such as: Increased traffic problems, Increased parking problems, Passenger faces problems due to increasing Totowalas. Etc.



Plate,14: Toto blocking the whole road.



Plate.15: Toto drivers do not follow the traffic rule. The red arrow sign indicating that how a Toto come suddenly in the front of a bus.



Plate.16: Toto seized by police at NH 34 at Raiganj due to violation of restriction rule.



Plate.17: Hotel Owner write strict bill on the wall due to irritate of Toto parking.

The state government has declared that the registration of Totos given by the municipality is invalid. As well as the state government also trying to launch an e-rickshaw by cancelling Toto. Ignoring these allegations, the movement marched from the kasba more to siliguri more of the town of Raiganj on demanding clear guidance of the state government to ensure the movement of Toto.

There are some Totos that are very nice and some are very bad in condition in Raiganj municipality area. As for example following two different photos are explaining this:-



Plate.19: Electric fan system in Toto



Plate.20: Headlight and backlight is poor condition in Toto

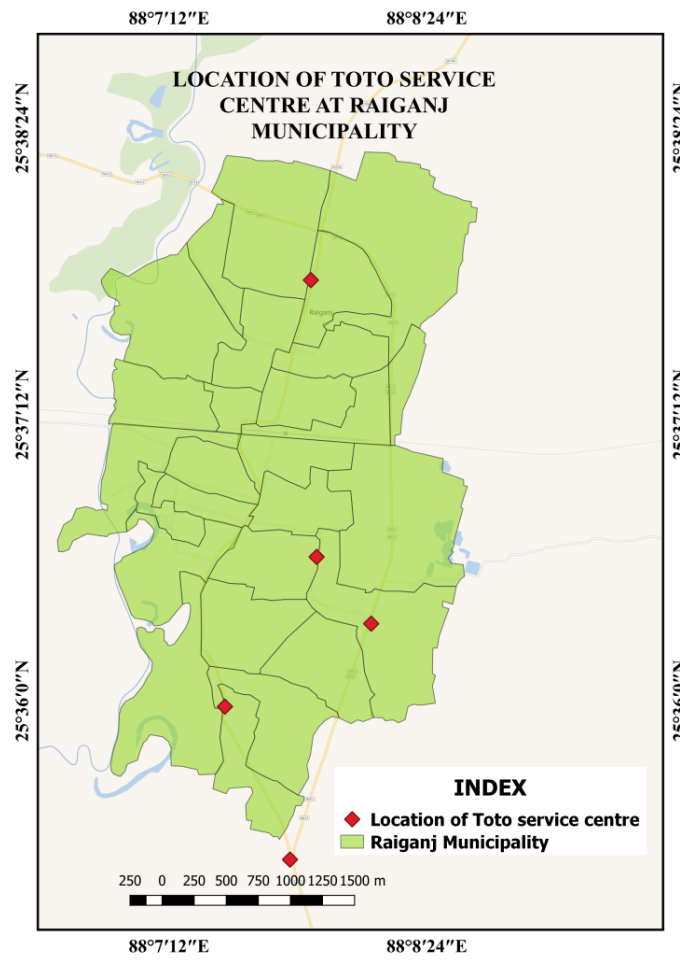


Plate.21: Tobacco packet storage by Totowalas.



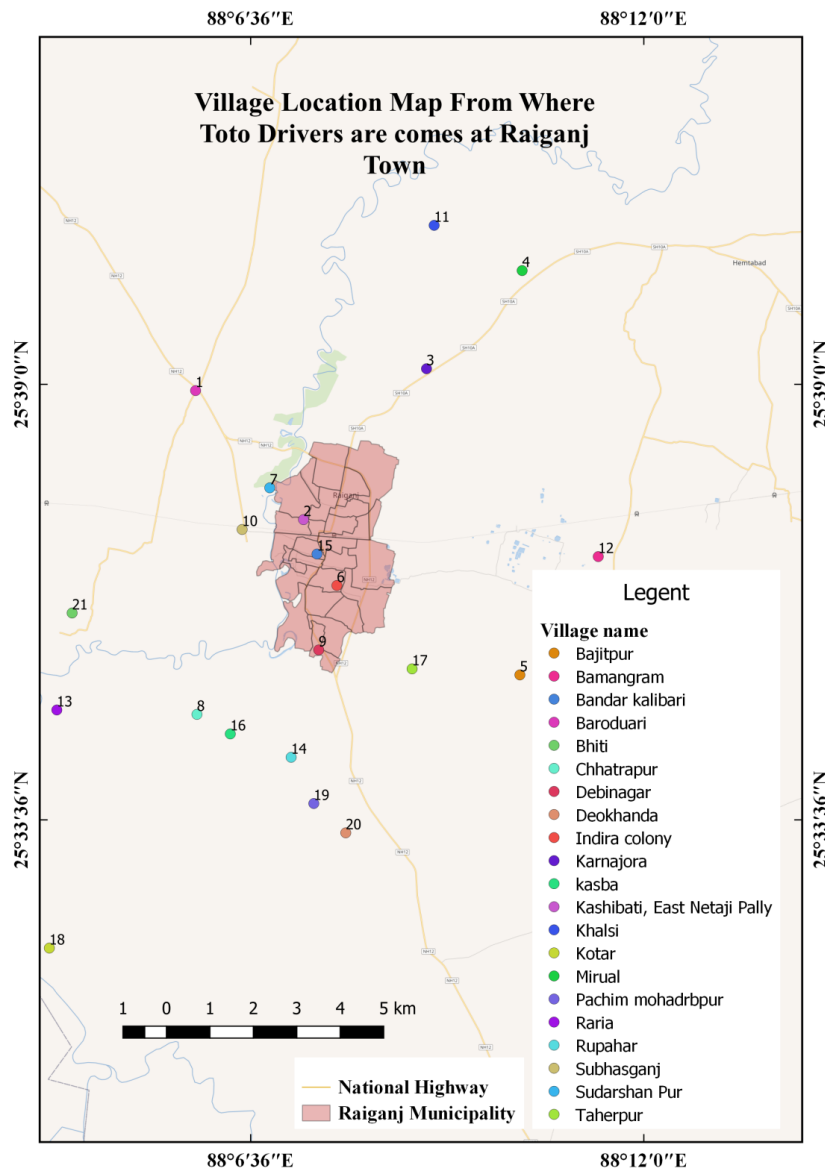
Plate.22: Toto showroom; sale and service centre at Netajimore, Raiganj

There has some Toto service centre in whole Raiganj municipality area. All these location are shown in the following map:-



Map: Location of Toto service centre

❖ Toto or E-Rickshaw drivers are not only come from different places of Raiganj town but also come from various adjacent villages. Following shown these adjacent village location with the help of a map:-



Map: Village Location Map

6.3. A Brief Description on Socio-Cultural aspects of urban Pedal Rickshaw drivers

There have some socio-cultural features among urban pedal rickshawalas in the study area. Following described this with the help of some data table and figure on the basis of primary collected data:-

Table 9 : Caste variability among urban pedal rickshawalas

Caste variable	Frequency (No. of selected variable)	Percentage (%)
SC	6	24
UR	16	64
OBC-A	3	12
TOTAL	25	100

Source: Primary data

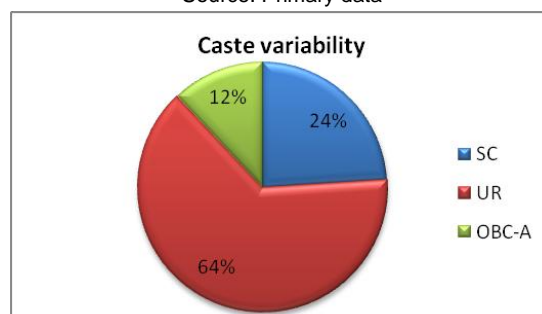


Figure7: Caste variability among urban pedal rickshawalas

❖ The represented diagram shows that the caste variability among pedal rickshawalas in the study area. There have high amount i.e. 64% of unreserved category and 24% of SC categorized of pedal rickshawalas. And the amount of OBC-A categorized of pedal rickshawalas is very low (12%).

Table 10 : Age distribution among pedal rickshaw driver

Age Group (Years)	Frequency (No. of selected variable)	Percentage (%)
Below28	1	4
28-38	4	16
38-48	7	28
Above 48	13	52
Total	25	100

Source: Primary data

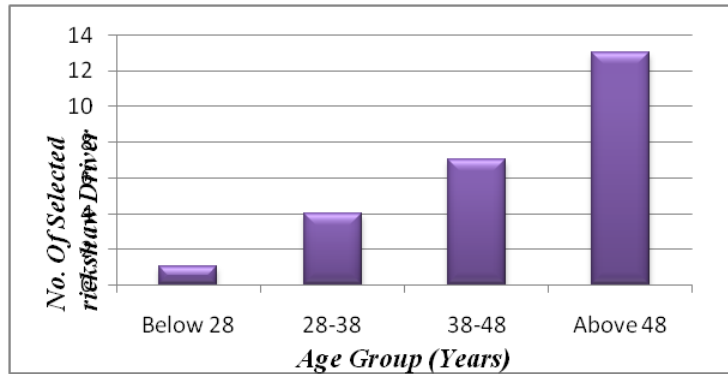


Figure 8: Age distribution among pedal rickshaw driver

The represented diagram shows the Age distribution among pedal rickshaw driver in the study area. From represented diagram it can interpreted that there maximum number i.e. 52% of pedal rickshaw driver have their age above 48 years. Only 4 % fall under age group of below 28 years.

Table 11: Educational qualification of pedal rickshawalas

Educational qualification	Frequency (No. of selected variable)	Percentage (%)
Illiterate	13	52
Primary school	11	44
Below metric	1	4
Metric	0	0
12 th Standard	0	0
Graduation	0	100

Source: Primary data

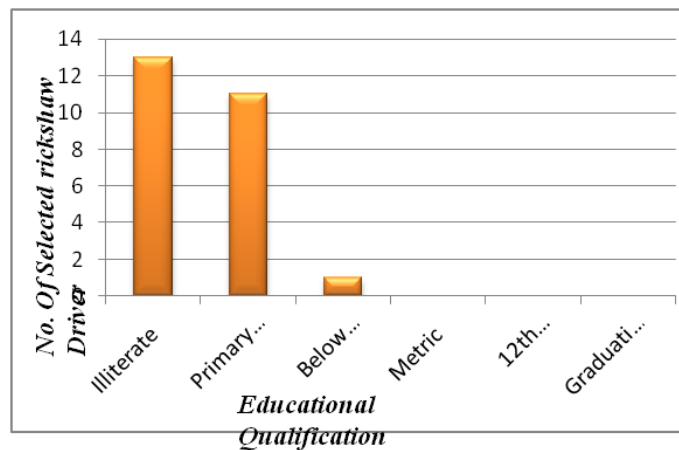


Figure 9: Educational qualification of pedal rickshawalas

The represented diagram shows the Educational qualification of pedal Rickshawalas of the study area. There have very low educational qualification among pedal rickshawalas. 52% rickshawalas are illiterate and 44% are completed their education up to primary school.

Table 12: House Ownership of Pedal rickshaw drivers

House ownership	Frequency (No. of selected variable)	Percentage (%)
OWN	24	96
RENT	1	4
TOTAL	25	100

Source: Primary data

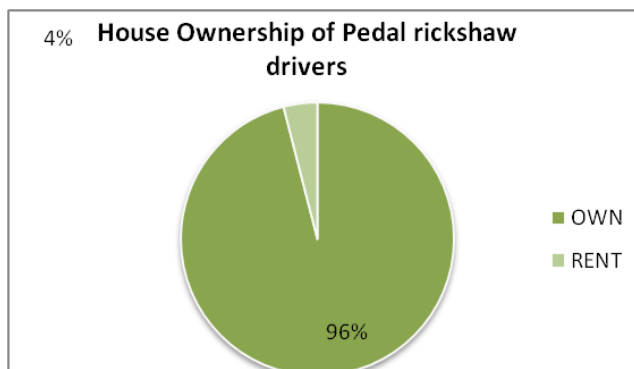


Figure 10: House Ownership of Pedal rickshaw drivers

From the represented diagram it can say that there 96% pedal rickshaw driver has their own houses. Just 4% have their rental house because they are come from Bihar district.

Table 13 : House Type of Pedal Rickshawalas

House Type	Frequency (No. of selected variable)	Percentage (%)
Kacha	17	68
Pucca	4	16
Semi-Pucca	4	16
Total	25	100

Source: Primary data

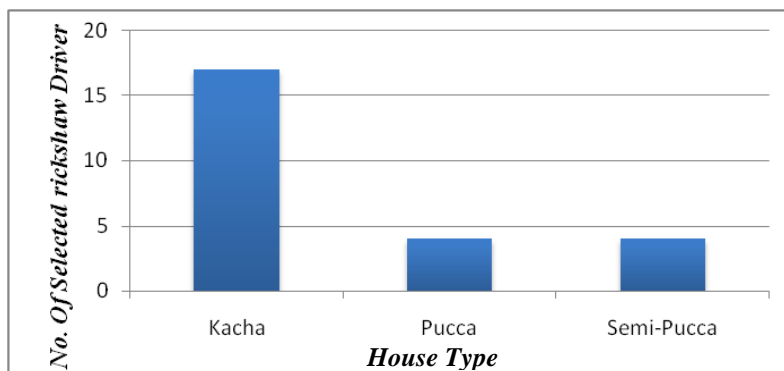


Figure 11:House Type of Pedal Rickshawalas

The represented diagram shows the House Type of Pedal Rickshawalas of the study area. There 68% pedal rickshawalas has their kacha type of houses. So it can say that the economic status of urban pedal rickshawalas is very poor.

Table 14: Per day income of pedal rickshawalas

Income group (Per day income in Rs)	Frequency (No. of selected variable)	Percentage (%)
Below 150	6	24
150-200	8	32
Above 200	11	44
Total	25	100

Source: Primary data

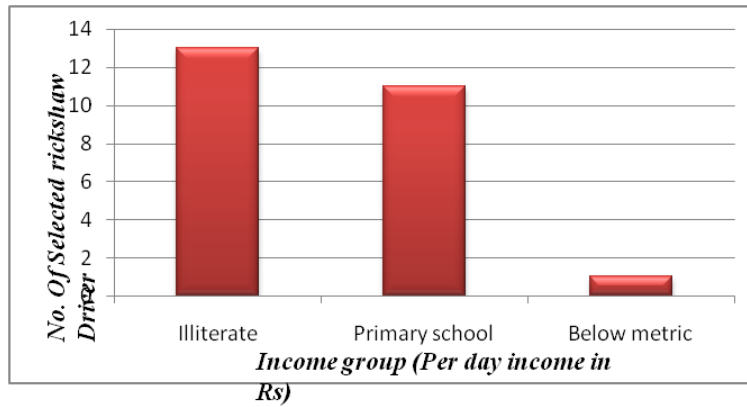


Figure 12: Per day income of pedal rickshawalas

The represented diagram shows the Per day income of pedal rickshawalas of the study area. There 44% pedal rickshawalas have their per day income above Rs.200 While 24% and 32% of pedal rickshawalas have theirperday income below150 and Rs. 150-200 respectively. So it can say that they are economically weak.

Table 15: Per day expenditure of Pedal rickshawalas

Expenditure in Rs. (Class Group)	Frequency (No. of selected variable)	Percentage (%)
Below 150	13	52
150-200	6	24
Above 200	6	24
Total	25	100

Source: Primary data

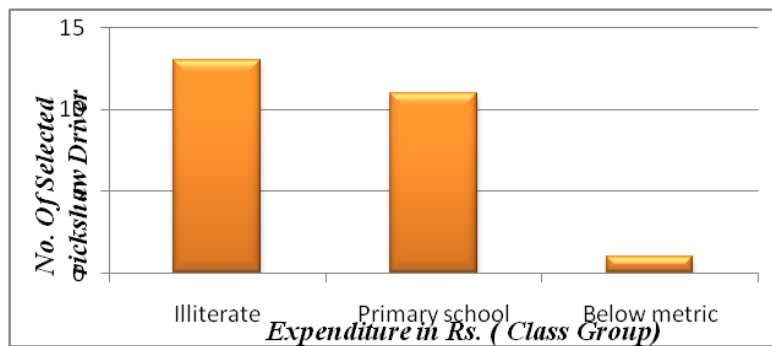


Figure 13: Per day Expenditure of pedal rickshawalas

The represented diagram shows the per day Expenditure of pedal rickshawalas of the study area. About 52% pedal rickshawalas have per day expenditure is below Rs. 150 and rest is above Rs 200. So it can say that they are economically weak.

Table 16 : Rickshaw ownership of Pedal Rickshawalas

Rickshaw Ownership	Frequency (No. of selected variable)	Percentage (%)
Own	12	48
Rent	13	52
Total	25	100

Source: Primary data

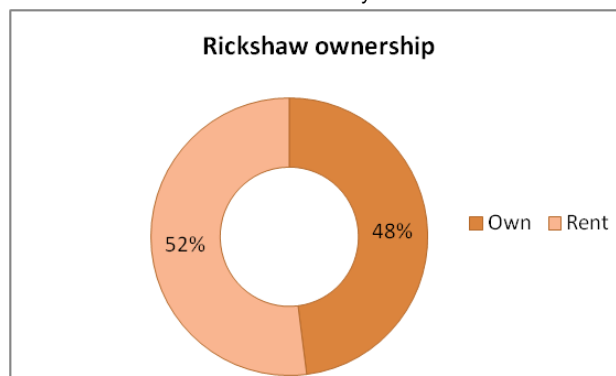


Figure 14: Rickshaw ownership of Pedal Rickshawalas

The above diagram represents the rickshaw ownership of pedal rickshawalas of the study area. The amount of own and rental rickshaw is very close to each other but amount of rental rickshaw (52%) is slightly high than own rickshaw (48%).

Table 17: Use of mobile phone among Pedal Rickshawalas

Use of mobile phone	Frequency (No. of selected variable)	Percentage (%)
Yes	8	32
No	17	68
Total	25	100

Source: Primary data

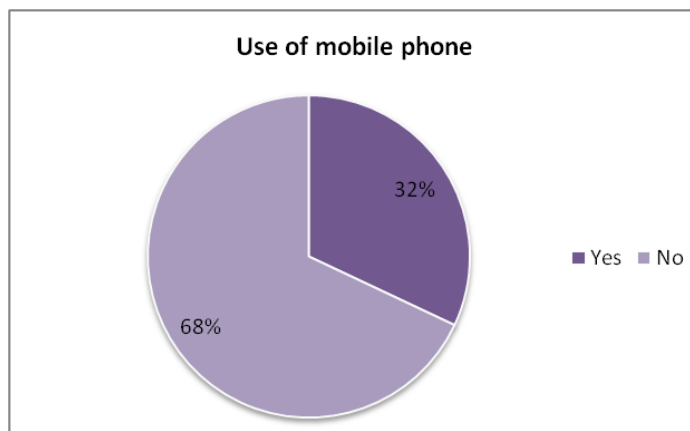


Figure 15: Use of mobile phone among Pedal Rickshawalas

The represented diagram shows that Use of mobile phone among Pedal .Rickshawalas in the study area. 68 % pedal rickshaw driver not uses any mobile phone and only 32% rickshawalas use mobile phone. So it can say that modernization not seen among rickshawalas.

Table 18 : Amount of having involved with any rickshaw union

involved with any rickshaw union	Frequency (No. of selected variable)	Percentage (%)
Yes	0	0
No	25	100
Total	25	100

Source: Primary data

- Problems faced by pedal rickshawalas after introduction of e-rickshaw or Toto: The pedal rickshawalas are faced various problems after introduction of e-rickshaw or Toto. These are: Passenger decreases, Many people do not like travel to rickshaw, Cannot reach to the destination place fast than e-rickshaw or Toto, Passenger more interested to travel in Toto, Rickshaw driver could not drive rickshaw well on the road due to jam for Toto, Children not choice Toto to travel. Etc.



Plate.25: use of pedal rickshaw in transportation of goods. According to rickshawalas they rent maximum times in transportation Table 5: House type of urban Totowalas

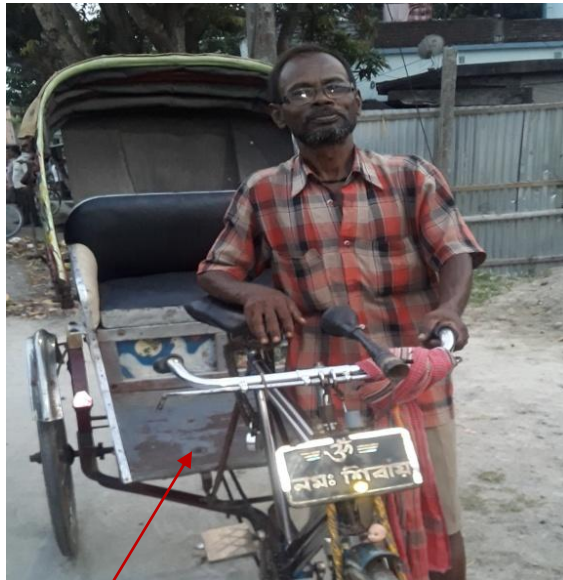


Plate.26: There are somerickshawalawas who care and worship their rickshaw

6.4. Comparative Study on Health Status between Urban Pedal Rickshawalawas and Totowalawas:
 Following discuss the health status Urban Pedal Rickshawalawas and Totowalawas:

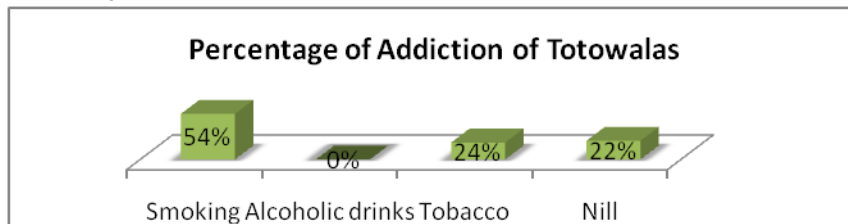


Figure 16: Percentage of addiction of Totowalawas

The above represented diagram shows the Percentage of addiction of Totowalawas of the study area. There 54% Totowalawas smoke and 22% Totowalawas do not have with any addiction.

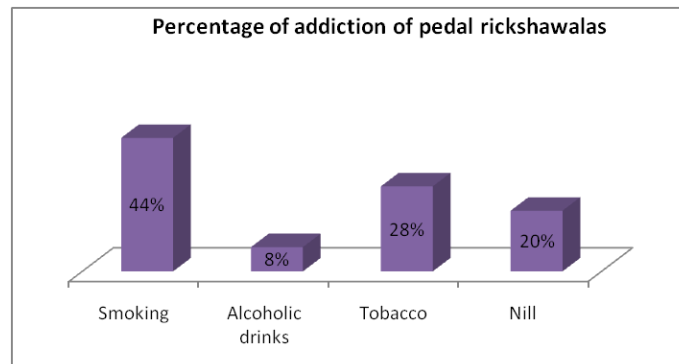


Figure 17: Percentage of addiction of pedal rickshawalawas

The represented diagram shows the Percentage of addiction pedal rickshawalawas of the study area. There 44% rickshawalawas do smoke and 20% rickshawalawas do not have their addiction.

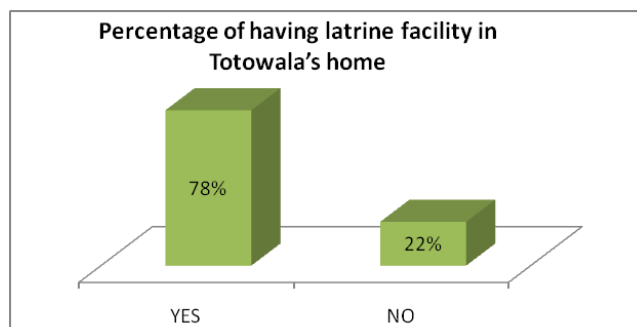


Figure 18: Percentage of having latrine facility in Totowala's home

The represented diagram shows the Percentage of having latrine facility in Totowala's home of the study area. About 78% Totowalas have latrine facility in their home while 22% Totowalas have no latrine facility. The Percentage of having latrine facility in rickshawala's home of the study area. 56% Rickshawalas have latrine facility in their home but about 44% rickshawalas not have any latrine facility. So it can say that there has moderate health status in rickshawalas community.

Conclusion

From above the detailed study some major findings are found. As needs both mode of transport like pedal rickshaw and e-rickshaw or Toto, municipality authority should try to solve the problems which arise with increasing number of e-rickshaw or Toto in municipality area. From above data analysis we found Totowalas faces problems of particular Toto stand and traffic congestion rises due to increasing many unauthorized Toto in municipality area. So municipality authority should try to solve these problems as soon as possible.

References

1. Anil K. Rajvanshi, September 2002, "Electric and improved cycle rickshaw as a sustainable transport system for India",
2. Debapriyachoudhury, National Institute of Fashion Technology, New Delhi "The History and Evolution of Rickshaw in India", 24th August, 2015
3. Shashank Singh, Researching Reality Summer Internship 2014 Working paper: 323, "A Study of the Battery Operated E-rickshaws in the State of Delhi".
4. Yashpal Malik, A Research Scholar, Amity Institute of Social Sciences, Amity University Sector 125, Noida, Uttar Pradesh 201303, "impact assessment of e-rickshaws while analyzing entrepreneurial success of rickshaw pullers"
5. Anil K. Rajvanshi, Nimbkar Agricultural Research Institute (NARI), "History of Electric Rickshaws at NARI"
6. Rickshaw, From Wikipedia, the free encyclopedia, website: <https://en.wikipedia.org/wiki/Rickshaw>
7. Electric rickshaw, From Wikipedia, the free encyclopedia, website: https://en.wikipedia.org/wiki/Electric_rickshaw
8. Raiganj, From Wikipedia, the free encyclopedia, website: <https://en.wikipedia.org/wiki/Raiganj>
9. Raiganj Population Census 2011 – 2019,
10. Website: <https://www.census2011.co.in/data/town/801651-raiganj-west-bengal.html>
11. Kolkata's Hand-Pulled Rickshaws are British Heritage in India's Colonial Treasure, Website: <https://www.indianeagle.com/travelbeats/hand-pulled-rickshaws-of-kolkata/>
12. Ecocabs - World's first dial-a-rickshaw scheme...where technology meets tradition, Website: <http://www.ecocabs.org/about/>