



CAG

Citizen consumer and civic Action Group



PEDAL FOR PROGRESS

**A survey of livelihood cyclists in
Chennai**

May 2024

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About CAG

Citizen consumer and civic Action Group (CAG) is a 38-year-old, non-profit, non-political, and professional organisation that works towards protecting citizens' rights in consumer and environmental issues and promoting good governance processes including transparency, accountability, and participatory decision-making.

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Executive Summary

The Study

Livelihood cyclists, or people who cycle as their primary mode of transportation, face perilous conditions on our roads everyday. In order to understand their use of the vehicle, their travel patterns and their reported hazards, CAG conducted a survey in Chennai among livelihood cyclists and cycle repair shop owners.

A total of 481 livelihood cyclists were surveyed, of whom 147 were female. The majority of cyclists surveyed (~56%) have been cycling for 3-5 years. 44% of participants reported travel times of 31-60 minutes daily. Around 54% of respondents expressed a preference for local roads as their primary journey paths. Only 5% of respondents reported the availability of safe cycle paths. Both the preference for local roads, and the reported lack of bicycle paths underscore a pressing necessity for the development of extensive cycle path networks to enhance cycling as a safe mode of travel.

Respondents also complained of a lack of safe cycle parks - adding this provision could potentially improve cycling as a means of first and last mile connectivity. This ties in with our finding that the majority of respondents (82%) use their cycles for the entire commute. It appears that a workplace fairly local to where one lives is a prerequisite for cycling consistently. Apart from poor cycling infrastructure, inconsiderate and dangerous driving behaviour of motorists was reported by respondents as a top concern.

A total of 70 cycle repair shop owners were surveyed. Due to the increasing market size and improvements in technology of bicycles, several bicycle repair shop owners feel that most customers who own these bicycles tend to use the manufacturer's in-house services as they lack the latest tools required to maintain such cycles.

Recommendations

The solutions proposed were based on gaps identified by the livelihood cyclists themselves. To make incremental improvements, along with creating awareness on sustainable transportation such as cycling, increased **infrastructural** and **policy support** is vital. **Awareness campaigns** are meaningless, unless accompanied by improved, safe, and segregated infrastructure to support cyclists.

Some of the identified infrastructural improvements were to first **map existing bicycle networks, maintenance shops and routes** frequented by livelihood cyclists to identify the population clusters that cycle to work, and the routes frequented by them in order to pinpoint the shortfalls in infrastructure.

This vital step would be the beginning, before moving on to addressing the short-term concerns by providing **segregated bicycle lanes** in areas identified above, followed by a wider, expansive study for a **city-level bicycle network plan**. Other steps were to **provide safe, reliable and affordable bicycle parking, inclusive public bicycle sharing systems and to improve road conditions**.

The infrastructure improvements would go hand in hand with **policy support to incentivize bicycle usage** and **awareness campaigns** to sensitise the population on the plights of cyclists and to inculcate an awareness that the roads are for all, not just motorised transportation.

Glossary and Abbreviations

MoHFW	Ministry of Health and Family Welfare
GDP	Gross Domestic Product
MoRTH	Ministry of Road Transport and Highways
GPS	Global Positioning System
CMRL	Chennai Metro Rail Limited

Introduction

The bicycle can mean a variety of things to people: a favourite mode of transport from during their childhood, an efficient form of exercise, a nostalgic gift from years ago, and according to figures, a common household vehicle. The Ministry of Health and Family Welfare (MoHFW) reported, in their most recent National Family Health Survey (2019-2021), that over 50% of Indian households had a bicycle¹. Despite this, India is widely lamented as being a dangerous country for cyclists and the stage for thousands of accidents a year, with many fatalities in the process. Given the importance cycles have in leading the country to become a more sustainable country, why are they so widely neglected?

India's rise as an economic power has seen it accomplish many feats in a short time. Since the economic reforms of the 1990s, the country's GDP has expanded 10-fold and seen once drowsy and lackadaisical towns transform into bustling and lively cities. Indians are increasingly becoming richer and more educated and are able to spend their money on new commodities. Among these, are new forms of transport. According to the MoHFW, compared to 1% in 1992, around 8% of Indians now travel in cars. Despite this, the popularity of the bicycle has remained high, with figures indicating that more than half of the country's households possess at least one of the 2-wheel vehicles. At first glance, the statistic that Indians still hold a love for the bicycle bodes well for the country, especially as the country aims to become greener and more sustainable. However, the issues faced by cyclists are often buried and need to be addressed on an urgent basis.

Riding a bicycle in India can often be a test of character and survival. While this may seem to be an exaggerated cliché, statistics show grave findings that being a cyclist means a constant threat to one's life and limb at some point. According to the Ministry of Road Transport and Highways (MoRTH), between 2018 and 2022, a total of 21,683 cyclists died as a result of road crashes². Tamil Nadu featured prominently in the yearly figures, seeing close to 1690 deaths during the same period. More recently, the country saw a 35% rise in bike accident fatalities from 2020 to 2021. There were also no specific patterns reported in the times of the day the accidents happened, implying that deep structural problems are causing the precarious conditions that cyclists exist in.

Common with many systemic problems, several explanations exist for why cyclists remain in a perilous state. A primary reason is the lack of distinct, robust infrastructure for riders. This forces cyclists to lump themselves into already congested motor vehicle -filled roads, which put them at risk of collision at any time. To make things worse, motorists often show no compassion for their bicycle-riding counterparts, often disregarding their safety and lacking conformation to traffic rules. The bicycle bell's rings are often drowned by the shrieking honks of cars, which stifles any ability of cyclists to stamp their presence on the roads. Furthermore, hit and run accidents are far too common throughout the country, with car drivers often fleeing the scene before any explanation can be given. The lack of justice for many cyclists often dissuades them from making long journeys, for fear of their safety and

¹ International Institute for Population Sciences (IIPS) and ICF. 2021. National Family Health Survey (NFHS-5), 2019, <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>

² Compiled from MoRTH Road Accidents Reports involving bicycles through the years 2018 – 2022

health. While all cyclists ride under perilous conditions, livelihood cyclists have no option but to continue using a cycle.

Thus, CAG decided to conduct a survey to understand the problems and derive solutions to the problems reported by cyclists themselves. It is pertinent to note that, in these surveys and studies, only frequent livelihood cyclists were examined. These are people who, as mentioned earlier, are those who use bicycles as their primary mode of transport. Casual and recreational cyclists were ignored, as their mode of transport can be chosen.

Objectives & Methodology

Objectives

The intention behind this study was to understand the following:

- Travel patterns of livelihood cyclists across age and gender
- Struggles and issues faced by livelihood cyclists on a daily basis
- How cycling trends have affected cycle maintenance shop owners which in turn impact on cycling

Methodology

To better understand the cycling environment in Chennai, a survey of 481 bicyclists and 70 owners of bicycle repair shops was conducted. Before the survey, formal consent was obtained from participants. The participants were chosen from all age groups, genders, and socioeconomic levels. Leisure and recreational cyclists were not included in this study.

The questionnaires are attached as annexures.

The surveys were carried out by trained volunteers over two weeks. Volunteers approached/contacted cyclists through networks such as local shops (*potti kadai*), cycle repair shops, security personnel in houses/commercial establishments, delivery personnel, and local post offices.

Results & Discussion

Respondents' Demographic Data

Respondents' demographics

The survey had more male respondents (324) than female (147).

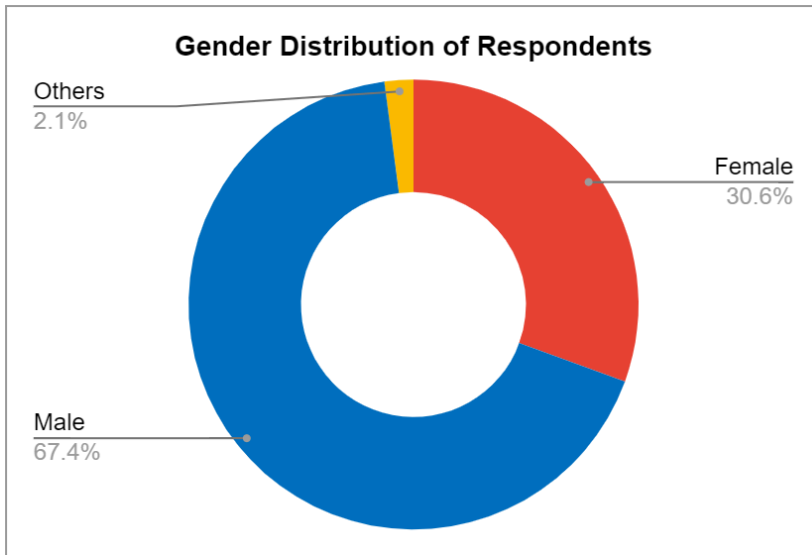


Figure 1: Gender Distribution of the survey respondents

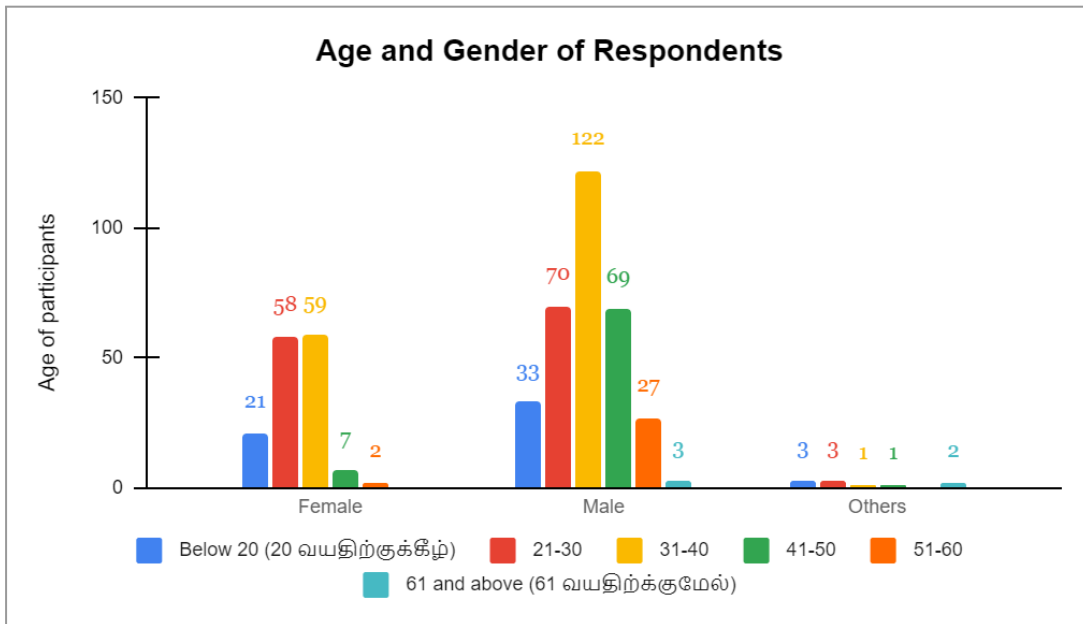


Figure 2 Age and Gender Distribution of Participants

The distribution of female cyclists reduces markedly after the age of 41. Among men, the 41-50 age group was the third highest, a fraction behind the 21-30 age group. The older age groups were heavily dominated by men.

About 56% of cyclists have been riding for three to five years, according to statistics on cycling experience. In comparison to female respondents, male respondents have been cycling for a longer time (6–10 years). Around 4% of the male cyclists have been cycling more than 11 years as shown in the graph below.

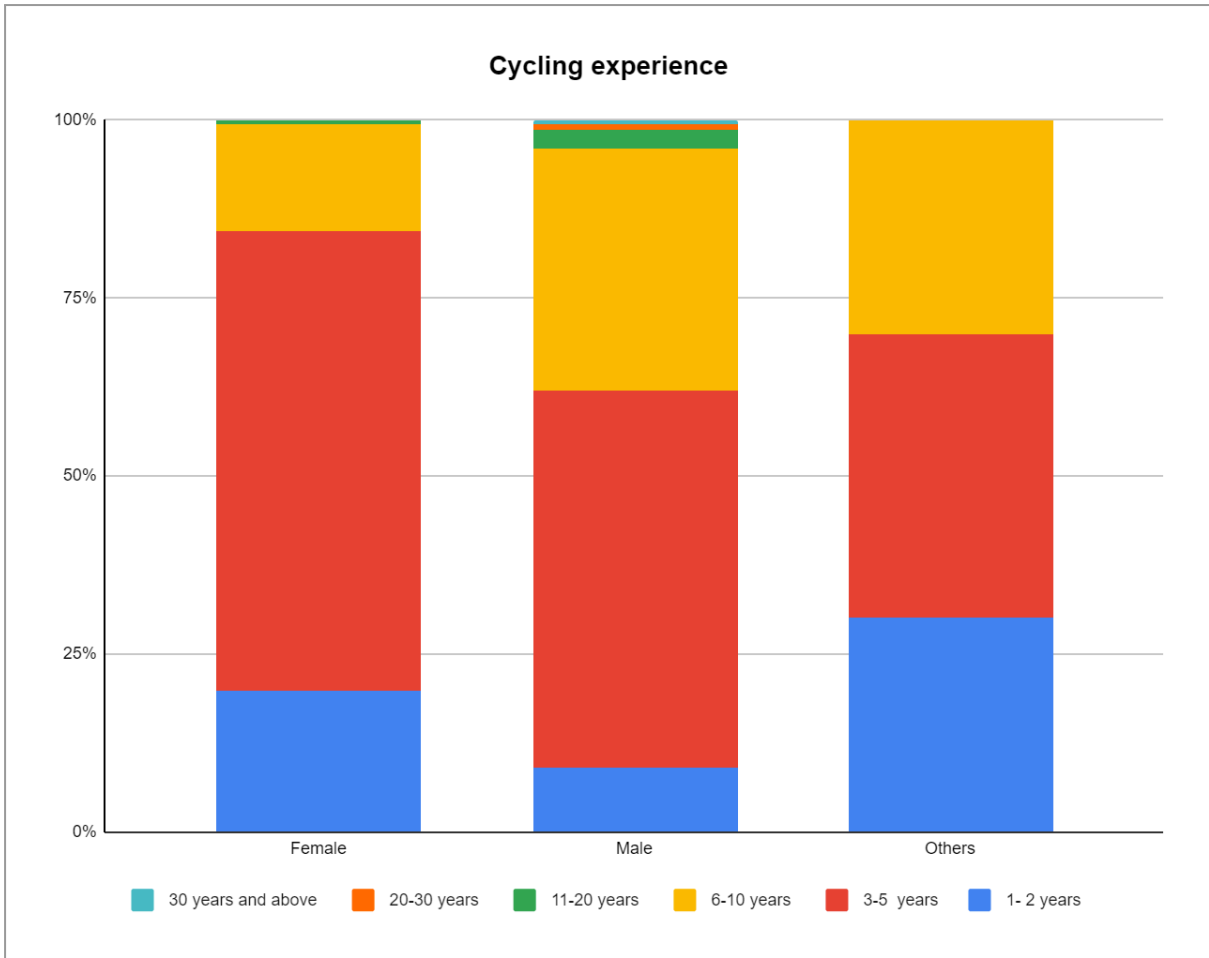


Figure 3 Cycling Experience Distribution Across Age and Gender of Survey Participants

Bicycle ownership

The survey reveals that there is no correlation between income and bicycle ownership among cyclists who ride for a living. The graph below depicts the distribution of cyclists by income levels and the types of bicycles they own. Bicyclists from a variety of socioeconomic backgrounds are able to own one. 468 individuals, or 97%, reported having a bicycle of their own or riding one that they borrowed from family. Only 2% of participants (9 people) use the bicycle their employer provides, and only 3 people rent bicycles from nearby shops. One study participant only had experience using a public bike sharing programme (SmartBike).

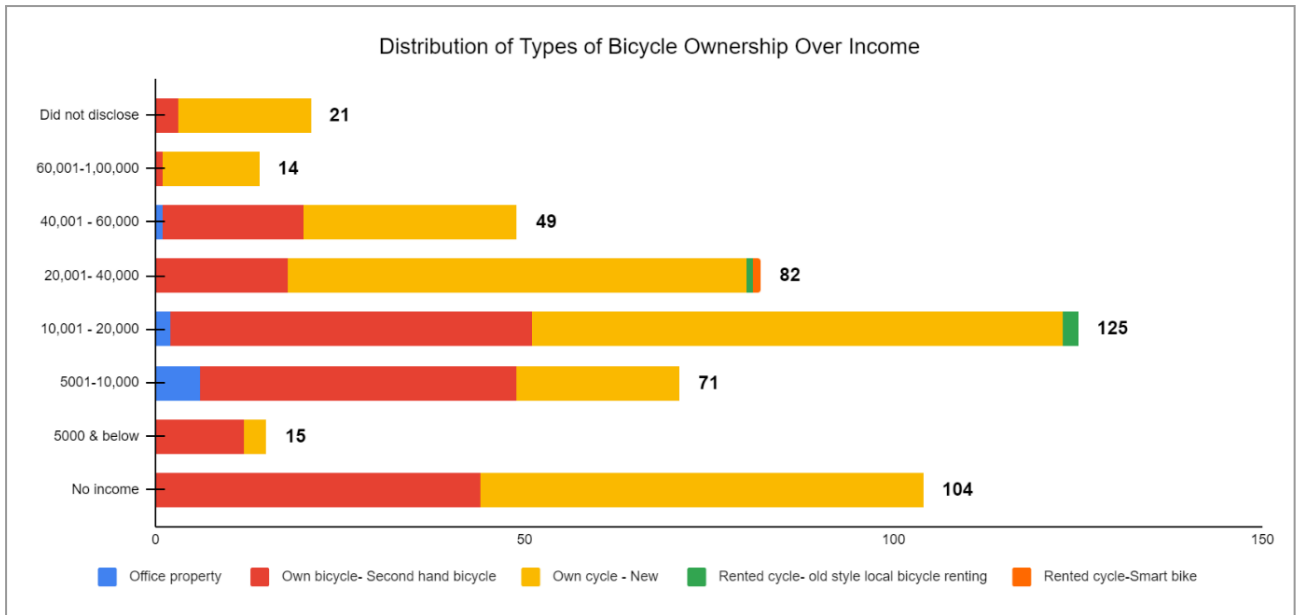


Figure 4 Types of Bicycle Ownership Over Different Income Groups

Respondents' Travel & Behavioural Data

Commute time

In order to identify the commuting patterns of livelihood cyclists, they were asked to elaborate on their commute patterns.

Approximately 44% of cyclists (of both genders) commute for between 30 and 60 minutes a day, on average. However, the average commute time varies by gender, with female participants spending less time on their cycles than male participants and taking fewer trips overall than male participants. 62% of female cyclists' commute for less than 60 minutes per day compared to 56% of male cyclists.

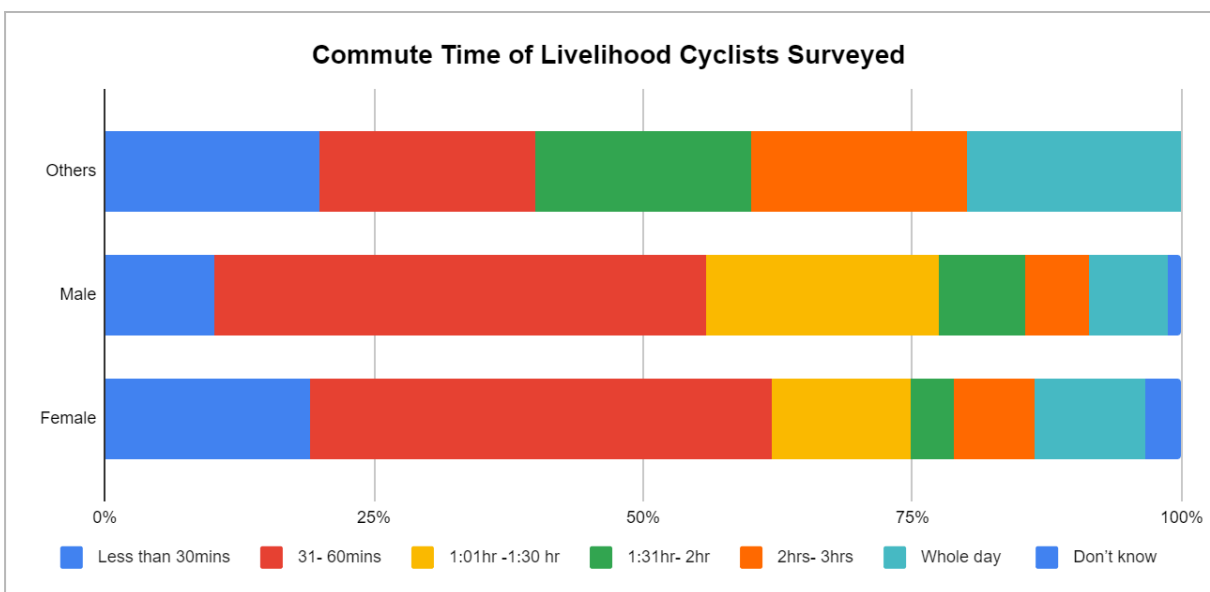


Figure 5 Commute Time of Livelihood Cyclists' that were surveyed

Travel pattern

Cycling is a fantastic first-last mile connection and short distance travel option. On average, the participants were asked if they rode their bicycles for the full commute or just the first and last miles. According to the findings, almost 82% of cyclists use their bicycles for the full commute, 6.7% for first- and last-mile connection, and the remaining cyclists use them for both.

According to the participants, there are less opportunities to use bicycles for first- and last-mile connectivity because there aren't enough secure parking spots for them. Additionally, parking facilities are available only in select stations in Chennai's metro system, and bicycles are not permitted inside metro stations. Suburban railways charge an additional fee for cyclists to ride in the designated compartment with their bicycles.

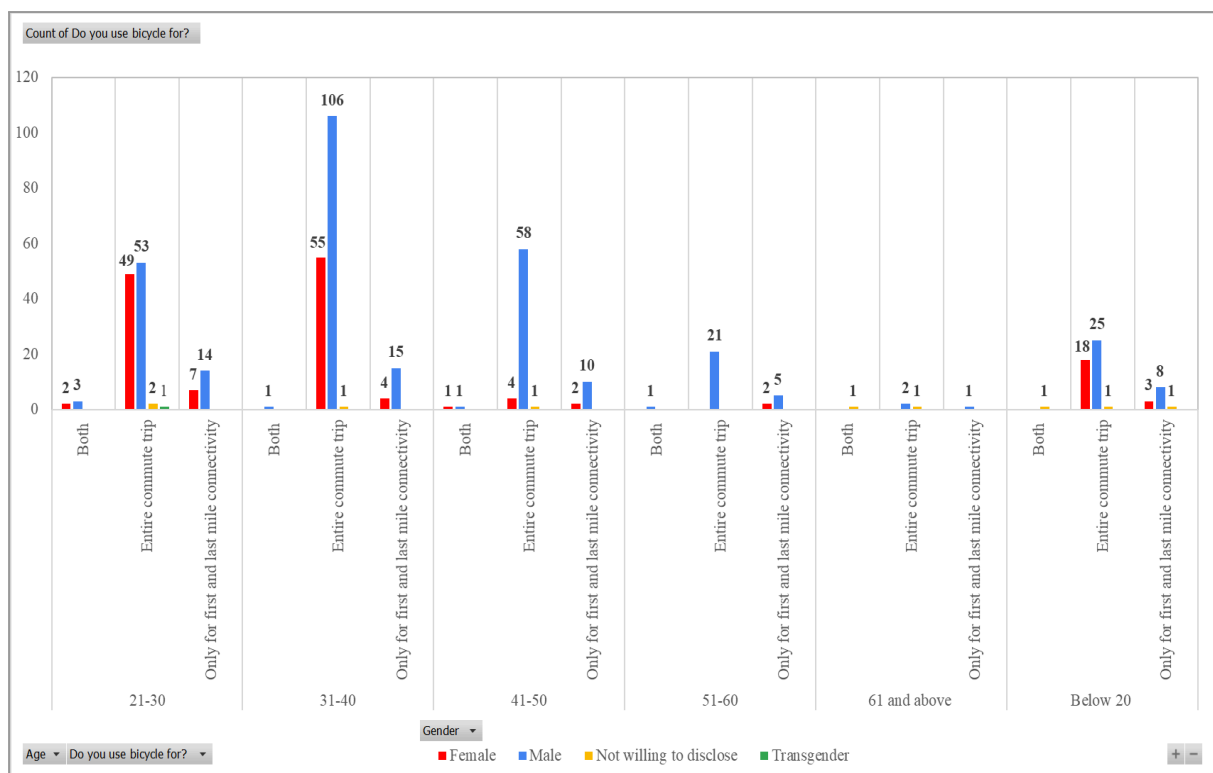


Figure 6 Bicycle usage statistics (entire commute vs first & last mile connectivity or for both) across respondents

In general, when choosing a route, 54% of cyclists choose local roads, 17% choose major roads, and the remaining 29% choose a combination of both. Women cyclists, as opposed to men, favour taking local streets when choosing their routes. A little over 60% of female cyclists have said that they prefer local roads to major ones. They report local routes as preferable because they have fewer vehicles and better conditions for cycling.

A little over 50% of male cyclists ride on local roads, and 34% of them favour a mix of local and main roads. A few cyclists claimed they choose their routes based on the shortest options, traffic-free roads, and familiarity with the surroundings, while a few others have begun using GPS to determine the fastest routes and for uncharted areas.

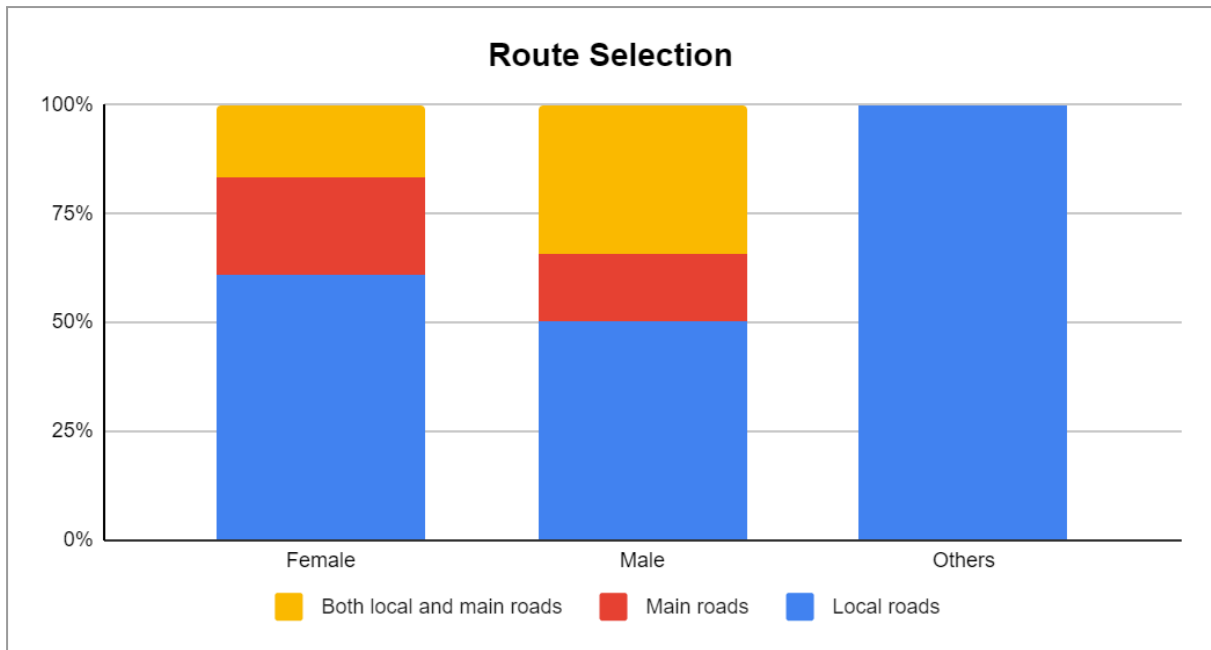


Figure 7 Route Selection of Livelihood Cyclists Surveyed

Road Infrastructure for Bicycles

Bicycle tracks & lanes

Cycling lanes are an essential infrastructure component that guarantees the security of motorists, cyclists, and pedestrians. In order to give cyclists a safe route, one of the first cycling tracks was paved in K K Nagar in 2017. But because it was only laid for 3.8km, it has had limited value. These are currently in poor condition and much of the stretch has been lost to motorists. Bicycle trails must be well-maintained and strictly policed for encroachments in order to be used effectively.

In order to promote cycling, the Chennai Smart City Limited provided a 17 km stretch of unique bicycle lanes in Chennai. Sardar Patel Road, Taluk Office Road, Velachery Main Road, Indra Nagar First Avenue, Second Avenue, Third Avenue, Kasturibai Nagar Third Cross Street, Durgabai Deshmukh Road, Brodies Castle Road, Besant Avenue Road, Besant Nagar Third Avenue, MG Road, Swamy Sivanantha Salai, Flag Staff Road, Napier Bridge, and Anna Salai are a few of the locations where bicycle lanes were installed³.

However, these remain scattered segments placing more emphasis on neighbourhood development than on a comprehensive plan for a citywide network.

According to the survey's findings, 68% of respondents claimed that their travel route lacked bicycle lanes. 13% of the participants say they've never heard of bicycle tracks. 19% of the participants have riding paths that include bike lanes of which only 5% of them find them safe and convenient to use.

³ Chennai Smart City Limited. "Bicycle Lane - Chennai Corporation." CSCL, 2019, <https://www.cscl.co.in/bicycle-lane>

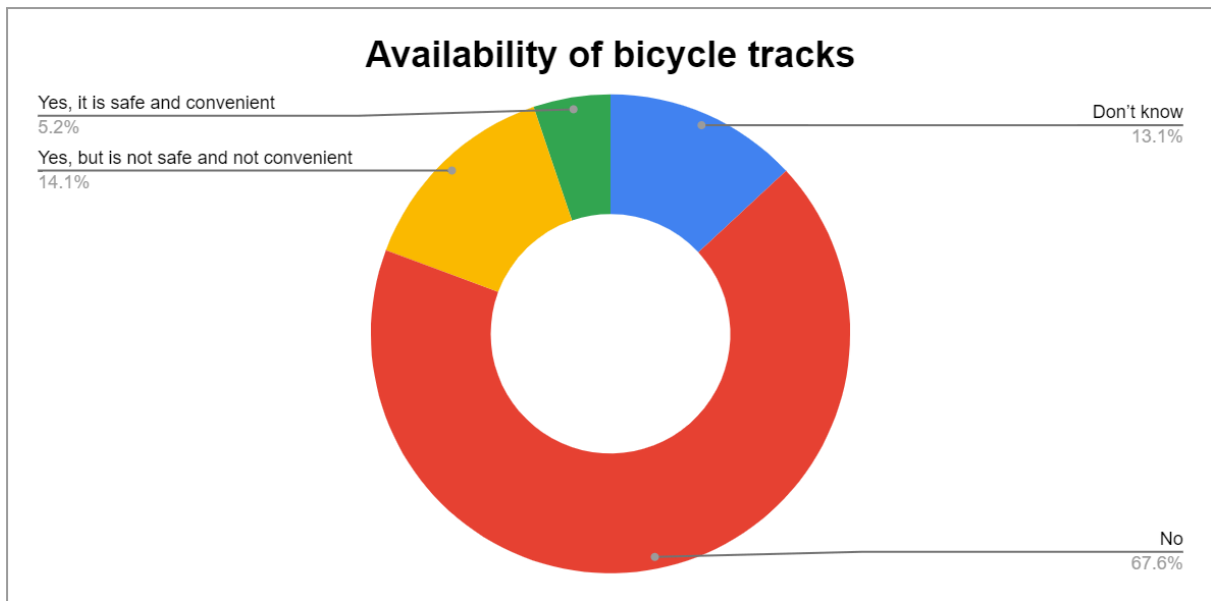


Figure 8 Availability of Bicycle Tracks / Lanes in Chennai

As reported, bicycle tracks are safe and convenient in the following localities, according to participants: Adyar, Besant Nagar, Guindy, Ambattur, Nungambakkam, Madipakkam, Thiruverkadu, Medavakkam, and Madurayol.

Bicycle tracks are unsafe and dangerous in the following locations, according to participants from those communities: Avadi, Ambattur, Teynampet, Mylapore, Nungambakkam, Poonamallee, Madipakkam, Medavakkam, Velachery, Thiruvanmiyur, Tondiarpet, Vyarsarpadi, Thiruverkadu, Villivakkam, and Kondungaiyur.

Provision for safe bicycle parking

The lack of safe bicycle parking in public areas is one of the main issues mentioned by the riders. It is extremely difficult for cyclists to find secure bicycle parking when they visit new places, which deters them from riding their bicycles there.

Bicycle maintenance

Availability of bicycle maintenance shops

Periodic cycle maintenance and repairs are necessary to ensure a smooth ride, cyclist safety, and long-term financial savings. Therefore, it is important that there are enough bicycle repair shops, ideally in the neighbourhood itself. According to the study's findings, 10% of cyclists find it very easy to discover a bicycle shop, and 47% of participants think it's easy to find a business that provides bicycle repair. However, when cycling to new places, cyclists find it difficult to locate bicycle repair shops. As might be predicted, cycling expertise has no bearing on one's ability to find bicycle repair, as the graph below demonstrates.

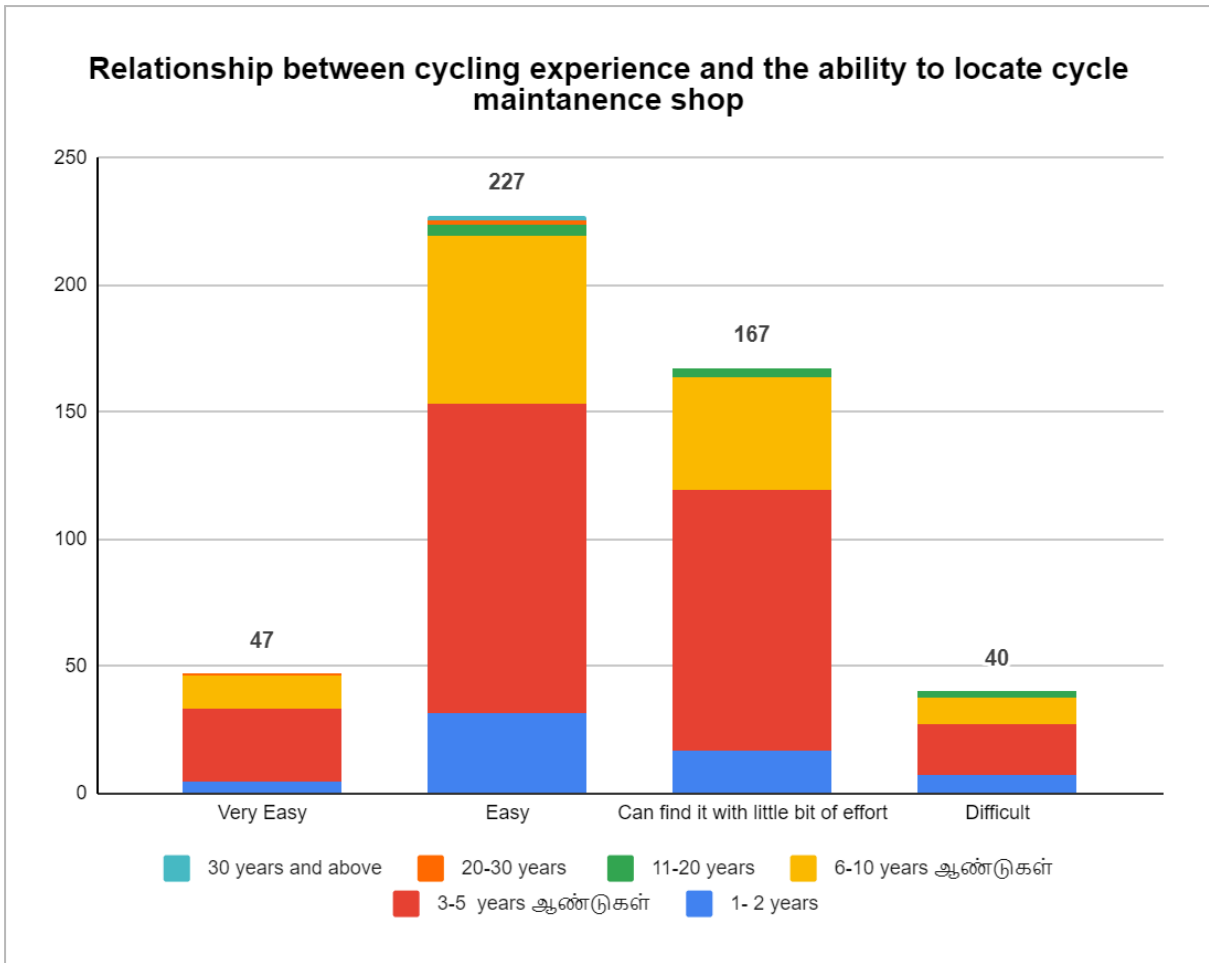


Figure 9 Ease of locating a bicycle shop

While local bicycle repair shops were the norm, this has changed significantly over the years, with the takeover by motor vehicles. We therefore surveyed 70 owners of bicycle repair shops in Chennai to better understand the growth dynamics and changes in the cycling culture. According to this study, 44% of the store owners had been in operation for between 4 and 10 years. Fewer than 5% of business owners have operated for over 29 years. Approximately 87% of bicycle store owners work full-time in their establishments. The remaining 13% operate their bicycle repair shop part-time to supplement their revenue from other sources. About 16% of bicycle shop owners have witnessed new maintenance shops opening, while the remaining 84% of owners of bicycle shops reported that no new bicycle stores had opened in their neighbourhood. As reported by those surveyed, the tools and materials needed to maintain the new model cycles are only available in these new maintenance and repair facilities.

The shop owners have also stated that men of all ages, in age categories spanning from young to middle-aged, make up a majority of their clientele. The histogram below shows the breakdown of clients in various shops. Around 43% of bicycle repair shop owners anticipate 0-60 regular customers per month.

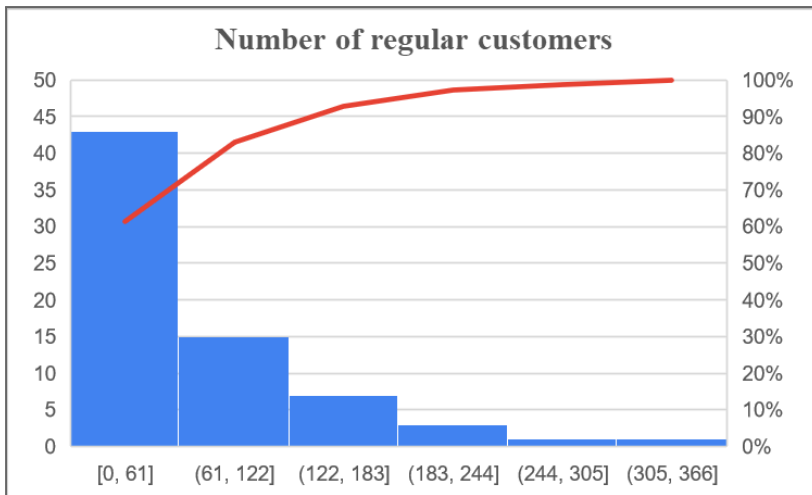


Figure 10 Number of regular customers in a month

The owners of bicycle shops were questioned regarding their perceptions of an increase or decline in bicycle users in order to better understand the rise and fall of the cycling culture in Chennai. 77% of the store owners perceived a decline in bicycle users over time. The remaining 13% of the shop owners reported a rise, particularly in leisure and fitness cyclists. One owner of a bicycle repair shop claimed to have observed more college students riding bicycles.



One of the many bicycle maintenance shops in Chennai | CAG

The daily average profit is around 500-1000 rupees per day depending on the popularity of the shop.

Technological advancement in the bicycle industry

As modern bicycles appear on the market, the ability of traditional shop keepers to manage and fix these vehicles is limited. This in turn, impacts their business. As cyclists are aware of these limitations, they prefer to take their vehicles straight to the manufacturers. Sports bicycles, imported bicycles, and high-end bicycles, which call for advanced knowledge and tools, frequently undergo this type of migration from neighbourhood repair shops to manufacturer service centres.

Below is a list of some of the concerns reported by shop owners, with regards to staying abreast of technological advancement:

1. Modern bicycles on the market require sophisticated tools and apparatus for repair, which traditional shop owners lack access to. They report that these are difficult to buy on the market.
2. Customers rely on most of the branded bicycles' in-house service centres for any services the neighbourhood maintenance shops cannot offer.

Cyclists' concerns

Issues faced while cycling

Anecdotal evidence obtained as part of the survey shows that cycling for recreation and fitness has increased significantly in India over the past few years. According to an Ipsos worldwide poll, 2 in 3 (67%) urban Indians bike at least once per week, which is the highest rate globally⁴. In India, the fundamental issue is still the safety of cyclists. In this study, cyclists were asked to identify some of the frequent problems and hazardous circumstances they have encountered on the roads.

Generally, all age groups and genders reported similar problems, as documented below:

Existing Infrastructure

1. Bad road conditions are one of the biggest problems cyclists encounter.
2. Uneven surfaces on roads are a result of poor road conditions, including potholes, open manholes, excavation work, and water stagnation.
3. Riding at night is challenging and dangerous in some places because of poor lighting.
4. The absence of cycle lanes or separated lanes forces cyclists to share the road with moving vehicles.
5. Cycling on the flyover presents additional challenges because it requires more effort to pedal on an incline.

⁴ Bhatia, Madhurima. "Globally India Tops in Those Who Ride a Bicycle at Least Once a Week: Ipsos Global Advisor Cycling Across the World Survey 2022." *IPSOS*, June 2, 2022
<https://www.ipsos.com/en-in/globally-india-tops-those-who-ride-bicycle-least-once-week-ipsos-global-advisor-cycling-across>

6. Cycling groups frequently claim that theft of bicycles is an issue, which makes cyclists fearful of parking their bikes in unfamiliar locations.
7. Only 5% of participants have used smart bikes, and those who have typically ride are between the ages of 18 and 30. It requires sufficient technological know-how as well as resources like a smartphone to hire a smart bike.

Driver Behaviour & Safety

8. Unsafe driver behaviour comes right after bad road conditions as one of problems cyclists encounter. These include behaviours exhibited by motorists such as unsafe overtaking, speeding, disorderly behaviour, honking and a general lack of safety.
9. Traffic jams and road rule infractions continue to be major contributors to accidents on the road.
10. Automobile honking causes unwanted disputes amongst drivers.
11. The inability of drivers and pedestrians to hear cycle bells makes it challenging for cyclists.
12. Since there are motorised vehicles travelling at varying speeds and swerving dangerously close to cyclists, crossing major roads and intersections is very challenging for cyclists. Additionally, cyclists claim that while they are awaiting signals, they are frequently struck by other vehicles.

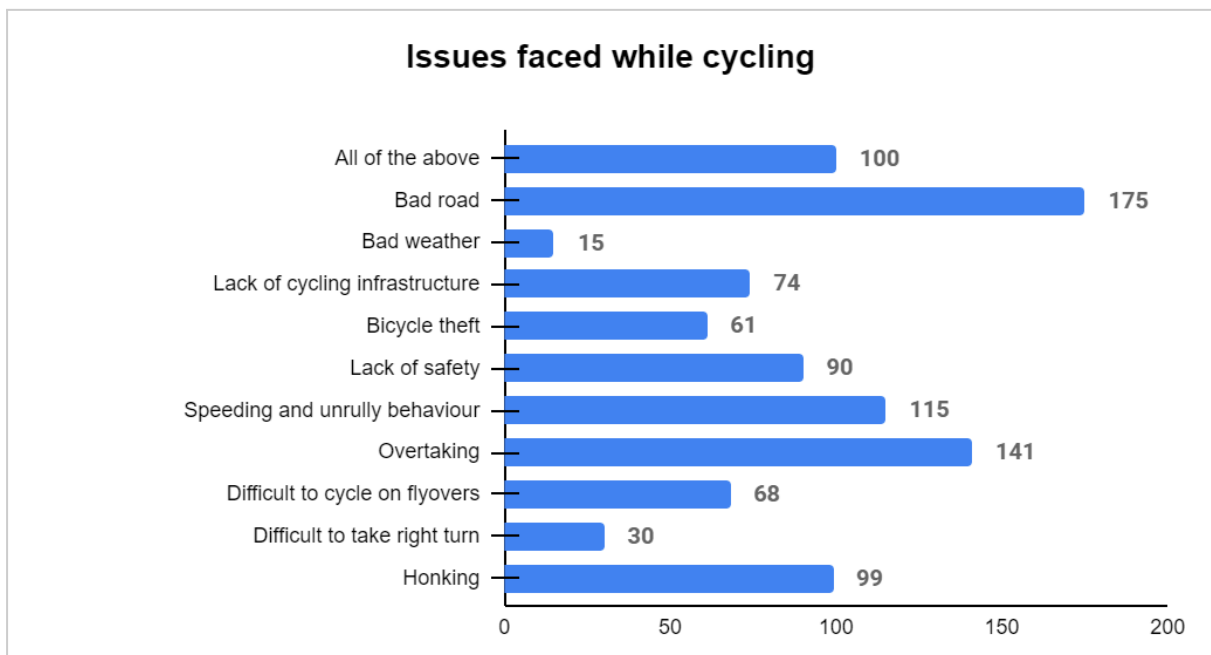


Figure 11 Common issues faced by cyclists on roads in Chennai

One of the cyclists said that “Our lives are at stake. Even if we follow the rules, that will not guarantee our safety.”

There are societal and infrastructure challenges unique to women cyclists. Their use of cycles is impacted by the gender conventions that are still prevalent in our society. For instance,

spouses or parents may be reluctant to allow women to start cycling or may even place limitations on where they can ride. When cycling, women are more likely to experience harassing behaviours from male cyclists such as swerving dangerously near to them. Sometimes the roads that feel safer to travel on in the morning feel unsafe at night. Women who ride bicycles also mentioned that their attire can occasionally get in the way of cycling safely.

Cyclists' accidents on the road

Road accidents study conducted by MoRTH shows that around 2.9% of people who lost their lives in road accident deaths in 2022 were cyclists⁵. Pedestrians and cyclists frequently take a bigger hit in traffic collisions, and their fatality rates are high.

The findings of this survey indicate that, regardless of gender, about 21% of cyclists had experienced an accident at least once in their lives. According to cyclists, the following are some of the main causes of accidents:

Inadequate Infrastructure

1. During rainy seasons, there are many potholes and stagnant water on the roads. The rainwater that collects in the potholes during monsoon seasons makes cycling problematic.
2. Poor visibility at night due to inadequate street lighting increases the risk of accidents.
3. Uncovered stormwater drains and sewage canals
4. Unwanted interactions with other vehicles that might threaten cyclists' safety.

Unsafe behaviour from motorists

5. On the road, reckless and erratic driving practices lead to dangerous collisions.
6. Because they typically drive on the far left of the road, drivers who drive on the wrong side of the road are particularly dangerous for cyclists.
7. Abrupt overtaking and right or left turns without proper signalling, especially with drivers of two-wheelers and shared vehicles.
8. Vehicle passengers can be careless by opening the door of the vehicle without first checking themselves in the mirror.
9. Animals, people, and vehicles suddenly cross the road without any notice.

Vehicle Failure

10. Accidents can also be caused by mechanical issues, like brake failure.

⁵ Rep. *Road Accidents in India 2022*, Ministry of Road Transport and Highways (Transport Research Wing), Government of India, October 2023. https://morth.nic.in/sites/default/files/RA_2022_30_Oct.pdf

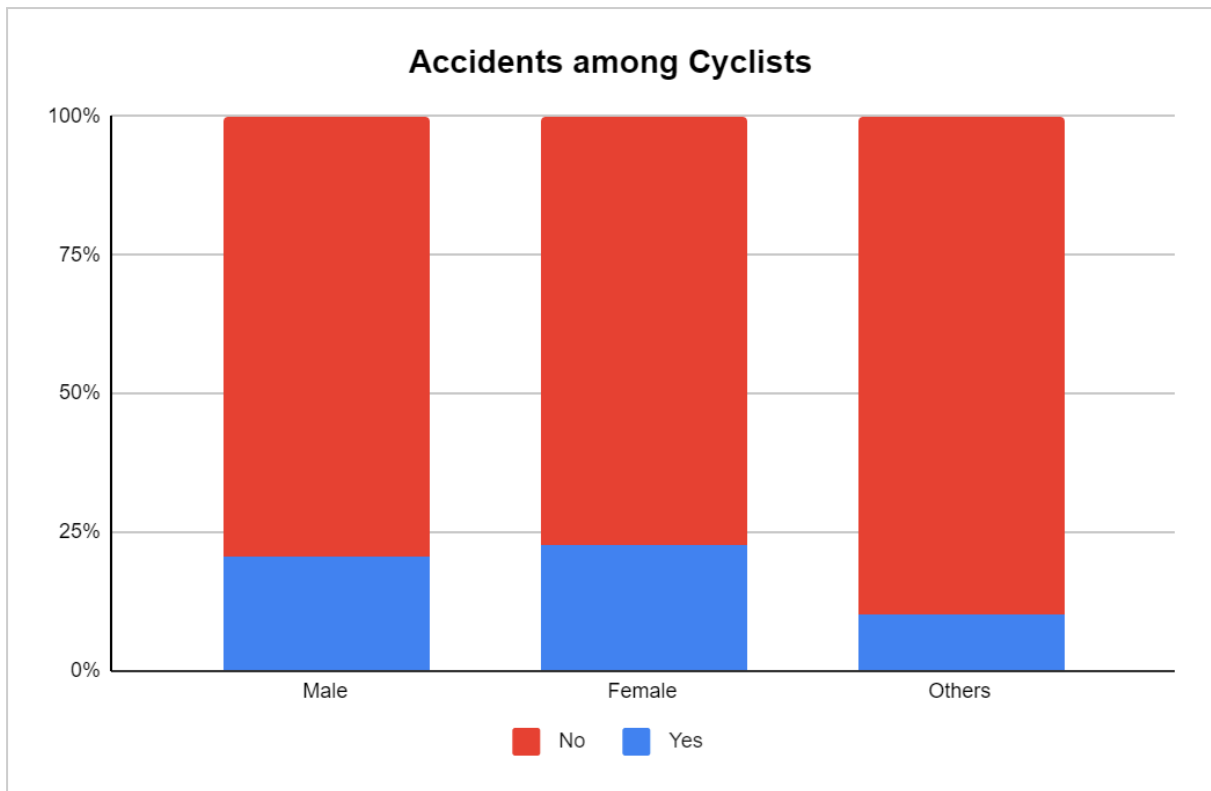


Figure 12 Accident rate among cyclists surveyed

Recommendations

Based on the survey data and problems identified by the livelihood cyclists themselves, these are some of the actions that need to be taken in order to promote cycling, enhance bicycle infrastructure and to improve the safety of cyclists.

Map existing bicycle networks and maintenance shops

Existing bicycle lanes and infrastructure needs to be mapped, before planning for increasing bicycle infrastructure. City-wide surveys and studies are required to identify cycling routes frequented by cyclists. It becomes vital to identify these gaps before planning to address them. This would provide direction and guidance when overlapped with the routes and population clusters utilising bicycles everyday in the city.

Segregated bicycle lanes and city-level bicycle network plan

Given the mixed traffic on our roads, segregated bicycle lanes are necessary because bicycles move at a slower speed than motorised vehicles. This could reduce conflicts and accidents involving various road users. In order to prevent the abuse of bicycle lanes, strict enforcement is needed. In addition, a city level bicycle network plan needs to come in place, such that bicycles are prioritised on these roads.

Increase in safe bicycle parking

Bicycle usage declines, particularly when travelling to new places, due to inadequate bicycle parking and widespread bicycle theft. It is vital to permit and facilitate bicycle parking areas in public transportation to build successful first and last-mile connections using bicycles. For instance, the Chennai Metro does not permit bicycles inside the train itself.

Improve road conditions It is exceedingly challenging for cyclists to pedal because of the rise in flyovers and poor road surfaces. While better road conditions may benefit all road users, the ease of cycling will especially be improved.

Inclusive public bicycle-sharing system

Several locations in Chennai have bicycle-sharing programs from CMRL and Smart Bike. However, renting one of these bikes is currently a laborious process that uses a lot of resources and isn't intended for all user groups. This needs to be addressed.

Promote and incentivize bicycle usage

The traffic regulations that remain in force must be in the cyclists' favour. Bicycle usage needs to be encouraged by supporting policies and laws that promote effective utilisation of cycles such as providing cyclists the right of way, de-incentivizing private motorised transport in certain stretches of the city during specific time periods, collaborating with private companies to promote cycling to work, and providing options to carry bicycles in metros, trains or buses during non-peak hours, along with parking provisions.

Education goes a long way in sensitising people towards the needs of cyclists. Equally, it is also important that cyclists are aware of their rights on roads. Without these, our roads will continue to be dominated by motor vehicles, which pollute, cause congestion and accidents and are not an equitable form of transport.

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ANNEXURE

CYCLE USER SURVEY Demographic information

1. Current location (example:. Adyar, Tondiarpet, Porur,etc.,) (இடம்)_____
2. Gender (பாலினம்)
 - a. Male (ஆண்)
 - b. Female (பெண்)
 - c. Transgender (திருநர்)
 - d. Do not want to disclose (வெளிப்படுத்த விருப்பமில்லை)
3. Age (வயது)
 - a. Below 20 (20 வயதிற்குக்கீழ்)
 - b. 21-30
 - c. 31-40
 - d. 41-50
 - e. 51-60
 - f. 61 and above (61 வயதிற்க்குமேல்)
4. Profession (தொழில்)
 - a. Working professional (தொழில்முறை வேலை)
 - b. Plumbing, electrician, carpenter (பிளம்பிங், எலக்ட்ரீஷியன், கார்பென்டர்)
 - c. Construction worker (கட்டுமான தொழிலாளி)
 - d. MSME workers (MSME தொழிலாளர்கள்)
 - e. Newspaper distributor (செய்தித்தாள் விநியோகஸ்தர்)
 - f. Postal services (தபால் சேவைகள்)
 - g. Security/Watchman(பாதுகாப்பு/வாட்ச்மேன்)
 - h. Self employed (சுயதொழில்)
 - i. Laundry service (சலவை சேவை)
 - j. Small shop vendors (சிறு கடை வியாபாரிகள்)
 - k. Office assistant (அலுவலக உதவியாளர்)
 - l. Student (மாணவர்)
 - m. Homemaker (இல்லத்தரசர்/இல்லத்தரசி)
 - n. Job seeker (வேலைதேடுபவர்)
 - o. Retired (ஓய்வுபெற்றவர்)
 - p. Others (மற்றவை) _____
5. Monthly income (வருடாந்திர வருமானம்)
 - a. No income/ unemployed/ student (வருமானம்/ வேலையில்லாதவர்/மாணவர் இல்லை)
 - b. 5000 & below கீழே
 - c. 5001-10,000
 - d. 10,001 - 20,000
 - e. 20,001- 40,000
 - f. 40,001 - 60,000
 - g. 60,001-1,00,000

- h. 1,00,001 and 2,00,000
 - i. 2,00,001 and above மற்றும் மேல்
 - j. Do not want to disclose (வெளிப்படுத்த விருப்பமில்லை)
6. How long have you been cycling? (எவ்வளவு காலமாக மிதிவண்டி உபயோகிக்கிறீர்கள்?)
- a. 1- 2 years ஆண்டுகள்
 - b. 3-5 years ஆண்டுகள்
 - c. 6-10 years ஆண்டுகள்
 - d. 11-20 years ஆண்டுகள்
 - e. 20-30 years ஆண்டுகள்
 - f. 30 years and above ஆண்டுகள் மற்றும் அதற்கு மேல்
7. Bicycle ownership (சைக்கிள் உரிமை)
- a. Own cycle - New (can be owned by a family member) சொந்த சைக்கிள் - புதியது (குடும்ப உறுப்பினருக்குச் சொந்தமானது)
 - b. Own bicycle- Second hand bicycle (சொந்த சைக்கிள் - பழைய சைக்கிள் வாங்கியது)
 - c. Rented cycle-Smart bike (வாடகை சைக்கிள் - ஸ்மார்ட் பைக்)
 - d. Rented cycle- old style local bicycle renting (வாடகை சைக்கிள் - பழைய பாணி உள்ளூர் சைக்கிள் வாடகை)
 - e. Office property (அலுவலக சொத்து)
 - f. Others

Cyclist Information

8. What is your trip purpose? உங்கள் பயண நோக்கம் என்ன?(select all that apply)
- a. I use bicycle for work (eg. like delivery, selling tea, etc.) (நான் வேலைக்கு சைக்கிளைப் பயன்படுத்துகிறேன் (எ.கா. டெலிவரி, டீ விற்பது போன்றவை))
 - b. Education (கல்வி)
 - c. To reach office (அலுவலகத்தை அடைய)
 - d. Shopping (கடையில் பொருட்கள் வாங்குதல்)
 - e. Escorting(pick up/ escorting, etc.,) எஸ்கார்டிங் (பிக் அப் / எஸ்கார்டிங், முதலியன.)
 - f. For exercise and sports (உடற்பயிற்சி மற்றும் விளையாட்டுக்காக)
 - g. Recreational/ leisure (பொழுதுபோக்கு / ஓய்வு)
 - h. Others _____
9. What is your average commute time in a day using your bicycle? (உங்கள் சைக்கிளைப் பயன்படுத்தி ஒரு நாளில் உங்கள் சராசரி பயண நேரம் என்ன?)
- a. Less than 30 mins
 - b. 31- 60 mins
 - c. 1:01hr -1:30 hr

- d. 1:31 hr- 2hr
e. 2hrs- 3hrs
f. Whole day (நாள் முழுவதும்)
g. Others _____
h. Don't know (தெரியாது)
10. Do you use bicycle for? (நீங்கள் சைக்கிள் பயன்படுத்துவது?)
a. Entire commute trip ((முழு தூர பயணம்)
b. Only for first and last mile connectivity (புறப்படும் மற்றும் சேருமிட இணைப்புக்கு மட்டுமே)
c. Others _____
11. What is your bicycle maintenance cost per year? (உங்கள் சைக்கிள் பராமரிப்பிற்கு ஒர் ஆண்டுக்கு ஆகும் செலவு?)
a. 1000 and below (1000 மற்றும் ஆதற்கும் கீழே)
b. 1001-2000
c. 2001-4000
d. 4001-6000
e. 6001-10,000
f. 10,000 and above (10,000 மற்றும் அதற்கு மேல்)
12. How easy is it to find a cycle maintenance/ shop on a regular basis? (வழக்கமாக ஒரு சைக்கிள் ரிப்பேர் கடையை கண்டுபிடிப்பது எவ்வளவு எளிது?)
a. Very Easy (மிக எளிதாக)
b. Easy (சுலபம்)
c. Can find it with little bit of effort (கொஞ்சம் முயற்சி செய்தால் கண்டுபிடிக்கலாம்)
d. Difficult (கடினமானது)
e. Very difficult (மிகவும் கடினம்)
13. What is the reason for using bicycle? சைக்கிள் பயன்படுத்துவதற்கான காரணம் என்ன?
a. Part of the job (வேலையின் ஒரு பகுதி)
b. Health benefits (உடல் நலன்)
c. Convenient (வசதி)
d. Saves time (நேரத்தை மிச்சப்படுத்துகிறது)
e. Saves money (பணத்தை சேமிக்கிறது)
f. Environmentally friendly (சுற்று சுழல் பாதுகாக்க)
g. To maintain social distancing (சமூக இடைவெளியை கடைபிடிக்க)
h. Others _____
14. What are the threats/ issues you have faced while cycling? (சைக்கிள் ஓட்டும்போது நீங்கள் எதிர்கொண்ட அச்சுறுத்தல்கள்/சிக்கல்கள் என்ன?)
a. Honking (அதிக ஒலி எழுப்பதல்)
b. Not being able to take a right turn (வலதுபுறம் திரும்ப முடியவில்லை)
c. Difficulty cycling on flyovers (மேம்பாலங்களில் சைக்கிள் ஓட்டுவதில் சிரமம்)

- d. Overtaking (முந்துதல்)
- e. Speeding/unruly behaviour of other drivers (மற்ற ஓட்டுனர்களின் வேகம்/கட்டுப்பாடற்ற நடத்தை)
- f. Lack of safety (பாதுகாப்பு இல்லாமை)
- g. Bicycle theft (சைக்கிள் திருட்டு)
- h. Lack of cycling infrastructure (சைக்கிள் ஓட்டுவதற்கான உட்கட்டமைப்பு இல்லாதது)
- i. Bad air/weather (மோசமான காற்று/வானிலை)
- j. Bad road (மோசமான சாலை)
- k. All of the above
- l. Others _____

15. Are there any bicycle tracks available on your route? (உங்கள் பாதையில் ஏதேனும் சைக்கிள் தடங்கள் உள்ளனவா?)
- a. Yes, it is safe and convenient (ஆம், இது பாதுகாப்பானது மற்றும் வசதியானது)
 - b. Yes, but is not safe and not convenient (ஆம், ஆனால் பாதுகாப்பானது மற்றும் வசதியானது அல்ல)
 - c. No(இல்லை)
 - d. Don't know (தெரியாது)

Road safety

16. How do you select your bicycle route? (Eg. Do you choose the local road network/ main road)? உங்கள் சைக்கிள் வழியை எவ்வாறு தேர்வு செய்வது? (எ.கா. நீங்கள் உள்ளூர் சாலை நெடுவொர்க்க/ பிரதான சாலையைத் தேர்வு செய்கிறீர்களா?) _____
17. Have you ever met with an accident while riding the bicycle? If yes, what do you think is the leading factor? (நீங்கள் எப்போதாவது சைக்கிள் விபத்தில் சிக்கியுள்ளீர்களா? ஆம் எனில், முக்கிய காரணி எது?) _____
18. What steps should the government and general public should take to ensure the safety of cyclists and cycles? (சைக்கிள் ஓட்டுபவர்களின் பாதுகாப்பை உறுதி செய்ய அரசும் பொதுமக்களும் என்ன நடவடிக்கை எடுக்க வேண்டும்?) _____

Smart bike-bicycle sharing

19. Have you used smart bike bicycle sharing in Chennai?(சென்னையில் ஸ்மார்ட் பைக் சைக்கிள் ஷேரிங் பயன்படுத்தியுள்ளீர்களா?)
- a. Yes(ஆம்)
 - b. No(இல்லை)
20. State the advantage/ disadvantage of using the smart bike app ஆம் எனில், ஸ்மார்ட் பைக் பயன்பாட்டைப் பயன்படுத்துவதன் நன்மையைக்

குறிப்பிடவும் _____

21. Name (பெயர்)[OPTIONAL] _____

22. Phone number(தொலைபேசி எண்) [OPTIONAL] _____

23. Email address (மின்னஞ்சல்)[OPTIONAL] _____

BICYCLE MAINTENANCE SHOP OWNER SURVEY

1. For how many years are you running this business? (எத்தனை ஆண்டுகளாக இந்த தொழில் செய்கிறீர்கள்?) (in years)
2. Are you running this business on a full-time basis or part-time basis? (இது முழுநேர தொழிலா / பகுதி நேர தொழிலா?)
 - a. Full time
 - b. Part time
 - c. Others
3. What are the average age and gender groups are your customers? (தங்கள் வாடிக்கையாளர்களின் சராசரி வயது மற்றும் பாலினம்?)
4. How many regular customers come to your shop in a month(approximate range)? (ஒரு மாதத்திற்கு எத்தனை வழக்கமான வாடிக்கையாளர்கள் தங்கள் கடைக்கு வருவர்?)
5. Do you think the number of people(including students) using bicycles has increased/ decreased over a period of time? (கடந்த காலங்களில் சைக்கிளை பயன்படுத்துபவர்களின் எண்ணிக்கை உயர்ந்துள்ளது/குறைந்துள்ளது. நீங்கள் என்ன நினைக்கிறீர்கள்?)
6. What is the most common type of service required from customers? (பெரும்பாலும் வாடிக்கையாளர்களுக்கு எந்த சேவை தேவைப்படுகிறது)
7. How is the profit compared to previous years? (கடந்த ஆண்டுகளை ஒப்பிடும்போது லாபகரமானதாக உள்ளதா?)
8. Has the technological development in the bicycle industry affected your business in any way? (சைக்கிள்களில் தொழில்நுட்ப வளர்ச்சி தங்கள் தொழிலை எவ்வகையிலாவது பாதித்துள்ளதா?)
9. How much profit do you earn every day, compared to when you started your business? (இத்தொழிலின் ஆரம்பித்த காலத்தை ஒப்பிடும்போது, நாளொன்றுக்கு எவ்வளவு லாபம் ஈட்டுகிறீர்கள்?)
10. Do you see any new bicycle maintenance shops opened in your area? If yes, what new services do they provide/ new equipment do they have? (தங்கள் பகுதியில் ஏதேனும் புதிய சைக்கிள் ரிப்பேர் கடை ஆரம்பிக்கப்பட்டுள்ளதா? ஆம் எனில், எந்த புதிய சேவை அல்லது புதிய உபகரணம் அவர்களிடம் உள்ளது?)
11. Any comments/interesting facts given by the bicycle shop owners? Elaborate it.(சைக்கிள் கடை உரிமையாளர்களால் ஏதேனும்

கருத்துகள்/சுவாரஸ்யமான தகவல்கள் உள்ளனவா? அதை
விரிவாகக் கூறுங்கள்.)

12. Name and address of the shop. (கடையின் பெயர் மற்றும் முகவரி)



CAG

Citizen consumer and civic Action Group

Citizen consumer and civic Action Group

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