



Survey of *Delhi* - **Livelihood Cyclists in** Opportunities and Challenges



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Findings at a Glance

01 Using Cycle as Primary Mode of Transport

Over **90%** respondents used cycle as a primary mode of transport.

02 Frequency of Cycle Usage for Transportation

Around **91%** respondents reportedly used their cycles every day to commute. The frequency of cycle usage for commuting was highest among skilled workers (**94%**) and lowest among unskilled workers (87%).

03 Distance of Residence from Primary Job Location

Around **29%** respondents had to travel for more than 8 km by cycle (8 to 12 km-15%, More than 12 km-14%) from their residence to their primary job locations.

04 Challenges Faced in Cycling

Feeling unsafe while cycling in absence of proper infrastructure and dedicated cycling lanes was the major concern stated by nearly half of the sample respondents while **47%** feel upset at the unruly behavior of other drivers. Other worries included; probability of theft of their cycles (37%) and bad weather (32%).

05 Willingness for Using Cycle for Transportation

A whopping majority of the respondents (**97%**) were willing to use cycles as a mode of transportation everyday if it were made safe and convenient.

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Ownership of Cycle

Nearly **93%** respondents owned cycles while **7%** hired it on rental basis for commuting to their work places.

Reasons for Using Cycle for Transportation

Saving money appeared to be one of the main reasons for using cycles as cited by **67%** respondents while **32%** cycled to work for its health benefits.

Distance Covered for Marketing Job

Nearly **15%** of the respondents with marketing jobs had to travel beyond 10 km by cycle (10 to 15 km - 11%, More than 15 km - 4%) while **35%** covered a distance of 5 to 10 kms by cycle every day.

Encouraging Factors for Using Cycle

Majority of the respondents were of the view that more designated cycle lanes and separate pathways for cyclists and pedestrians would motivate them to use cycles more often.

01

Context and Rationale

Urban road infrastructure in India is biased in favour of motorised vehicles. This is on account of lack of a reaction to extremely high growth in motorized vehicles in urban India in the last two decades. While the population of India's six major metropolises increased by about 1.9 times during 1981 to 2001, the number of motor vehicles went up by over 7.75 times during the same period (Ministry of Urban Development, 2007, pp. 1-2). Two decades ago, a third of commuting in 80 Indian cities was done on bicycles, but by 2007 this average had fallen to 12%. It is likely to drop further "given that Indian cities are not taking any significant initiatives to create a safe cycling environment¹.

Bicycle users have no rights on the road. They are forced to either remain on the sides with tattered edges making cycling unsafe or they have to ride on the road space meant for motorised traffic. Many are found riding on the middle of the road and motorised vehicle drivers consider them to be hindrances on the road. These hazardous practices are unsafe for the cyclists and slow down the entire traffic. Most cyclists risk their lives every day in a city where roads, service roads, arterial roads, lanes, even footpaths, are chock-a-block with vehicles. With about 10 million vehicles jostling for space on the roads, two cyclists are said to lose their lives every week on an average, according to a study by the Centre for Science and Environment (CSE). Many cyclists prefer to travel in groups to fight what they call the 'tyranny of motorists', and demand their share of space on the roads. It is not unusual to see such groups commuting to work together so they can help each other if they run into trouble.

The lack of a cycling ecosystem and infrastructure in India prevent many urban citizens from switching to this eco-friendly mode of transport. On India's roads 16 fatalities take place every hour and cyclists are among those most vulnerable among the road users apart from 2-wheeler riders and pedestrians. According to the Ministry of Road Transport and Highways Data, 2015 report, the Vulnerable Road Users make up for 46.3% of the total fatalities². With a mix of slow- and fast-moving traffic on the roads, travel by bicycle and rickshaws is very unsafe, and road fatalities of cyclists are on the rise every year.

In spite of the various odds and challenges for the cyclists, cycling has been a major mode of mobility in India and this is largely because bicycles play a major role in enabling livelihoods of the urban poor by providing a cost-effective transport option.

In Delhi, every day, lakhs of people - vendors, shop helps, factory workers, daily labourers, peons cycle to work, braving the maddening Delhi traffic, bullying motorists, harsh weather and pollution in a city often dubbed as one of the most dangerous in the world for cyclists. For them, it is not recreational cycling - rather, it is the only way they can reach their workplace. About 30.6% of the Delhi's households own a bicycle, and about 11% of its working population cycles to work, according to the 2011 census³. Most of those who cycle to work say they cannot afford public transport. But, Unfortunately the growth of cycling has been constrained because of no or limited cycle infrastructure.

1 <https://timesofindia.indiatimes.com/city/delhi/Less-than-4-of-commuting-in-Delhi-done-on-cycles-now/articleshow/41053944.cms>

2 <https://sites.ndtv.com/roadsafety/cycling-india-worth-risk-2482/>

3 <https://www.hindustantimes.com/delhi-news/the-daily-life-of-a-cyclist-in-delhi-tough-and-tortuous/story-UXBTWqG39g-JGArQDnggeXI.html>

02

The 'Livelihood Cyclists' Survey

Considering the challenges faced by the cyclists on road in the absence of infrastructure and a proper ecosystem for cycling, CEED (Centre for Environment and Energy Development)⁴ along with other likeminded and environmental sector organisations i.e. Purpose Climate Lab⁵ and ASAR Social Impact Advisors⁶ conceptualised and conducted a survey among the 'Livelihood Cyclists' in Delhi under their initiative called 'Cycle Chalegi, Dilli Badhegi'.

The purpose of the survey was to understand the challenges faced by the cyclists everyday while cycling in an intense traffic and the general behavioural pattern of people towards them. The survey also tried to address the concern of the cyclists and attempted to find out the possible solutions for their problems.

The ultimate outcome of this exercise was to generate evidence around the problems faced by daily cycle commuters and to build data on livelihood cyclists in Delhi with the long-term objective of advocating to the Delhi Government for better cycling infrastructure for those who use cycling as the main mode of transportation for work.



4 CEED is solution-driven organisation that works towards creating inspiring solutions to maintain a healthy, clean and sustainable environment (www.ceedindia.org).

5 Purpose builds and supports movements to advance the fight for an open, just, and habitable world. The organisation uses public mobilization and storytelling to help the leading organizations, activists, businesses, and philanthropies engaged in this fight and creates campaigning labs and new initiatives that can shift policies and change public narratives when it matters most (www.purpose.com).

6 ASAR works on social and environmental issues by conducting research, ground truthing, and understanding local contexts in order to build innovative strategies that are rooted in reality (www.asar.co.in).

03 Methodology

The survey was conducted among a total 1358 people who were chosen randomly from various locations/areas of Delhi. While determining the sample spread, it was ensured that the survey will have the representation of respondents from all the eleven districts.

The respondents for the survey were those who come from the low-income groups and the ones who use cycle to reach their workplaces. The sample target groups were broadly categorised into five groups-

1. Unskilled workers (labourers, helpers, workers, maids, sweepers, etc.)
2. Skilled workers (electricians, plumbers, AC operators, Cable operators, mechanics, etc.)
3. Petty shops/small businesses (small shops, hawkers, welding shops, vegetable vendors, fruit sellers, etc.)
4. Jobs (delivery boys, sales men, call centers, supervisors, guards, peons, teachers, etc.)
5. Others (students, contractors, gardeners, newspapers distributors, etc.).

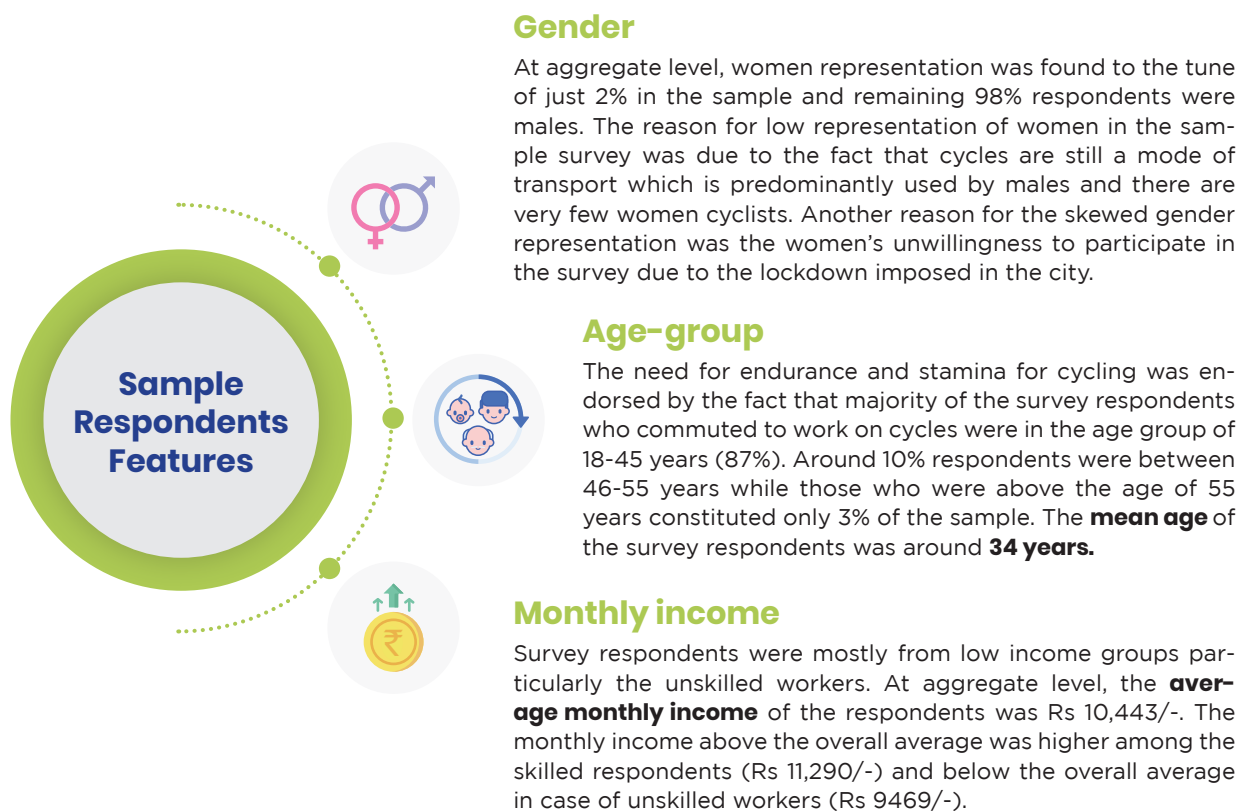
A structured questionnaire was designed jointly by CEED, Purpose Climate Lab and ASAR and the same was administered among the target groups by the volunteers and grassroot workers of CEED. Analysis of data and report writing was undertaken by CMSR Consultants Pvt. Ltd., a Delhi based multi-disciplinary research and communication consultancy organisation. The respondents' category-wise sample achieved is presented below-

Table 1. Sample achieved

Respondent's Category	Number	% coverage
Unskilled workers	344	25.3
Skilled workers	438	32.3
Petty shops/small businesses	257	18.9
Jobs	223	16.4
Others	96	7.1
Overall	1358	100.0

04 Sample Respondents Features

Fig 1. % distribution of sample respondents by gender, age group & monthly income



05 Findings of the Survey

5.1 Using Cycle as Primary Mode of Transport

At aggregate level, around 90% of the respondents reported using bicycles as their primary mode of transport, of which maximum were skilled workers and those who owned petty shops and small businesses (92% each). In case of unskilled workers, 86% stated commuting to their work place in cycles.

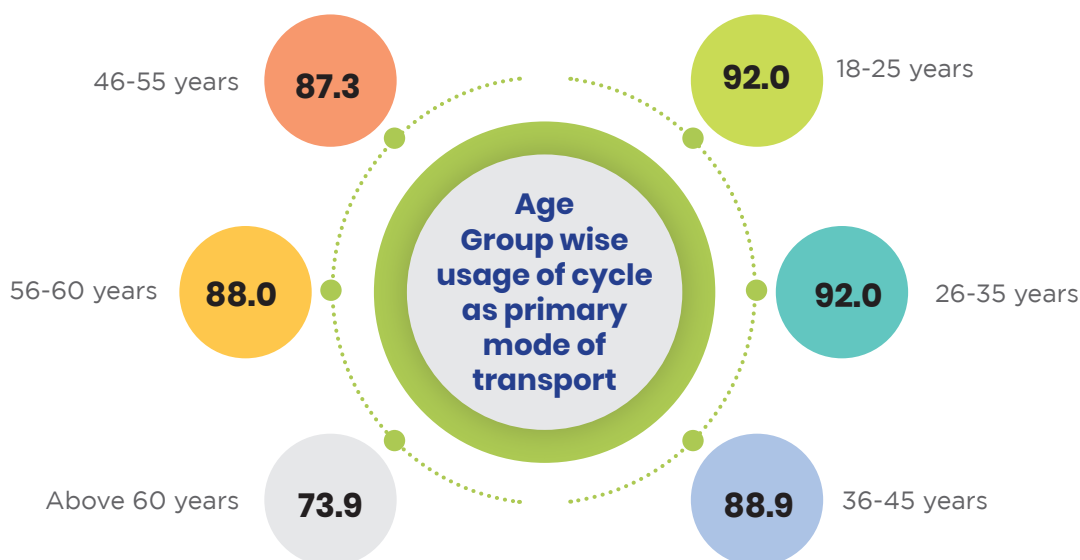
Table 2. % distribution of respondents stating usage of cycle as primary mode of transport

Respondent' Category	% of respondents using bicycle as primary mode of transport
Unskilled workers	86.3
Skilled workers	92.5
Petty shops/small businesses	92.2
Jobs	91.0
Others	89.6
Overall	90.4

Gender-wise analysis revealed that usage of cycles as a primary mode of transport was much higher among the male respondents (91%) as compared to female respondents (52%).

Likewise, Maximum respondents (92%) who used cycles as a primary mode of transport to work were young people in the age group of 18 to 35 years. Only 74% of the sample respondents above the age of 60 years stated using their bicycles to commute to their work places.

Fig 2. % distribution of respondents using cycle as primary mode of transport by age-group



5.2 Ownership of Cycle

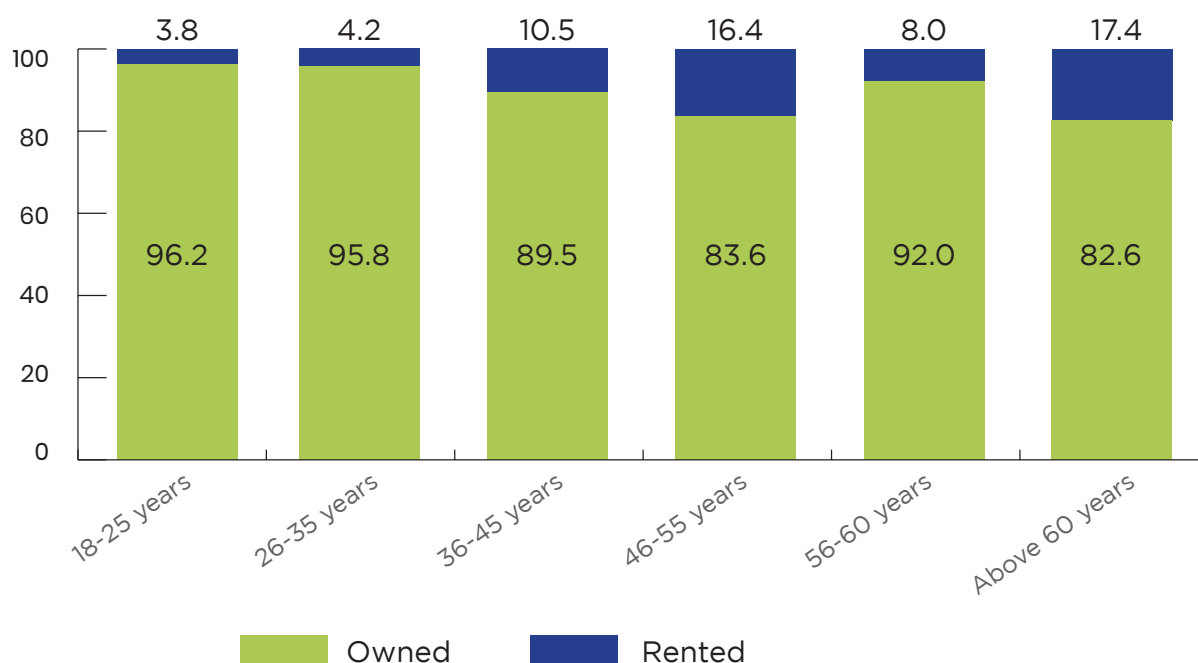
It was learnt that around 93% respondents who were a part of the survey owned cycles while the remaining 7% reported hiring on rent for commuting to their work place. Maximum hired/rented cycles were used by the unskilled workers (14%). Likewise, maximum respondents who had their own cycles were skilled workers (97%), followed by owners of petty shops and small businesses (95%) and those who are into jobs (94%). Those who hired cycles reportedly had to pay a rental amount in the range of 50 (minimum) to 250 (maximum) per month.

Table 3. % distribution of respondents by ownership of cycle

Respondent' Category	Ownership of cycle	
	Owned	Rented
Unskilled workers	85.8	14.2
Skilled workers	97.0	3.0
Petty shops/small businesses	95.3	4.7
Jobs	93.7	6.3
Others	91.7	8.3
Overall	92.9	7.1

While analysing the ownership of cycle by different age groups, it was noted that youth in particular prefer to own cycles as a staggering 96.2% in the age group of 18 to 25 years stated owning cycles and to a slightly lesser extent in the next higher age group i.e. the 26 to 35 years category (95.8%). Surprisingly 92% of the respondents who were in the 56 to 60 years reported owning cycles.

Fig 3. Ownership of cycle by age-group



5.3 Frequency of Cycle Usage for Transportation

The study attempted to find out the respondents' frequency of cycle usage for transportation. A vast majority of the respondents (91%) reported using their cycles every day to commute to their workplaces. The frequency of cycle usage for commuting was highest among skilled workers (94%) and lowest among unskilled workers (87%). Around 5% respondents stated making use of their cycles at least once a week for transportation. Less than 2% each were using cycles once a month or once every two months.

Table 4. % distribution of respondents by frequency of cycle usage for transportation

Respondent' Category	Frequency of cycle usage			
	Everyday	At-least once a week	At-least once a month	At least once every 2- 3 month
Unskilled workers	87.2	4.9	4.7	3.2
Skilled workers	93.8	4.1	0.7	1.4
Petty shops/small businesses	92.2	5.8	0.4	1.6
Jobs	88.8	7.6	2.2	1.3
Others	90.6	3.1	0.0	6.3
Overall	90.8	5.2	1.8	2.2

5.4 Reasons for Using Cycle for Transportation

When asked the reasons for using cycles for commuting, maximum respondents (67%) stated relying on cycles to save money on transport. Around 55% of the respondents pointed out that they use cycles for the purpose of employment/livelihood while 32% stated cycling to work for its health benefits as it increases stamina and strength. Around 11% opined that cycles as a mode of transportation is environment friendly and hence, they use it. Likewise, 6% of the sample were of the opinion that commuting to the work place in cycles is an efficient way to maintain social distancing as compared to other modes of transport such as buses, autorickshaws and cycle rickshaws. Majority of the respondents who stated cycling to work to save money were the unskilled workers (74%) as compared to only 59% skilled workers.

Table 5. % distribution of respondents by reasons for using cycle for transportation

Respondent' Category	Reasons for Using Cycle				
	Exercise or health	Livelihood/ Employment	Environment Friendly	Save Money	Enable Social Distancing
Unskilled workers	39.0	52.3	17.4	73.5	8.1
Skilled workers	22.8	58.0	5.7	59.4	5.9
Petty shops/small businesses	30.0	61.5	12.5	69.6	4.7
Jobs	39.0	53.8	15.2	65.9	2.7
Others	33.3	36.5	4.2	66.7	3.1
Overall	31.7	55.0	11.4	66.5	5.5

The reasons for using cycles for commuting by age group also indicates a more or less similar trend as evident from the table below. Saving money appeared to be prime reason for cycle usage across all age groups.

Table 6. Reasons for using cycle for transportation by age group

Age-group	Exercise or health	Livelihood/ Employment	Environment Friendly	Save Money	Enable Social Distancing
18-25 years	29.2	56.6	10.0	68.7	4.4
26-35 years	24.9	54.7	8.2	63.7	5.0
36-45 years	41.1	55.4	16.6	66.2	7.6
46-55 years	47.8	58.2	17.9	68.7	5.2
56-60 years	12.0	40.0	0.0	76.0	12.0
Above 60 years	21.7	30.4	8.7	78.3	0.0

5.5 Distance of Residence from Primary Job Location

The study tried to find out how far the respondents reside from their primary job locations. It was seen that at aggregate level, around 36% respondents stay at a distance of 0 to 4 kms from their work places while 35% stated that their residence was 4 to 8 kms away from their job location. Respondents who reside at a distance of 8 to 12 kms from their job locations constituted 15% of the sample. Another 14% stayed at a distance of more than 12 kms away from their work locations.

Respondents' category wise data revealed that around 18-19% unskilled and skilled workers stay at a distance of more than 12 kms from their work places. Likewise, it was seen that the respondents who belonged to others categories (primarily students, gardeners, newspapers distributors, etc.) stay close to their work places i.e. within a distance of 0 to 4 kms.

Table 7. % distribution of respondents by distance between residence and primary job location of the respondents

Respondent' Category	Distance of residence from primary job location			
	0 to 4 km	4 to 8 km	8 to 12 km	12 km and above
Unskilled workers	21.9	39.4	19.9	18.9
Skilled workers	28.6	37.0	16.5	17.8
Petty shops/small businesses	46.8	33.3	12.2	7.6
Jobs	49.3	29.6	10.8	10.3
Others	57.0	31.4	4.7	7.0
Overall	35.9	35.3	14.7	14.1

5.6 Distance Covered for Marketing Job

Respondents who were into marketing jobs like Postmen, Courier service, Delivery boys etc. were asked as to how many kilometres they had to commute by cycle on a daily basis. Nearly 15% respondents had to travel for more than 10 km by cycle (10 to 15 km - 11%, More than 15 km - 4%) while 35% stated covering a distance of 5 to 10 kms by cycle on a daily basis. A distance of 0 to 5 km was covered by the remaining respondents (50%).

Fig 4. % distribution by distance covered for marketing jobs



5.7 Challenges Faced in Cycling

Respondents who were a part of the study were asked to state the challenges they faced while cycling. Half of the sample respondents stated that they feel unsafe while cycling in heavy traffic. Nearly 47% opined that they feel upset at the unruly behavior of other drivers. Around 37% respondents stated that the probability of theft of cycles was a constant worry while another 32% stated that cycling during bad weather conditions was a huge challenge. Lack of proper cycling infrastructure was cited as a challenge by 16% respondents. Maximum respondents who stated feeling unsafe in traffic (58%) and bad behavior of other drivers (54%) were the unskilled workers. Likewise, it was seen that the owners of petty shops and small businesses were the ones most concerned about cycle thefts (46%).

Table 8. % distribution of respondents by challenges faced by them while cycling

Respondent' Category	Challenges faced in cycling				
	Bad Air/ weather	Feel unsafe while cycling in traffic	Worried for cycle theft	Bad driver behavior	Lack of In-frastructure
Unskilled workers	41.6	58.1	34.6	54.1	25.3
Skilled workers	26.0	45.9	34.0	40.9	18.5
Petty shops/small businesses	28.4	49.4	45.9	46.3	12.5
Jobs	36.3	48.9	37.7	53.4	6.7
Others	21.9	44.8	36.5	34.4	5.2
Overall	31.8	50.1	37.2	46.8	16.2

5.8 Encouraging Factors for Using Cycle

The study attempted to find out from the respondents the factors that could inspire and encourage them to use cycles for commuting more frequently. Majority of the respondents (58%) were of the opinion that more designated cycle lanes would motivate them to use cycles more often. Another 48% pointed out that if separate pathways are designated for cyclists and pedestrians, they would feel more encouraged to commute by cycles while 27% sample respondents felt the need for exclusive cycle parking spaces in markets and offices. Around 25% stated that they would feel motivated to cycle more often if the streets had a better lighting system.

Table 9. % distribution of respondents stating factors that would encourage them for cycle usage for transportation more often

Respondent' Category	Factors that will encourage for using cycle			
	More designat-ed cycle lanes	Separate path-ways for cyclist and pedestrians	Cycle parking space in mar-ket and office places	Better street lighting system
Unskilled workers	63.1	60.5	36.3	27.0
Skilled workers	57.1	47.7	21.0	16.9
Petty shops/small businesses	56.8	42.4	30.7	30.0
Jobs	54.7	39.5	25.6	35.4
Others	53.1	40.6	19.8	18.8
Overall	57.9	48.1	27.4	25.1

5.9 Willingness to Use Cycle for Transportation

A whopping majority of the respondents (97%) were willing to use cycles as a mode of transportation everyday if it were made safe and convenient. Only marginal differences were observed among the various categories of respondents.

Table 10. % distribution of respondents stating their willingness for cycle usage if it becomes safe and convenient

Respondent' Category	Willingness for cycle usage if it becomes safe and convenient			
	Everyday	At Least once a week	At Least once a month	At least once every 2- 3 months
Unskilled workers	98.8	0.3	0.0	0.9
Skilled workers	96.6	1.6	0.5	1.4
Petty shops/small businesses	96.1	2.3	0.4	1.2
Jobs	97.8	0.9	0.0	1.3
Others	93.8	0.0	0.0	6.3
Overall	97.1	1.2	0.2	1.5

06 Insights

The study findings indicated that cycling is a major mode of transport for majority of the people residing in Delhi, particularly those who come from poor socio-economic strata. People travel 10-12 km or even more by cycle to reach their work places, not as a hobby but to save money as many of them cannot afford to commute by public transport. Health consciousness is also a key factor for cycle usage by a large population and people admitted that they resort to cycling to remain fit and healthy. On the one hand, most of the cycle users want to continue with cycling, however on the other hand, they are also plagued by several constraints like unruly drivers, improper lighting, heavy traffic, bad weather conditions and the fear of cycle thefts.

There are numerous benefits of cycling. It is not only one of the best eco-friendly and sustainable modes of transport but also reduces traffic congestion drastically. It will also take the load off the public transport systems and mitigate the risk of pollution. Cycling is an affordable means of mobility for low income households in addition to offering several health benefits. There are many people interested in using cycles as a means of transport to work places or run errands or take it up as a hobby or sport activity but the absence of proper infrastructure and other ecosystem for cycling in Delhi restricts them. Saji Cherian, Director of Operations, SaveLIFE Foundation says, **“Segregation of traffic is essential to reduce road user conflict and protect vulnerable road users such as pedestrians and cyclists who form the bulk of urban road users in India. States must ensure that non-motorised transport road users are prioritised in street design rather than motorised road users.”**

In the present times, cycling is the most effective social-distanced mode of transport and also one of the most efficient ways of exercising and getting around. The study results showed that most people are willing to use cycle more often, provided the government takes adequate measures to make cycling a safe and convenient mode of transport. In order to enhance the use of cycles, policy measures to create and provide large-scale safe cycling infrastructure, accompanied by regulations on the use of private motorized vehicles could be implemented.

Some of the studies suggest that cycling by women was earlier considered socially unacceptable, however with increased number of women/girls cycling, the perception has faded away. But still a lot need to be done to promote bicycling among women. The cycle users among women are much lesser as compared to men. Hence, women can be made aware about the significance and benefits of cycle usage and government may also ensure to provide an ecosystem for women cyclists. Government can essentially introduce a special initiative to encourage and motivate women and girls to use cycle as a primary mode of transport.



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