

AN ANALYSIS OF PEDESTRIAN BEHAVIOUR ON SIDEWALKS: A CASE STUDY OF KOLKATA

PEDESTRIAN FATALITIES IN KOLKATA

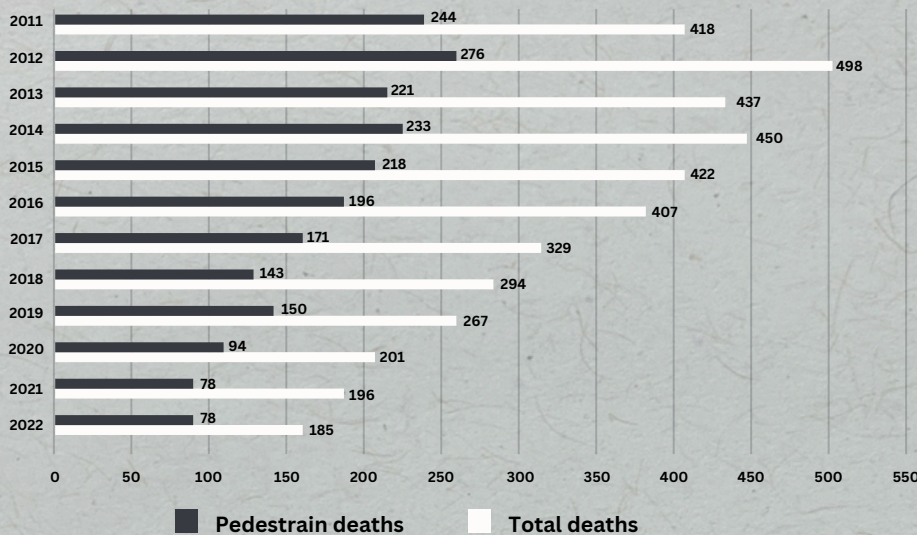


Figure 1: Number of deaths from road traffic

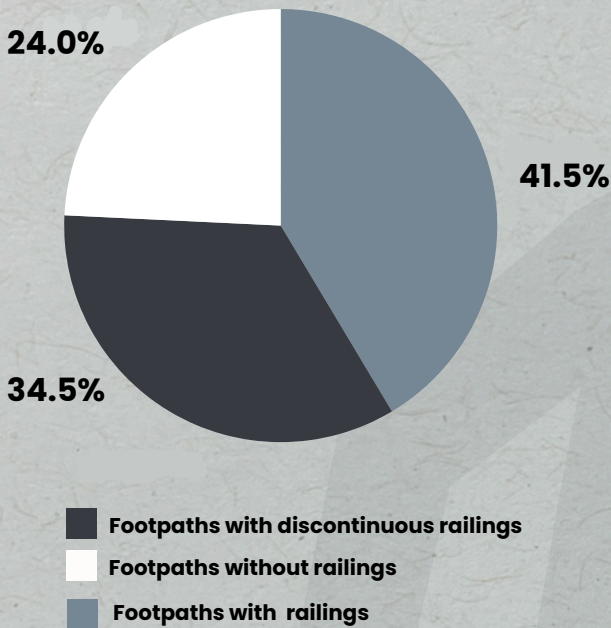
- In 2022, 40% of road accident victims in Kolkata were pedestrians, with 74 out of 185 deaths involving pedestrians ([Ghosh, 2023](#)).
- Jaywalking is cited as a major cause of fatal accidents involving pedestrians ([MoRTH, 2023](#)).
- Guardrails have been installed at key city intersections, such as Hazra, Jadavpur, Esplanade, Khidirpur, Diamond Harbour Road, Ruby Crossing, and in front of RG Kar Hospital's emergency gate, to curb pedestrian jaywalking.

PEOPLE'S PERCEPTION 1 : The existing infrastructure of pedestrian traffic management is mostly capable of catering for the pedestrian rush but they are not properly maintained.

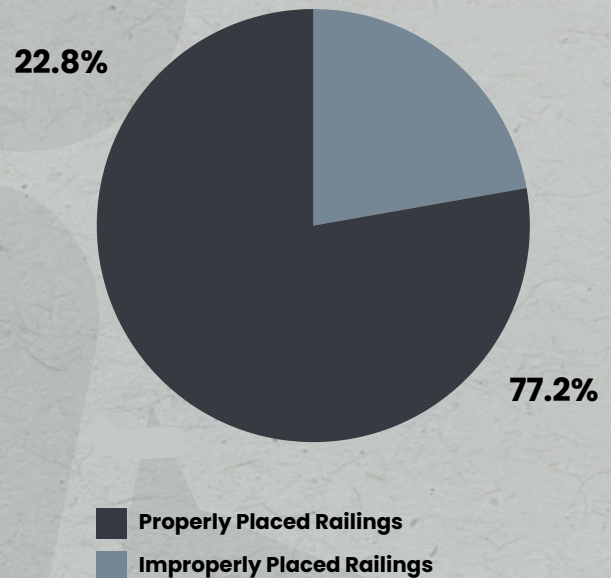


PEOPLE'S PERCEPTION ON THE CONDITION & PLACEMENT OF PEDESTRIAN RAILINGS

Peoples' Response on the Condition of Pedestrian Railings



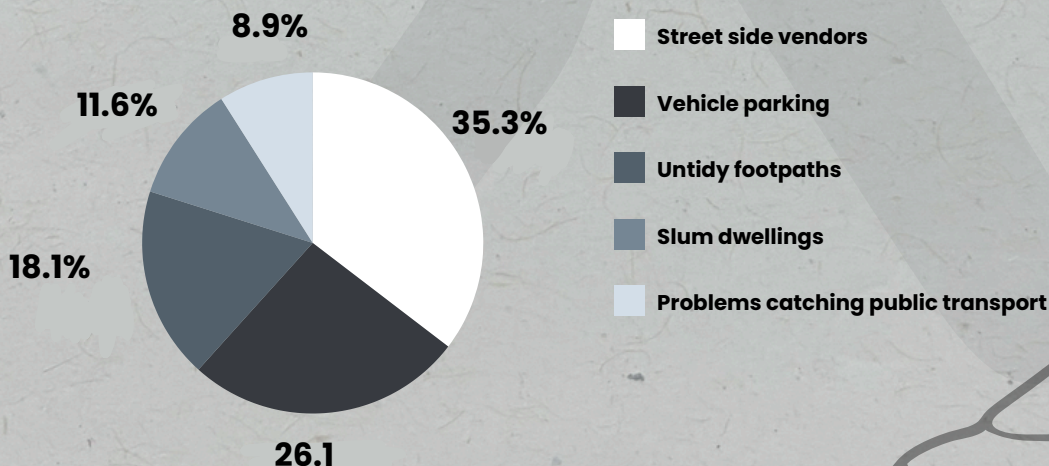
Peoples' Response on the Placement of Pedestrian Railings



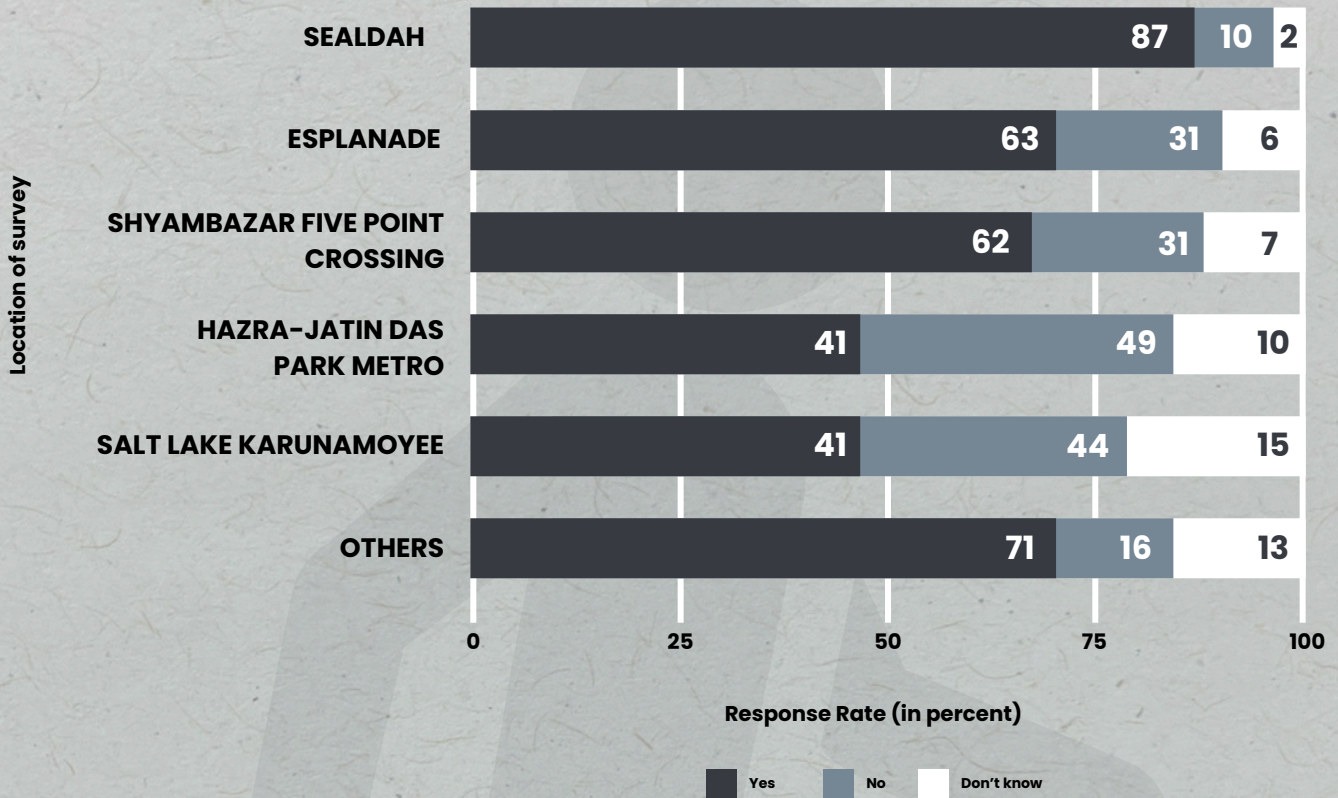
- 58.5% of respondents were dissatisfied with pedestrian railings, with 34.5% citing discontinuity and 24% noting the absence of railings.
- While 77.2% agreed that footpath railings are properly placed.

PEOPLE'S PERCEPTION 2 :People in Kolkata believe that street-side vending, vehicle parking, and mismanagement of public transport halts, especially in congested areas like Sealdah, Esplanade, and Shyambazar, force pedestrians to walk on roads instead of footpaths, while better-managed areas like Hazra and Salt Lake Karunamoyee experience fewer such issues.

People's Choice of Reasons for using motorroads instead of footpath



People's Assent on Disorderly Public Transport Halts and its impact on Pedestrian Railings Compliance

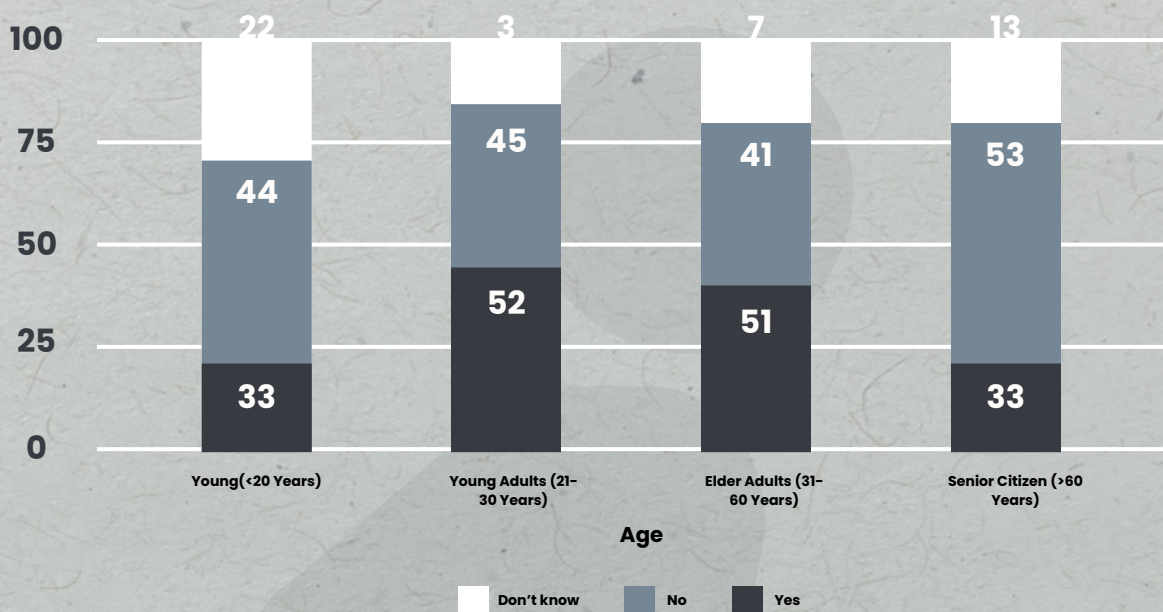


- 35.7% of respondents attribute pedestrians avoiding footpaths to street-side vendors, while 26.1% cite vehicle parking as a major reason.
- At Sealdah, Esplanade, and Shyambazar, disorderly public transport halting is cited by 87%, 63%, and 62% of respondents, respectively, while only 41% in Hazra and Salt Lake Karunamoyee see it as a key issue.

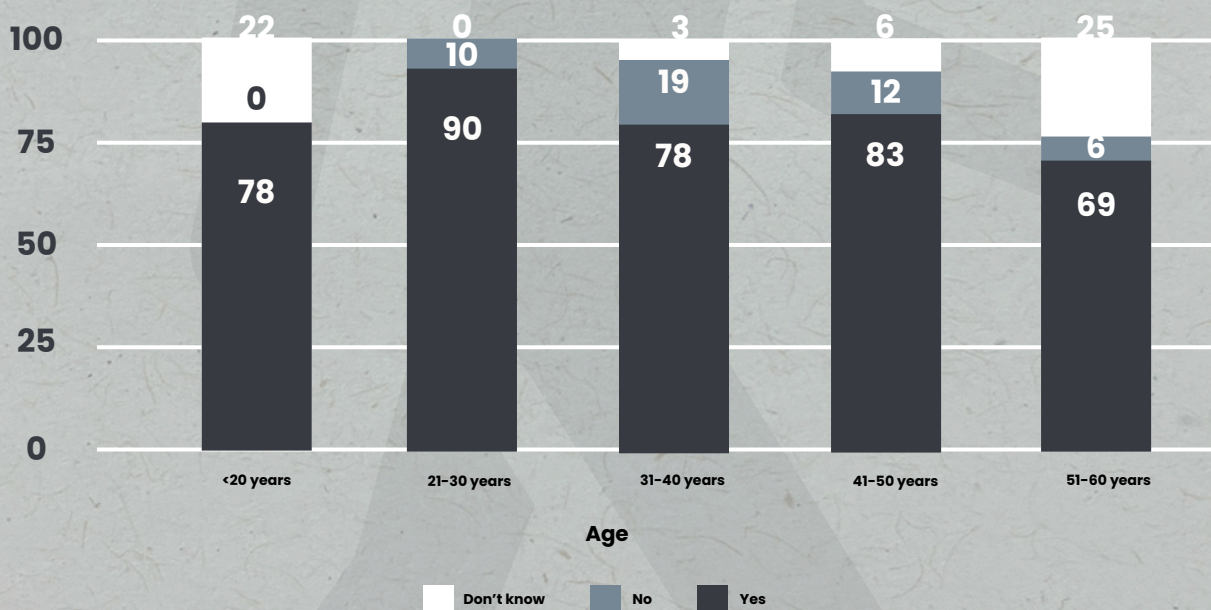
PEOPLE'S PERCEPTION 3 : People of Kolkata have mixed views on pedestrian railings, with some citing safety concerns like broken or slanted railings, while others believe they effectively reduce traffic exposure, though elderly safety remains unaddressed.



Perception of Pedestrian railings' Impact on Road Crossing



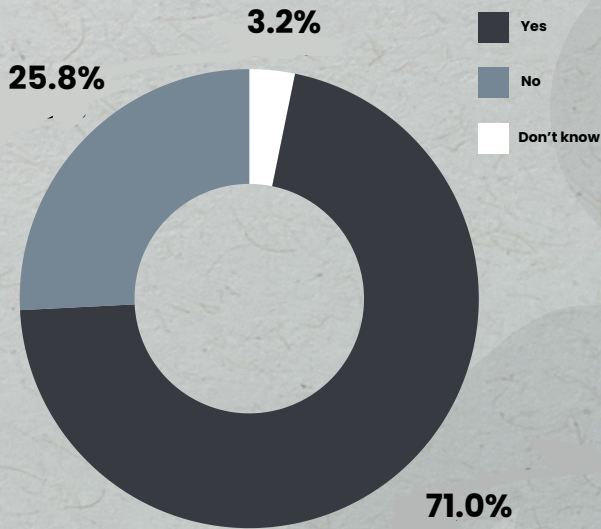
Perceptions of Pedestrian Railings' Impact on Safety



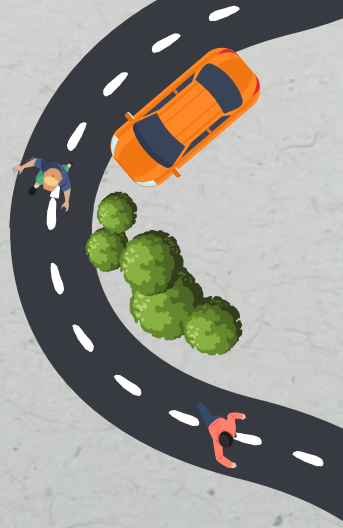
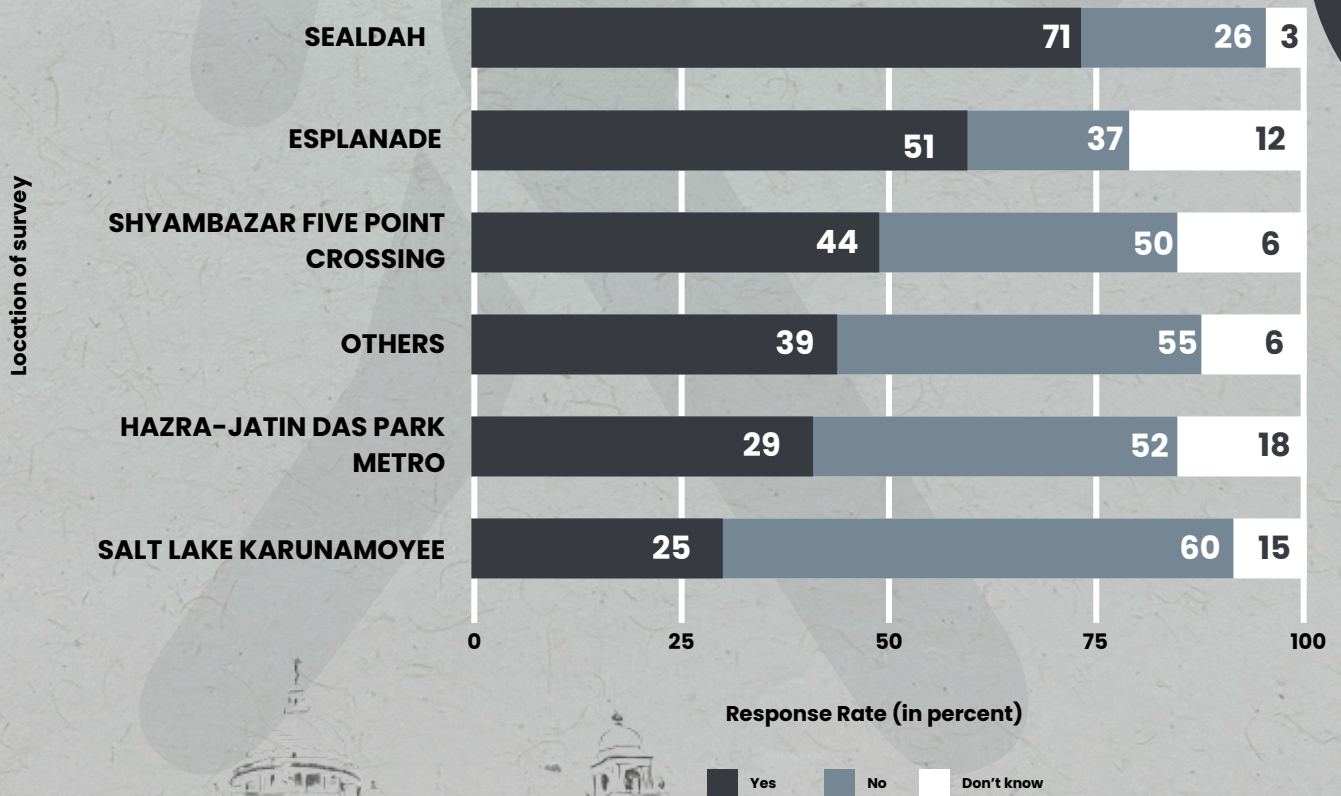
- About 44% of the younger demographic and a significant portion of senior citizens (53%) believe that pedestrian railings are ineffective in deterring road crossing.
- The majority of respondents (81.48%) across all age groups strongly affirmed that pedestrian railings enhance their sense of safety while walking on the road.

PEOPLE'S PERCEPTION 4: People perceive that the influence of traffic police on pedestrian road-crossing behaviour varies by location, with a strong presence in busy central areas but a notable lack in planned satellite townships like Salt Lake, and they largely support additional railing installations to enhance pedestrian safety.

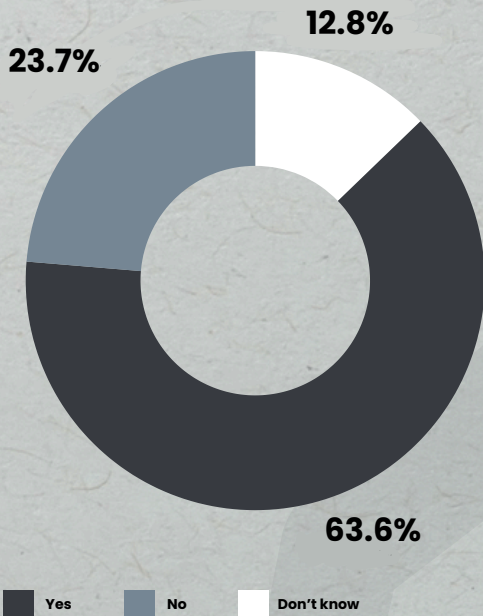
People's Perception on Impact of Traffic Police Presence on Pedestrian Crossing Behaviour



People's Perception on Impact of Traffic Police Presence on Pedestrian Crossing Behaviour- Location based Analysis



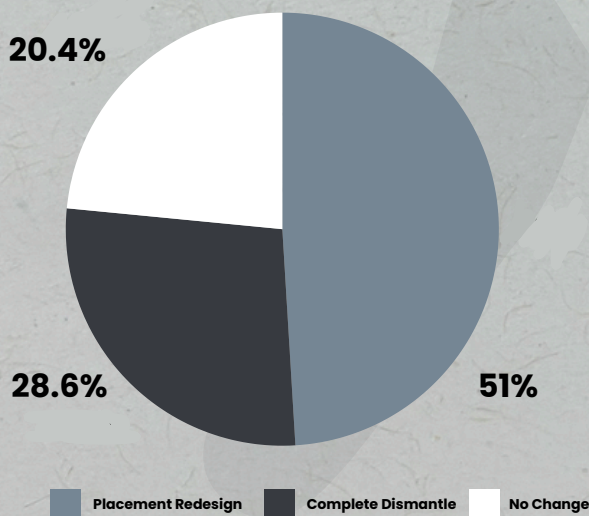
People's Consensus on the Additional Railings by Kolkata Police



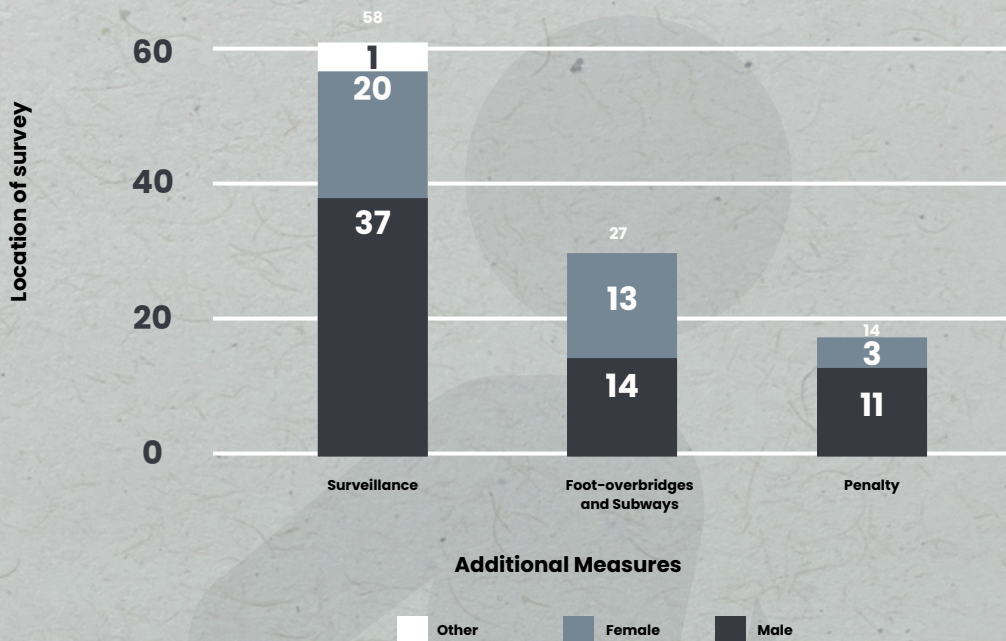
- 51.2% of respondents see police presence as influential for pedestrian road crossings, while 36.9% deny this due to a lack of strictness.
- In central Kolkata, 71% and 51% of respondents in Sealdah and Esplanade, respectively, note a significant reduction in jaywalking, while northern, eastern, and southern junctions show minimal police influence.
- A majority (63.6%) support additional railings by Kolkata Police, but 23.7% doubt their effectiveness in reducing pedestrian fatalities, with 12.8% unsure.

PEOPLE'S PERCEPTION 5 : People in Kolkata prioritise redesigning distorted railings and installing them at busy junctions, along with implementing proper surveillance to reduce jaywalking and conflicts between pedestrians and vehicles.

Public Opinion on the Requirement of Pedestrian Railing Modifications

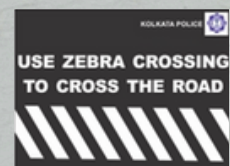
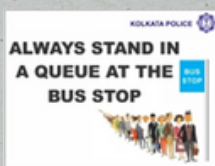


People's Choice of Additions with Pedestrian Railings



- 51% of respondents advocate for redesigning pedestrian railings, 71.4% support retaining them, and 58% favor increased surveillance for better traffic management.
- 27% suggest adding more foot overbridges and subways to reduce fatalities, while 14% support penalties to regulate pedestrian traffic flow.

RECOMMENDATIONS FOR PEDESTRIANS



- **Use Pedestrian Facilities Responsibly:** Use footpaths when possible and respect railings to enhance safety.
- **Advocate for Pedestrian Rights:** Engage in community forums to promote pedestrian-friendly infrastructure and raise safety awareness.
- **Practice Caution and Awareness:** Stay vigilant, follow traffic signals, and adhere to road-crossing etiquette.
- **Report Safety Concerns:** Inform authorities about safety issues like broken railings and collaborate with communities to improve pedestrian safety.



RECOMMENDATIONS FOR GOVERNMENT AUTHORITIES (TRANSPORT DEPARTMENT, KOLKATA POLICE, AND KOLKATA MUNICIPAL CORPORATION)

- **Enhanced Enforcement and Surveillance:** Increase police presence and CCTV surveillance to monitor pedestrian behaviour and improve safety measures.
- **Prioritize Infrastructure Maintenance:** Repair pedestrian railings and signals to ensure traffic flow and safety.
- **Regulate Street Vending and Parking:** Management of street-side vending and illegal parking on footpaths by establishing designated zones.
- **Improve Public Transport Management:** Organising public transport stops and optimise bus routes to prevent disorderly halts and enhance efficiency.
- **Robust Awareness Drive:** Conducting community programs on footpath use and safety, encouraging prompt reporting of issues.



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