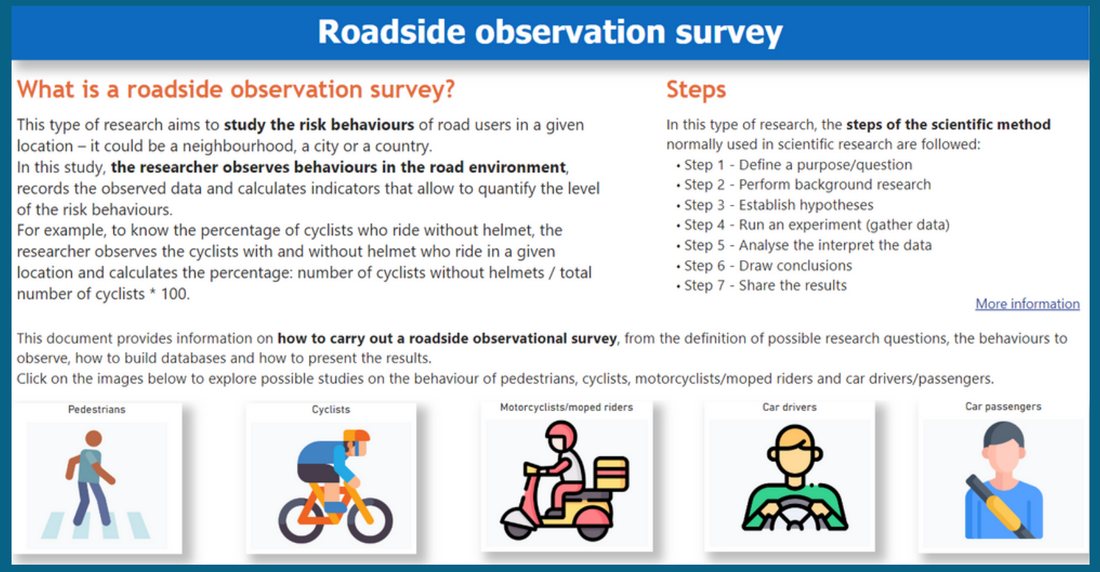
Roadside observation survey

Step-by-step information for carrying out the study:

- behaviours to observe and instructions for observations;
- planning and instruments for data collection;
- datasets and calculation formulas;
- examples for presenting the results.

Online app

Presentation



Roadside observation survey

What is a roadside observation survey?

This type of research aims to **study the risk behaviours** of road users in a given location – it could be a neighbourhood, a city or a country.
In this study, **the researcher observes behaviours in the road environment**, records the observed data and calculates indicators that allow to quantify the level of the risk behaviours.
For example, to know the percentage of cyclists who ride without helmet, the researcher observes the cyclists with and without helmet who ride in a given location and calculates the percentage: number of cyclists without helmets / total number of cyclists * 100.

Steps

In this type of research, the **steps of the scientific method** normally used in scientific research are followed:

- Step 1 - Define a purpose/question
- Step 2 - Perform background research
- Step 3 - Establish hypotheses
- Step 4 - Run an experiment (gather data)
- Step 5 - Analyse the interpret the data
- Step 6 - Draw conclusions
- Step 7 - Share the results

More information

This document provides information on **how to carry out a roadside observational survey**, from the definition of possible research questions, the behaviours to observe, how to build databases and how to present the results.
Click on the images below to explore possible studies on the behaviour of pedestrians, cyclists, motorcyclists/moped riders and car drivers/passengers.

Pedestrians | Cyclists | Motorcyclists/moped riders | Car drivers | Car passengers

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N.º 101006468

Partnerships for Science Education

Developed by:

PRP Prevenção Rodoviária Portuguesa

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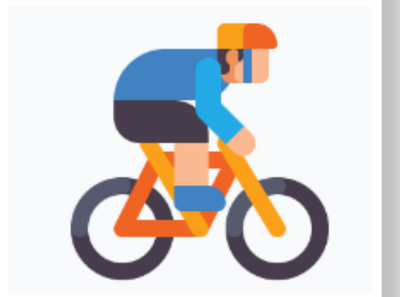
Pedestrians

Cyclists



Motorcyclists/moped riders

Car drivers

Car passengers

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Pedestrians

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Pedestrians
Cyclists
Motorcyclists/moped riders
Car drivers
Car passengers

Possible research questions

- What is the percentage of pedestrians that are using the mobile phone while crossing the road? (the use of the mobile phone can be separated: talking on the mobile phone or texting)
- What percentage of pedestrians cross the road outside the pedestrian crossing?
- Are these percentages higher for female or for male pedestrians?

Data to collect

For each pedestrian observed while crossing the road:

- Crosses the road on the pedestrian crossing: no/yes
- Is using the mobile phone: no/yes (talking/texting)
- Gender: female/male

Planning the data collection

Observations/ data collection

- **Observations grid** - **example**
- **Online form** - **example** (Google forms)

Instructions for the observations

The observer must position himself on the sidewalk close to a pedestrian crossing and record the data of each pedestrian moving towards him. He/she must record the data one pedestrian at a time, following the following process:

1. observes the 1st pedestrian who starts crossing.
2. records the data of the pedestrian observed.
3. observes the next pedestrian who starts crossing.
4. records the data of the 2nd pedestrian observed.
5. ...

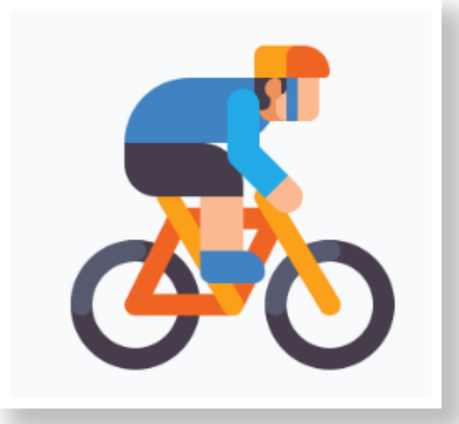
Dataset and calculation of indicators

Example

Presenting the results

Example

Cyclists



Main page
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Car passengers

Possible research questions

- What is the percentage of cyclists that are not wearing helmet?
- What is the percentage of cyclists that do not have retroreflective material?
- Are these percentages higher for female or for male cyclists?

Data to collect

For each cyclist observed:

- Wears helmet: no/yes
- Has retroreflective material: no/yes
- Gender: female/male

Planning the data collection

Observations/ data collection

- **Observations grid** - **example**
- **Online form** - **example** (Google forms)

Instructions for the observations

The observer must position himself on the sidewalk, away from the road where cyclists ride. He/she must record the data of one cyclist at a time, following the following process:

1. observes the 1st cyclist riding on the road.
2. records the data of the cyclist observed.
3. observes the next cyclist riding on the road.
4. records the data of the 2nd cyclist observed.
5. ...

Dataset and calculation of indicators

Example

Presenting the results

Example

Motorcyclists/moped riders

Steps of a roadside observation survey

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Possible research questions

- What is the percentage of motorcyclists/moped riders that are not wearing helmet?
- Are these percentages higher for female or for male motorcyclists/moped riders?

Data to collect

For each motorcyclist/moped rider observed:

- Wears helmet: no/yes
- Gender: female/male

Planning the data collection

Observations/ data collection

- **Observations grid** - **example**
- **Online form** - **example** (Google forms)

Instructions for the observations

The observer must position himself on the sidewalk, away from the road. He/she must record the data of one motorcyclist/moped rider at a time, following the following process:

1. observes the rider of the 1st motorcycle/moped on the road.
2. records the data of the rider observed.
3. observes the next motorcycle/moped on the road.
4. records the data of the 2nd rider observed.
5. ...

Dataset and calculation of indicators

Example

Presenting the results

Example

Car drivers

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Possible research questions

- What is the percentage of car drivers that are not using seat belt?
- What is the percentage of car drivers that are using the mobile phone while driving? (the use of the mobile phone can be separated: talking on the mobile phone or texting)
- Are these percentages higher for female or for male drivers?

Data to collect

For each car driver observed:

- Has the seat belt: no/yes
- Is using the cell phone: no/yes (talking/texting)
- Gender: female/male

Planning the data collection

Observations/ data collection

- **Observations grid** - example
- **Online form** - example (Google forms)

Instructions for the observations

The observer must position himself on the sidewalk, away from the road. He/she must record the driver's data for one car at a time, following the following process:

1. observes the driver of the 1st car on the road.
2. records the data of the driver observed.
3. observes the driver of the next car on the road.
4. records the data of the 2nd driver observed.
5. ...

Dataset and calculation of indicators

Example

Presenting the results

Example

Car passengers

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Possible research questions

- What is the percentage of car passengers in the front seat that are not using seat belt?
- What is the percentage of car passengers in the back seat that are not using seat belt?
- Are these percentages higher for female or for male passengers?

Data to collect

For each car passenger observed:

- Position in the car: front seat/back seat
- Has the seat belt: no/yes
- Gender: female/male

Planning the data collection

Observations/ data collection

- **Observations grid** - example
- **Online form** - example (Google forms)

Instructions for the observations

The observer must position himself on the sidewalk, away from the road. He/she must record the passenger's data for one car at a time, following the following process:

1. observes the passengers of the 1st car on the road.
2. records the data of the passengers observed.
3. observes the passengers of the next car on the road.
4. records the data of the passengers observed.
5. ...

Dataset and calculation of indicators

Example

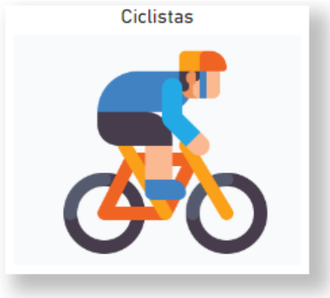
Presenting the results

Example

Estudo observacional à beira da estrada

Documents available online for download

- Example of observation grid and example of an online questionnaire (Google forms);
- Presentation with the steps of the scientific method.
- Spreadsheet with an example of a dataset, calculation formulas and examples of graphs.



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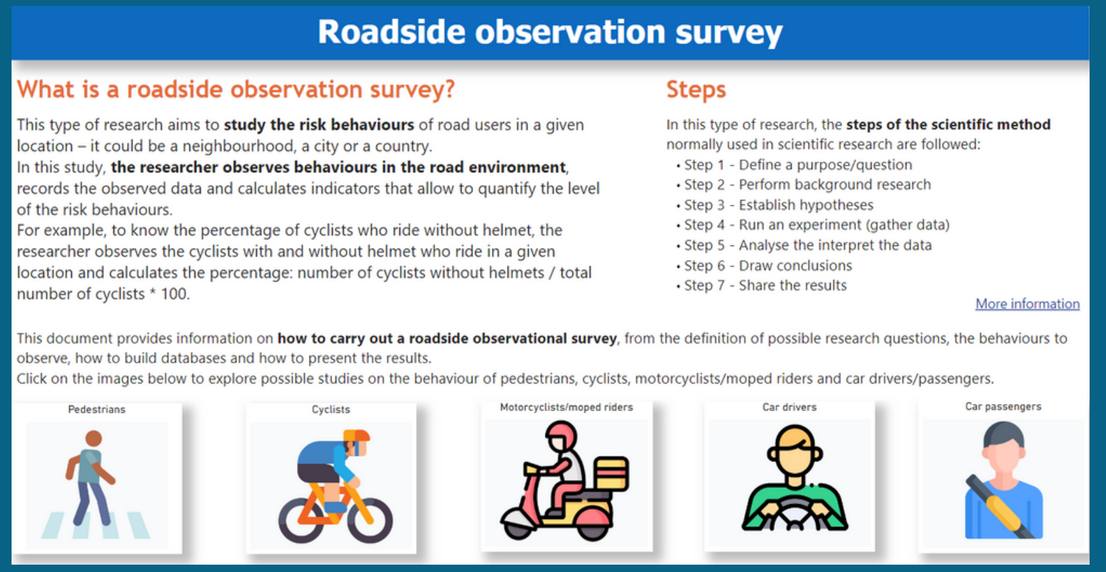

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