

Questionnaire Surveys about Quiet Vehicle Sounds

Katsuya Yamauchi



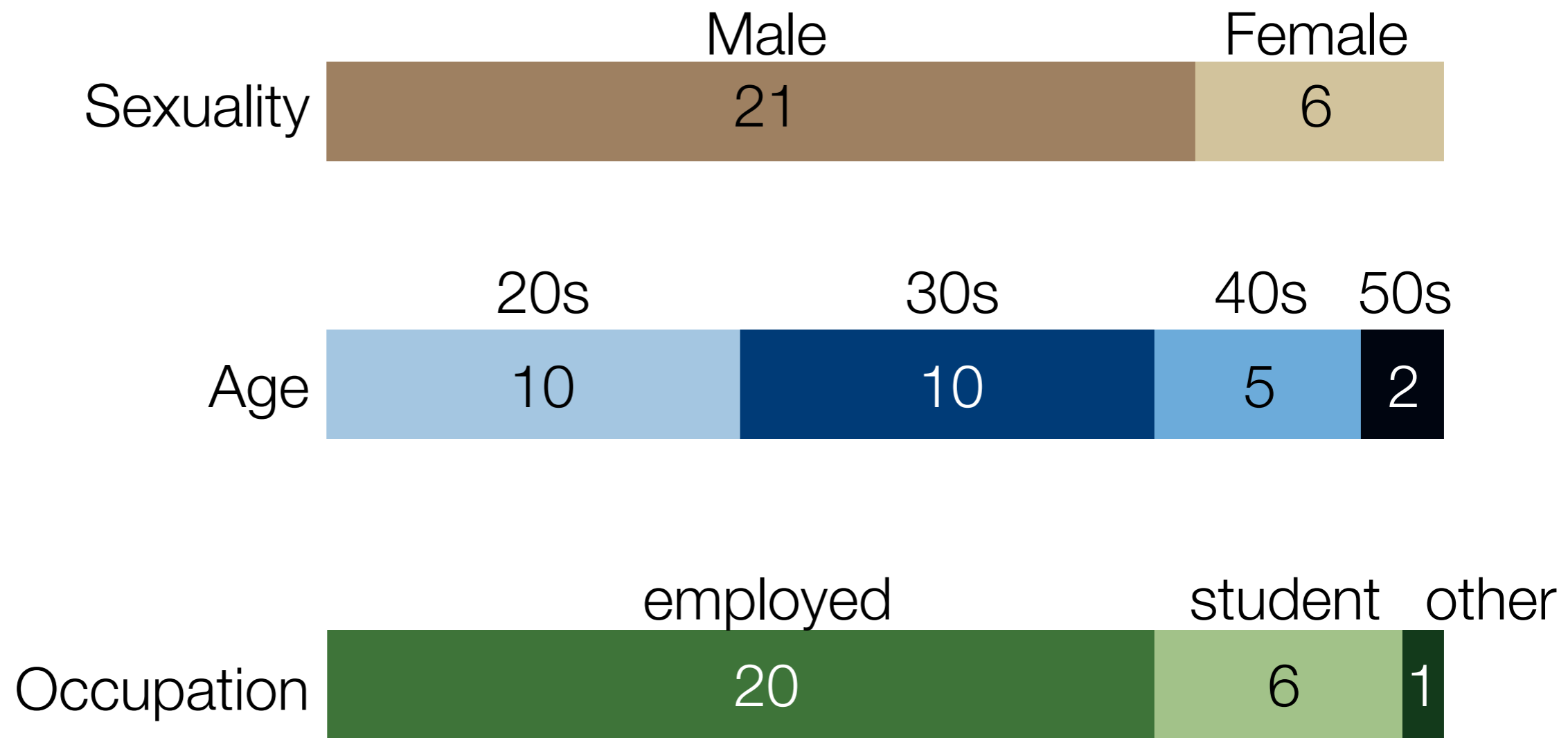
Faculty of Engineering, Nagasaki University

Outline of the Survey

- Date: January 2011
- Location: Munich, Germany
 - *(parallel survey was also carried in Fukuoka, Japan)*
- Target: member of Institute of MMK/TUM and their family, employees of automotive company in Munich.
- Procedure: Questionnaire Form

Respondents

- Corrected 27 responses



Questions: as a driver

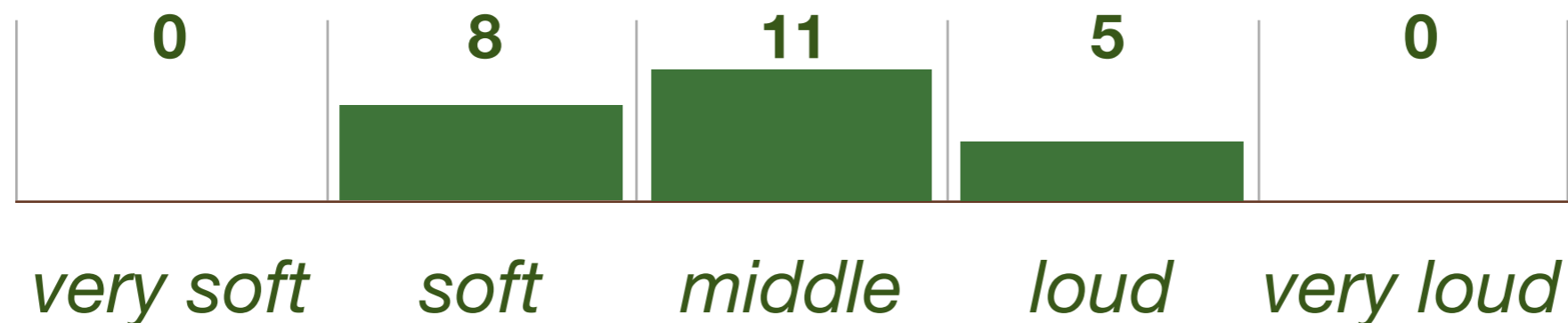
- **Q1: Do you drive car? / Q2: How often do you drive?**



- **Q3: What is your car's brand and model?**
 - No hybrid and electric vehicles

Questions: as a driver — sound of your won car

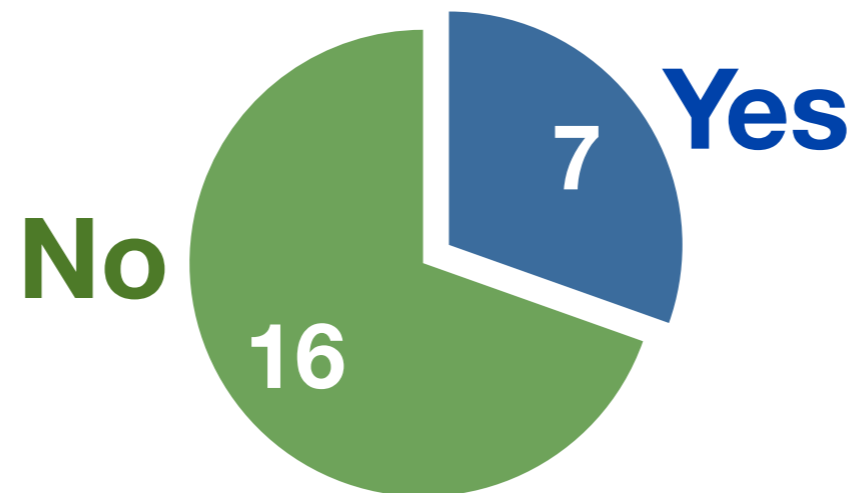
- **Q4: How do you think about the sound quality of your car?**
 - ➔ Comfortable (50%), Feel nothing special (21%)
- **Q5: How do you think about the sound level of your driving sound?**



- **Q6: If the driving sound becomes too quiet to be audible, how would you think?**
 - ➔ Good, because it is quiet (46%)
 - ➔ Dangerous, because it is difficult to feel the speed (29%)

Questions: as a driver — Quiet problem

- ***Q7: Have you ever felt dangerous and/or unsatisfaction due to the pedestrians' unawareness of your driving car?***



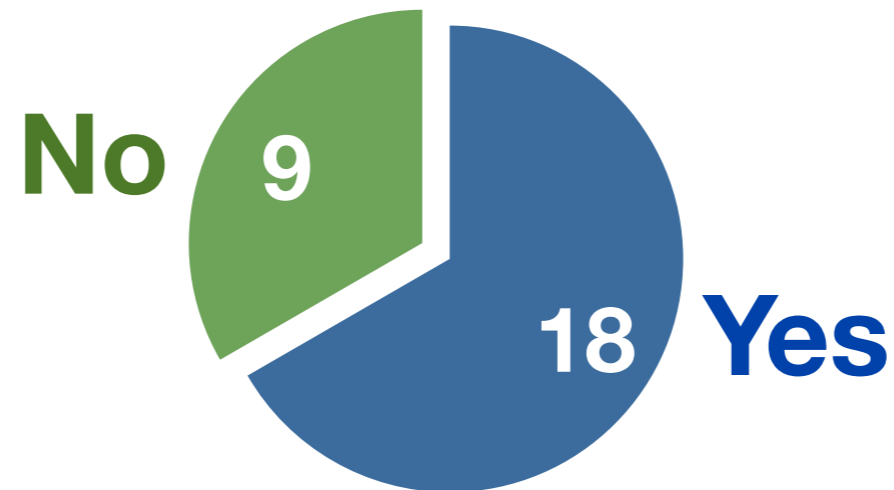
- ***Q7-1: Which time of the day?
What kind of road/area?
How much traffic?
How fast the traffic?
How did you feel?***

Questions: as a driver — Quiet problem

- ***Q7-1: If you have understand why pedestrian(s) did not aware your car, please describe it.***
 - ➔ They were in a hurry and not aware of the traffic.
 - ➔ They crossed the street without checking traffic sufficiently.
 - ➔ The pedestrian underestimate the speed.
 - ➔ Because my car's existence(noise) was buried within many cars and other environmental sounds.
 - ➔ Mostly they are old, they are not able to hear correctly.

Questions: as a pedestrian — Quiet problem

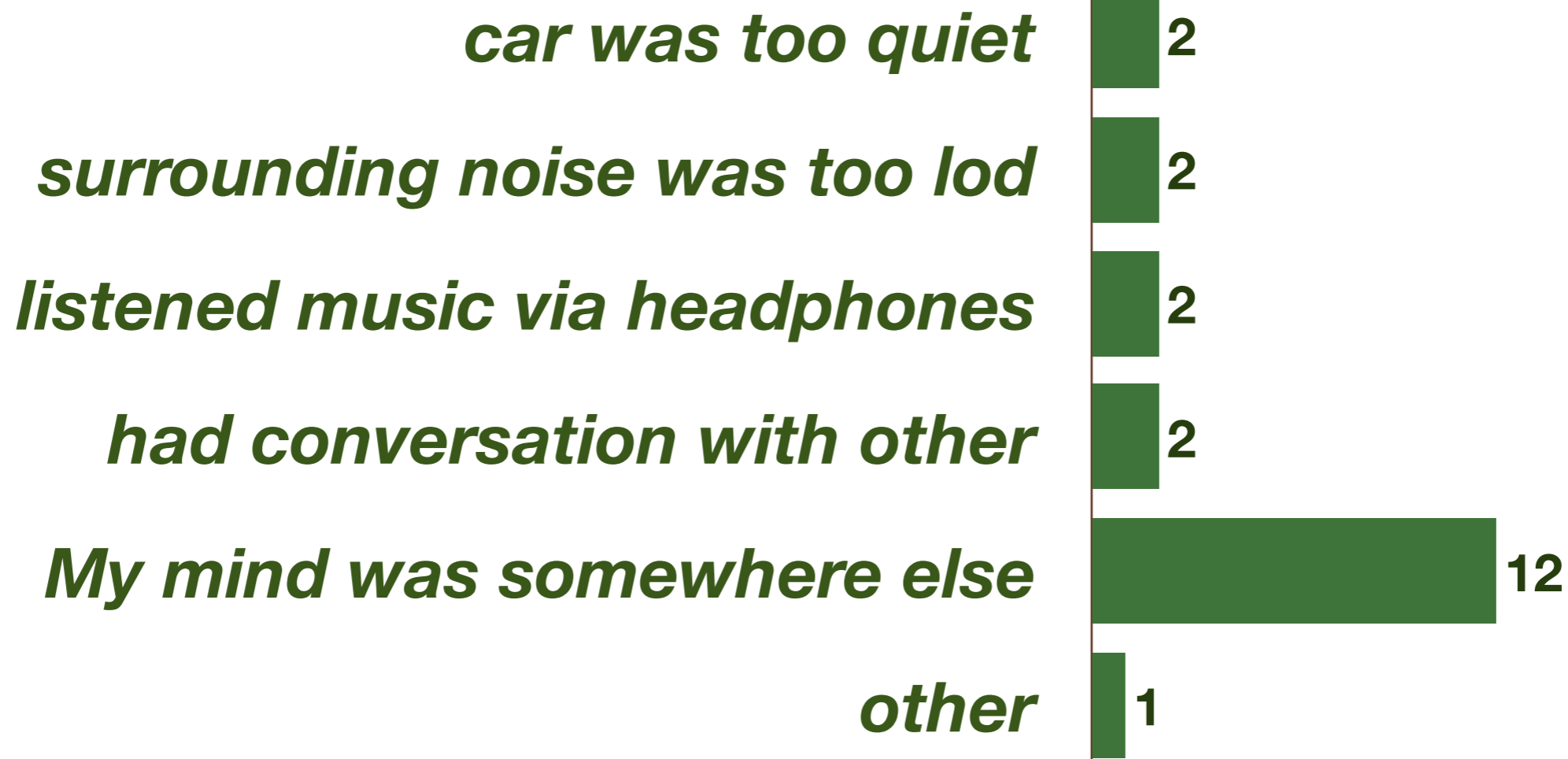
- ***Q8: Have you ever felt dangerous and/or surprise due to the unaware car approaching?***



- ***Q8-1: Which time of the day?
What kind of road/area?
How much traffic?***

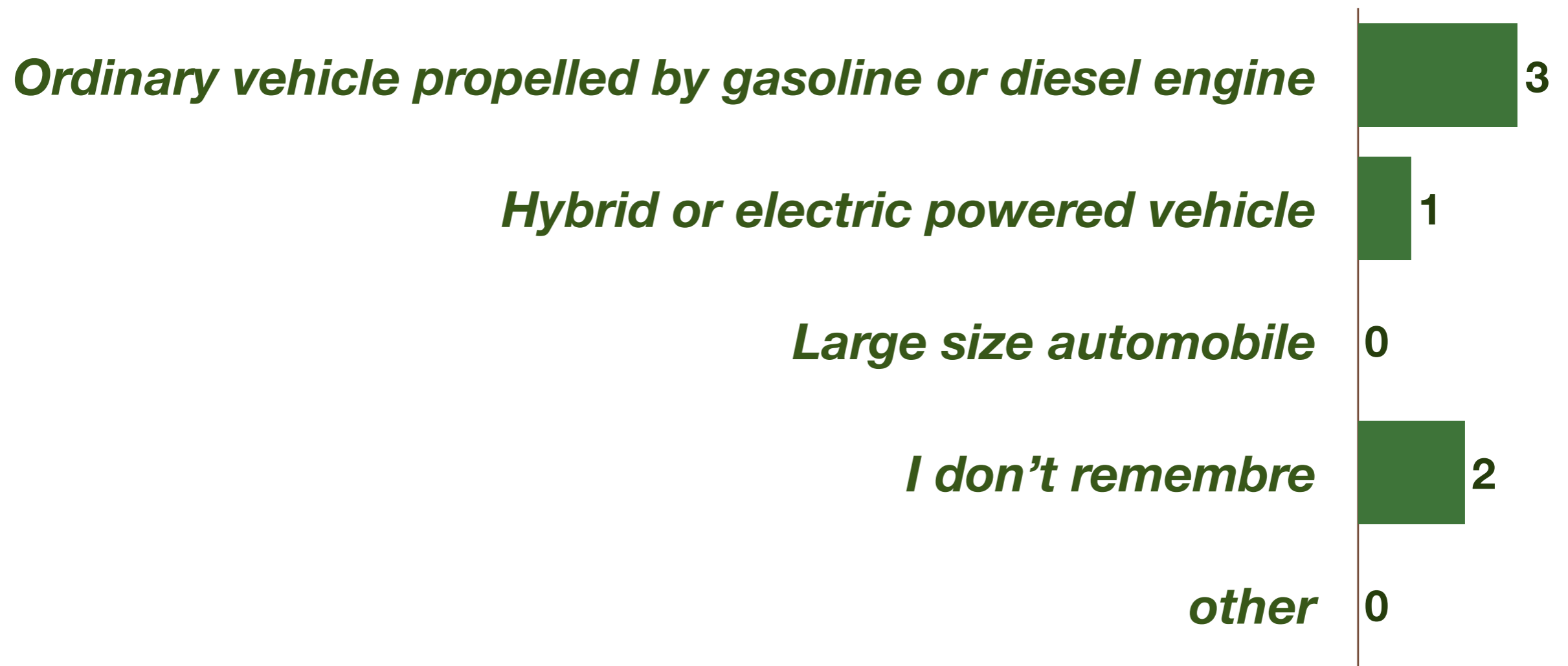
Questions: as a pedestrian — Quiet problem

- **Q8-1: Chose the most applying item as a reason why you did not aware.**



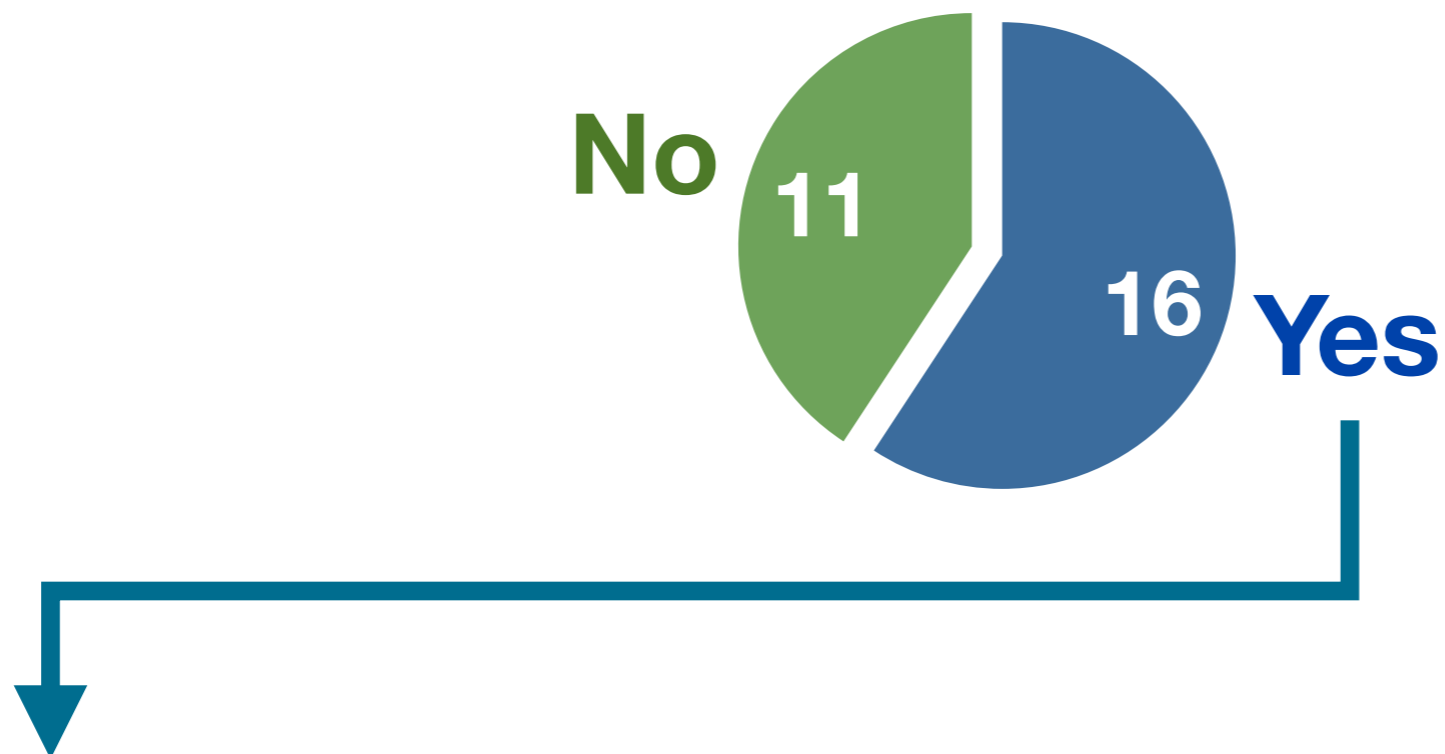
Questions: as a pedestrian — Quiet problem

- ***Q8-2: What kind of car was that?***

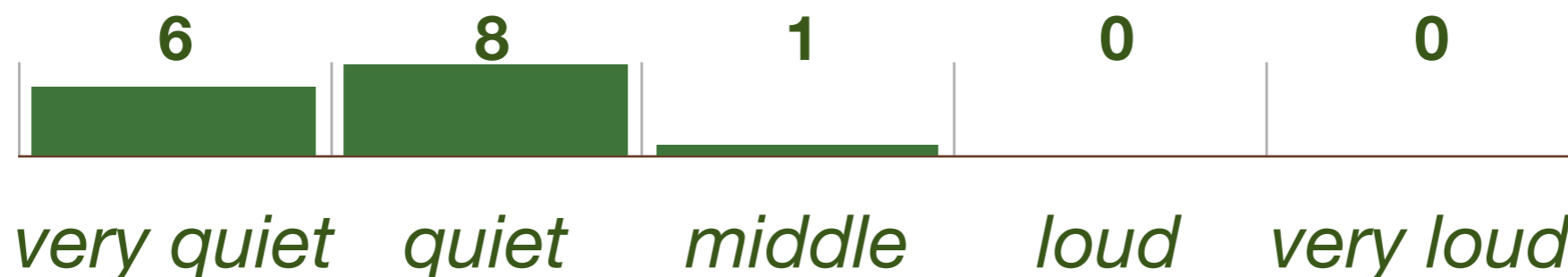


Questions: as a pedestrian — HV/EV experience

- **Q9: Have you ever listened to the sound that the HV/EV goes slowly?**



- **Q10: Did you feel how loud the sound was?**



Questions: concerning the AVAS

- ***Japanese government has published a guideline to recommend automobile manufactures to install a sounding device to HV/EVs. Do you know this movement?***



- ***How do you think about the necessity of the sounding device for HV/EVs?***

