

# Survey Questions & Data Analysis

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Image courtesy of <https://www.pexels.com/search/questionnaire/>

## Law Enforcement Community Surveys Training Module 3

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# “What type of question do you want to ask & how do you want to analyze the data?”

Choose the right type of questions for your respondents, your goals, and your analytical resources.

## Close-ended Questions aka “Fixed-choice”

*Provide participants with pre-established response options or answers.*

- **Strengths**
  - Generally take respondents much less time.
  - Data entry, analysis, and presentation of the findings are easier.
- **Weaknesses**
  - Survey designer has to pre-specify all of the answer choices.
  - The way you group response options in closed-ended questions assessing frequency or quantity, can also influence how people respond.

## Open-ended Questions “Fixed-choice”

*Allow respondents to write anything they want in the space you provide.*

- **Strengths**
  - They can provide a wealth of information.
- **Weaknesses**
  - Can overwhelm or fatigue your potential respondents, possibly resulting in fewer people completing the survey.
  - Large quantity of text produced from open-ended responses can burden the people who do the data entry and analysis.



## How you group options in closed-ended questions assessing frequency or quantity, can influence responses

**“Not That” implies an answer of 21 is somewhat high while “Do This” makes an answer of 21 not seem as deviant.**



### DO THIS

How many times in the past month did you see someone driving 10+ miles an hour above the speed limit in your neighborhood?

- ☐ 0 times
- ☐ 1 to 9
- ☐ 10 to 19
- ☐ 20 to 29
- ☐ 30 or more



### NOT THAT

How many times in the past month did you see someone driving 10+ miles an hour above the speed limit in your neighborhood?

- ☐ 0 times
- ☐ 1 to 4
- ☐ 5 to 9
- ☐ 10 to 14
- ☐ 15 or more

# Dichotomous (Close Ended)

The simplest form of a closed-ended question is a dichotomous item, where you give the respondent just two options for answering.

# Question

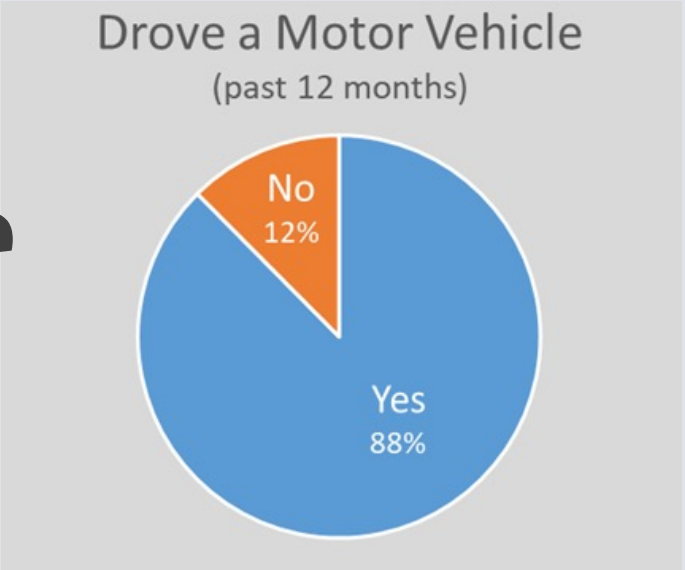
*Have you driven a MOTOR VEHICLE at least once per month over the last 12 months?*

- ☐ Yes
- ☐ No

Data

	A	B	C	D	E	F
1	ResponseID	Drove 12M	Drive Safety	Drive Unsafe Text	Driving Map 1	Driving Map 2
2	38	1	10		0	0
3	41	1	7	There are not always good signs. Some of the s	0	0
4	158	1	4	The roads around here aren't always the best, e	0	0
5	103	1	5	There are too many people that sleep at the wh	0	0
6	26	0	9	The main thing that makes driving in my comm	0	0
7	189	0	5	I live in a city so people are always in a rush in c	0	0
8	140	1	6	The presence of aggressive drivers, jaywalkers,	0	0
9	93	1	10		0	0
10	48	1	9	I live in a relatively small town and do not enco	0	0
11	111	1	5	The main thing that makes driving less than saf	0	0
12	66	1	8	I feel a lot of the drivers in town aren't very goo	0	0
13	123	1	9	We have a lot of drivers that run red lights on r	0	0
14	191	1	9	There are many people that do not check their	0	0

Analysis



# Multiple Choice- Single Answer (Close Ended)

The most common version of a multiple-choice survey question involves forcing the respondent to choose just one answer from the list provided.

# Question

*What is your age?*

- ☐ 18 - 24
- ☐ 25 - 34
- ☐ 35 - 44
- ☐ 45 - 54
- ☐ 55 – 64
- ☐ 65 or older

Data

	AS	AT	AU	AV	AW	AX	AY	
1	Gender	Age	Race White	Race Black	Race Asian	Race Am Indian	Race Hawaiian	
2	0	0	1	1	0	0	0	
3	0	1	1	0	0	0	0	
4	1	0	1	0	0	0	0	
5	0	2	1	0	0	0	0	
6	1	1	1	0	0	0	0	
7	1	0	0	1	0	0	0	
8	0	1	0	0	1	0	0	
9	0	0	1	0	0	0	0	
10	0	4	1	0	0	0	0	
11	1	3	1	0	0	0	0	

Analysis

Survey Respondents by Age		
Age	#	%
18 to 24	20	9.6%
25 to 34	94	45.0%
35 to 44	53	25.4%
45 to 54	20	9.6%
55 to 64	16	7.7%
65 or older	6	2.9%
Grand Total	209	

# Multiple Choice

- Check all the Apply  
(Close Ended)

Each choice becomes a dichotomous question or variable.

# Question

Which is your race? Select one or more boxes

- ☐ White
- ☐ Black or African-American
- ☐ Asian
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ Some Other Race

Data

	A	B	C	D	E	F	G	H
1	Race White	Race Black	Race Asian	Race Am Indian	Race Hawaiian	Race Some Other	Race Count	Race Final
2	1	0	0	0	0	0	1	White
3	0	1	0	0	0	0	1	Black/African-American
4	0	0	0	0	0	1	1	Some Other Race
5	1	0	1	0	0	0	2	Two or More Races
6	0	0	1	0	0	0	1	Asian
7	1	0	0	0	0	0	1	White
8	0	1	0	0	0	0	1	Black/African-American
9	0	0	1	0	0	0	1	Asian
10	1	0	0	0	0	0	1	White
11	0	0	1	0	0	0	1	Asian
12	0	0	0	0	0	1	1	Some Other Race

Analysis

Survey Respondents by Race		
Race	#	%
White	166	79.4%
Non-White	43	20.6%
Am. Indian or Alaska Native	2	1.0%
Asian	12	5.7%
Black/African-American	13	6.2%
Some Other Race	7	3.3%
Two or More Races	9	4.3%
Grand Total	209	



# Likert Rating Scale (Close Ended)

Rating scales assess where someone falls along a single continuum.

# Question

The way people drive here makes me worry about my own safety.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree/Disagree
- ☐ Agree
- ☐ Strongly Agree

The way people drive here makes me worry about the safety of my family.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree/Disagree
- ☐ Agree
- ☐ Strongly Agree

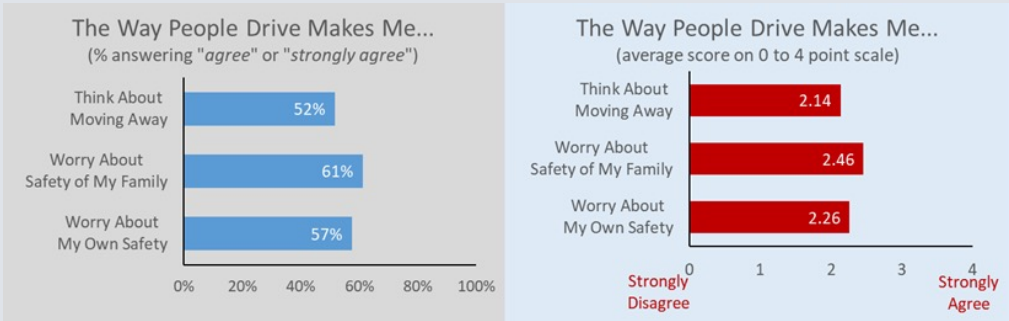
The way people drive here makes me think about moving away from the city.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree/Disagree
- ☐ Agree
- ☐ Strongly Agree

Data

	AC	AD	AE	AF	AG
1	Biggest Threat	Worry Own Safety	Worry Family	Leave City	Police Do
2	6	2	3	3	I think they are doing a good job in all honesty. It is
3	1	2	1	1	They could repair the roads. I think that having saf
4	7	3	3	3	They took basic road safety classes out of schools &
5	4	3	1	3	There are already many police cars around, the pr
6	1	3	3	2	Actually enforcing the laws that are already in plac
7	4	3	3	3	The increased use of public transportation and ride
8	4	1	2	0	They could start handing out more fines and possi
9	6	1	4	3	I guess just be more alert for distracted drivers. I'n
10	7	3	4	4	Enforce the law more stringently: I live on a corner

Analysis



# Semantic Differential Rating Scale (Close Ended)

Used to assess a person’s attitudes or feelings towards a given object, event, or construct.

# Question

How safe is it to drive on public streets in Sara City?  
(Select a number on the scale below from 0 “Very Unsafe” to 10 “Very Safe”)

Very Unsafe

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

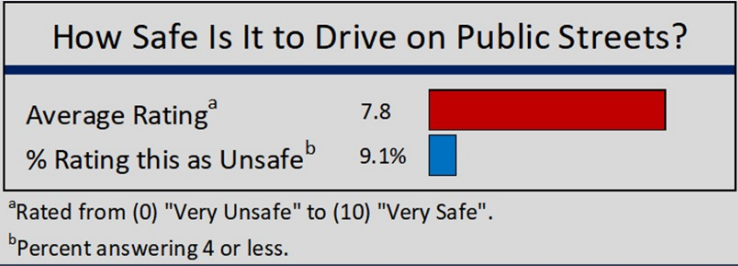
0 1 2 3 4 5 6 7 8 9 10

Very Safe

Data

	A	B	C	D	E	F
1	ResponseID	Drove 12M	Drive Safety	Drive Unsafe Text	Driving Map 1	Driving Map 2
2	38	1	10		0	0
3	41	1	7	There are not always good signs. Some of the s	0	0
4	158	1	4	The roads around here aren't always the best, v	0	0
5	103	1	5	There are too many people that sleep at the wh	0	0
6	26	0	9	The main thing that makes driving in my comm	0	0
7	189	0	5	I live in a city so people are always in a rush in	0	0
8	140	1	6	The presence of aggressive drivers, jaywalkers,	0	0
9	93	1	10		0	0
10	48	1	9	I live in a relatively small town and do not enco	0	0
11	111	1	5	The main thing that makes driving less than saf	0	0
12	66	1	8	I feel a lot of the drivers in town aren't very go	0	0

Analysis







# Likert Scale vs. Semantic Differential Rating Scale (Close Ended)

## Likert Scale

Do you agree or disagree with the following statement: The police are doing a good job controlling crime in the city.

- |   |   |
|---|---|
| <input type="checkbox"/> Strongly Disagree      | <input type="checkbox"/> Agree          |
| <input type="checkbox"/> Disagree               | <input type="checkbox"/> Strongly Agree |
| <input type="checkbox"/> Neither Agree/Disagree |   |

## Semantic Differential

How are the police are doing at controlling crime in the city?

Very Poor Job

☐

0

☐

1

☐

2

☐

3

☐

4

☐

5

Very Good Job

# Matrix Rating Scale (Close Ended)

A matrix saves space and facilitates a quicker response by listing the response anchors just one time. The data produced by a matrix also allows for nice comparisons across different items.

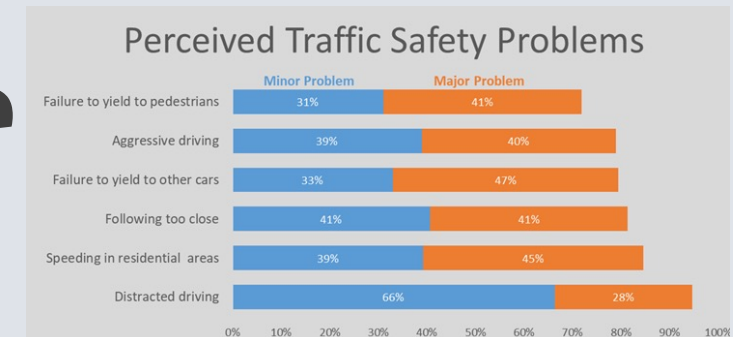
# Question

Please review the list of traffic behaviors below and rate the degree to which they are currently a problem in Sara City.

Traffic Safety Topics	Not a Problem <sub>0</sub>	Minor Problem <sub>1</sub>	Major Problem <sub>2</sub>	DON'T KNOW <sub>9</sub>
Speeding in residential areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Aggressive driving ("road rage")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Distracted driving (texting, phone calls)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Following too close ("tailgating")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Failure to yield to other motor vehicles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Failure to yield to pedestrians	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

	O	P	Q	R	S	T	U
1	Driving Map	Problems Speeding in residential areas	Problems Aggressive driving	Problems Distracted driving	Problems Following too close	Problems Failure to yield to other cars	Problems Failure to yield to pedestrians
2	11	1	0	1	0	0	0
3	0	0	2	0	0	9	2
4	0	2	2	2	2	2	2
5	0	2	2	2	2	1	1
6	0	2	1	2	2	1	1
7	0	2	0	2	1	2	2
8	0	2	2	2	2	2	2

# Analysis



# Control

# Control

- # Control

# Analyze

- # Analyze



- # Analyze

# Theme Analysis Example

# Question

What could the Police Department do to improve traffic safety in our community? (Type a brief response in the box below)

Data

	A	B	C	D	E	F	G	H
	What could the Police Department Do to Improve Traffic Safety	LEN	Enforce Traffic Laws, Crackdown, Give Citations	Increase Officers Patrolling Streets	Provide Information to Public, PSAs, Driver Training	Improve/Do Maintenance on Roads, Bike Lanes, Sidewalks	Reduce Speed Limits	Speed Cameras, Red Light Cameras
1	About the only thing the police department or sheriff's office can do to improve traffic safety is to have more officers on traffic duty and aggressively enforce the laws.	173	1	1				
2	They need to educate people about laws. Some people may have come from other countries and are able to drive with their drivers licenses in the states. So they never took classes on how to drive in the US.	206			1			
3	Ticket more people for following too closely. I have yet to see a person get a ticket for following too closely, UNLESS they are in a traffic accident.	151	1					
4	They should clean up the streets and make sure there are more potholes. They should also make sure the lines are clear and easy to see as well as lots of visible speed limit and traffic signs.	192				1		
5	Signage could be improved. Pedestrian education programs could be instituted. Bike education programs could be instituted for drivers and riders. Improvement and creation of bike paths.	190				1		
6								

Analysis

- #2 - Aggressively enforce traffic laws, issue more citations, crackdown on violators.
- “They could have more police officers on the road ready to aggressively ticket drivers who think they do not have to follow certain laws because they think the minor laws are not a big deal.”
  - “I think that they can crack down on distracted driving by hiding on a major street and while checking for speeders also look for people who may be texting and driving or doing any other distracting activity.”

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# Do Not Re-invent the Wheel



- Some, even most, of the topics you want to include in your survey may have been covered in prior surveys.
- Look for other community surveys on the Internet, as many other agencies and cities have surveyed their communities about crime and policing.
- Search academic literature using an online tool like Google Scholar (Can come with a lofty fee if you're not within academia or with an academic partner).

## Additional Resources

- Bruce, C. W., & Stallo, M. A. (2009). Better policing with Microsoft Office 2007. BookSurge Publishing, USA.
- Clarke, R. V., & Eck, J. E. (2005). Crime analysis for problem solvers in 60 steps. Community Oriented Policing Services. U.S. Dept. of Justice.



# Source & Acknowledgements

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