



Puerto Rico Speed and Aggressive Driving Survey

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5. Speed and Aggressive Driving Survey

To complement enforcement data and crash statistics, a telephone survey will be conducted to assess drivers' attitudes, perceived social norms, and perceived behavioral control regarding speeding and aggressive driving. This instrument, grounded in the Theory of Planned Behavior (TPB), helps explain why drivers choose to engage in or avoid risky behaviors such as speeding, tailgating, or abrupt lane changes. While administrative data show incident rates, the survey reveals motivations, awareness of laws, and recall of public campaigns. Integrating both sources strengthens the foundation for evidence-based messaging and targeted interventions in line with NHTSA and FHWA guidelines.

Category	Description
Survey	Speed and Aggressive Driving Survey
Method	Telephone Survey
Sample Size	500 Drivers
Focus	Speeding and aggressive driving behaviors
Purpose	Evaluate frequency and public perception of speeding and risky driving practices.
Main Content	Speeding habits, tailgating, unsafe lane changes, attitudes, law awareness, and campaign recall.
Participant Profile	Licensed drivers 18 and older across all regions of Puerto Rico.

<https://www.surveymonkey.com/r/CST-2025-AGRESIVEL0>

Section	Description
1: Demographics	5: Speeding
2: General Driving Habits	6: Laws
3: Distractions While Driving	7: Advertising
4: Aggressive Driving	8: Theory of Planned Behavior



SAMPLE DISTRIBUTION GOAL

Metro	150	Sur	90	Oeste	75
Norte	100	Este	85	Central	6
< 34	200	35 to 54	150	55 >	150



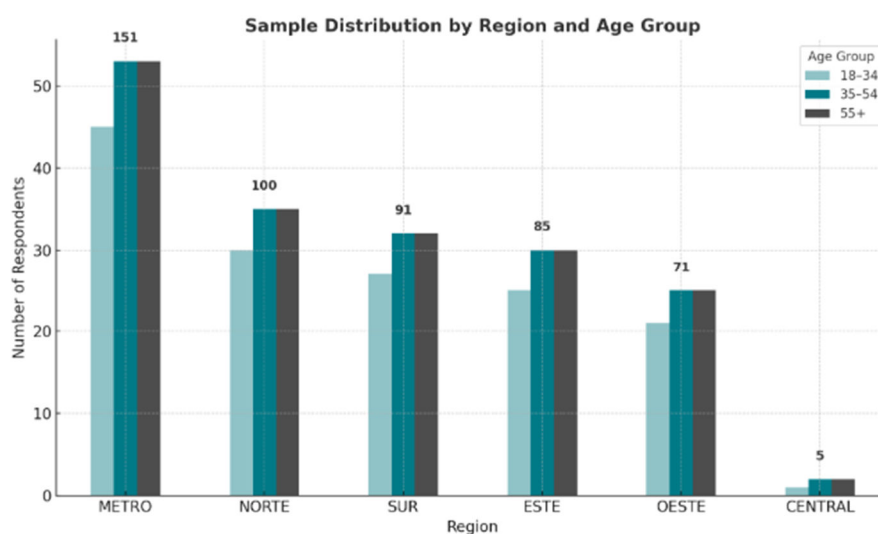
Sample distribution by Region, Gender and Age Groups.

REGION	%	SAMPLE	MEN	FEM	18-34	35-54	55+
CENTRAL	1%	6	3	3	2	2	2
ESTE	19%	93	46	47	31	32	30
METRO	33%	166	83	83	55	56	55
NORTE	17%	83	42	41	27	28	28
OESTE	17%	83	42	41	27	28	28
SUR	14%	69	35	34	23	24	22
ISLAND	100%	500	251	249	165	170	165

The table above presents the ideal sample distribution by region, sex, and age to generalize findings across Puerto Rico's driving population. However, to evaluate the impact of a targeted ad campaign, the sample was adjusted to oversample drivers aged 18 to 34—the primary audience and most exposed group to mobile phone use. Regional and age quotas were modified to ensure sufficient statistical power for measuring campaign effectiveness within this key segment, while still maintaining broad island wide representation. This targeted approach enhances the survey's ability to capture relevant insights from the group most at risk.

The following will be the targeted sampling distribution designed to evaluate the effectiveness of the distracted driving awareness campaign among younger drivers.

REGION	%	SAMPLE	MEN	WOMEN	18-34	35-54	55+
METRO	30%	150	75	75	60	45	45
NORTE	20%	100	50	50	40	30	30
SUR	18%	90	45	45	36	27	27
ESTE	17%	85	43	42	34	26	25
OESTE	14%	70	35	35	28	21	21
CENTRAL	1%	5	3	2	2	1	2
ISLAND	100%	500	251	249	200	150	150





Sample Distribution by Primary Sampling Units (PSU).

#	PSU	REGION	SAMPLE	%
1	SAN JUAN	METRO	48	9.00%
2	BAYAMON	METRO	30	6.00%
3	CAROLINA	METRO	22	4.40%
4	PONCE	SUR	15	3.00%
5	GUAYNABO	METRO	15	3.00%
6	JUANA DIAZ	SUR	15	3.00%
7	GUAYAMA	SUR	15	3.00%
8	SALINAS	SUR	15	3.00%
9	YAUCO	SUR	15	3.00%
10	COAMO	SUR	15	3.00%
11	ARECIBO	NORTE	12	2.40%
12	VEGA BAJA	NORTE	12	2.40%
13	HATILLO	NORTE	12	2.40%
14	TRUJILLO ALTO	METRO	12	2.40%
15	MANATI	NORTE	12	2.40%
16	DORADO	NORTE	12	2.40%
17	ISABELA	NORTE	12	2.40%
18	NARANJITO	NORTE	12	2.40%
19	BARCELOENTA	NORTE	12	2.40%
20	TOA BAJA	METRO	11	2.20%
21	MAYAGÜEZ	OESTE	9	1.80%
22	AGUADILLA	OESTE	9	1.80%
23	MOCA	OESTE	9	1.80%
24	SAN SEBASTIAN	OESTE	9	1.80%
25	CABO ROJO	OESTE	9	1.80%
26	ANASCO	OESTE	9	1.80%
27	SAN GERMAN	OESTE	9	1.80%
28	AGUADA	OESTE	9	1.80%
29	CAGUAS	ESTE	8	1.60%
30	HUMACAO	ESTE	8	1.60%
31	CANOVANAS	METRO	8	1.60%
32	CAYEY	ESTE	8	1.60%
33	RIO GRANDE	ESTE	8	1.60%
34	GURABO	ESTE	8	1.60%
35	LAS PIEDRAS	ESTE	8	1.60%
36	FAJARDO	ESTE	8	1.60%
37	JUNCOS	ESTE	8	1.60%
38	SAN LORENZO	ESTE	8	1.60%
39	CIDRA	ESTE	8	1.60%
40	AGUAS BUENAS	ESTE	8	1.60%
41	TOA ALTA	METRO	4	0.80%
42	CATANO	METRO	4	0.60%
		TOTAL	500	100%



Background

The Puerto Rico Speed and Aggressive Driving Survey was designed by the Comisión para la Seguridad en el Tránsito (CST) to measure the prevalence, perceptions, and consequences of speeding and aggressive driving across the Island. This survey is part of CST's broader efforts to reduce fatalities and serious crashes by generating evidence-based insights that inform education, enforcement, and policy initiatives.

Speeding is recognized as one of the leading contributors to roadway fatalities in Puerto Rico, particularly among male drivers, and aggressive behaviors often compound the risk by creating unpredictable traffic situations.

Aggressive driving is defined as any deliberate, erratic, or hostile action behind the wheel that does not promote road safety. Examples include tailgating, cutting off other vehicles, running red lights, weaving through traffic, blocking passing lanes, using the shoulder to bypass congestion, unnecessary horn use, and flashing lights or braking suddenly to intimidate other drivers. These behaviors are associated with an increased potential for loss of vehicle control, diminished effectiveness of safety equipment, greater crash severity, higher medical and economic costs, and elevated fuel consumption.

The survey also explores public exposure to awareness campaigns, perceptions of law enforcement, and knowledge of penalties. Early findings show that while many drivers acknowledge the risks of speeding and aggressive behavior, a large percentage believe the likelihood of receiving a citation is low. The results highlight the need for enhanced campaign visibility and stronger deterrence mechanisms to promote safer driving across Puerto Rico.

Survey Objectives

1. Quantify the frequency and self-reported behaviors of speeding and aggressive driving among licensed drivers in Puerto Rico.
2. Evaluate drivers' knowledge of Puerto Rico's speed limits, traffic laws, penalties, and enforcement practices related to aggressive driving.
3. Assess attitudes, perceived social norms, and perceived behavioral control related to speeding and aggressive driving, using the Theory of Planned Behavior (TPB) as the guiding framework.
4. Identify high-risk demographic and geographic groups with higher prevalence of speeding or aggressive driving and lower perception of enforcement risk.
5. Measure public recall and awareness of CST's speed and aggressive driving media campaigns and police enforcement initiatives (e.g., radar patrols, speed traps, and checkpoints).



Methodology

The Puerto Rico Driving Under the Influence of Alcohol Attitudinal Survey 2025 was conducted the week of August 18–23, 2025, through Computer-Assisted Telephone Interviews (CATI) with a total of 504 licensed drivers across Puerto Rico.

The survey design was grounded in the Theory of Planned Behavior (TPB) and employed a stratified sampling approach by region, municipality, and age group to ensure representativeness. Coverage was achieved across Puerto Rico's six CST regions, 42 selected municipalities, and three age brackets (<34, 35–54, 55+).

The standardized questionnaire was developed in alignment with CST objectives and captured key variables related to alcohol-impaired driving. These included:

- Self-reported speeding behaviors, such as frequency and circumstances of exceeding speed limits on urban, rural, and school-zone roads.
- Aggressive driving practices, including tailgating, weaving, blocking lanes, unnecessary horn use, and other hostile maneuvers.
- Perceived behavioral control, such as drivers' confidence in their ability to avoid speeding or acting aggressively under stressful traffic conditions.
- Social norms and peer influence regarding tolerance of speeding and aggressive driving.
- Knowledge and awareness of Puerto Rico traffic laws, penalties, and enforcement practices related to speed and aggressive driving.
- Exposure and recall of CST media campaigns, radar patrols, and speed enforcement initiatives.

Data from the 504 respondents will be analyzed to produce region- and age-specific insights, enabling CST to identify high-risk demographic and geographic groups, gaps in legal knowledge, and levels of campaign penetration related to speeding and aggressive driving.

The survey provides CST and stakeholders with reliable attitude and behavioral data to:

1. Improve targeting of educational and enforcement campaigns focused on reducing speeding and aggressive driving.
2. Evaluate public awareness and recall of past CST initiatives addressing speed and roadway aggression.
3. Inform policy and enforcement strategies to enhance deterrence and compliance with traffic laws.
4. Justify future programmatic funding and potential legislative updates aimed at reducing speed- and aggression-related crashes, injuries, and fatalities in Puerto Rico.

Research Objective

To analyze the factors influencing speeding and aggressive driving behaviors in Puerto Rico and evaluate the impact of educational campaigns, enforcement efforts, and legal awareness on compliance with traffic laws related to speed and roadway aggression.



Conceptual Framework

The research model for the *Puerto Rico Speed and Aggressive Driving Survey 2025* is grounded in the Theory of Planned Behavior (TPB) and incorporates additional variables relevant to traffic safety, enforcement, and communication effectiveness. At its core, the model posits that a driver's intention to avoid speeding or engaging in aggressive driving (behavioral intention) is shaped by three key psychological constructs:

- Attitudes: beliefs about the risks and consequences of speeding and aggressive driving, including perceived personal harm, societal harm, and economic costs.
- Subjective norms: perceived social pressure from peers, family, and the community to comply with traffic rules and refrain from unsafe, hostile, or unlawful driving behaviors.
- Perceived behavioral control: confidence in one's ability to avoid speeding or aggressive driving (e.g., managing stress, allowing extra travel time, or choosing safer driving strategies).

These intentions are expected to predict self-reported speeding and aggressive driving behaviors, specifically the frequency, circumstances, and decision-making processes surrounding unsafe driving practices. The framework also integrates legal awareness and campaign exposure as moderating factors, recognizing that enforcement visibility and public messaging can influence both attitudes and intentions, ultimately shaping safer roadway behavior.

External variables

External variables further enrich the model by providing contextual and moderating factors. Campaign exposure—such as awareness, frequency, and recall of CST's speed and aggressive driving prevention campaigns—is hypothesized to influence attitudes and behavioral intentions directly. Legal awareness, including knowledge of Puerto Rico's speed limits, traffic laws, penalties, and the perceived likelihood of enforcement (e.g., radar checks, roadblocks), may moderate the relationship between intention and behavior.

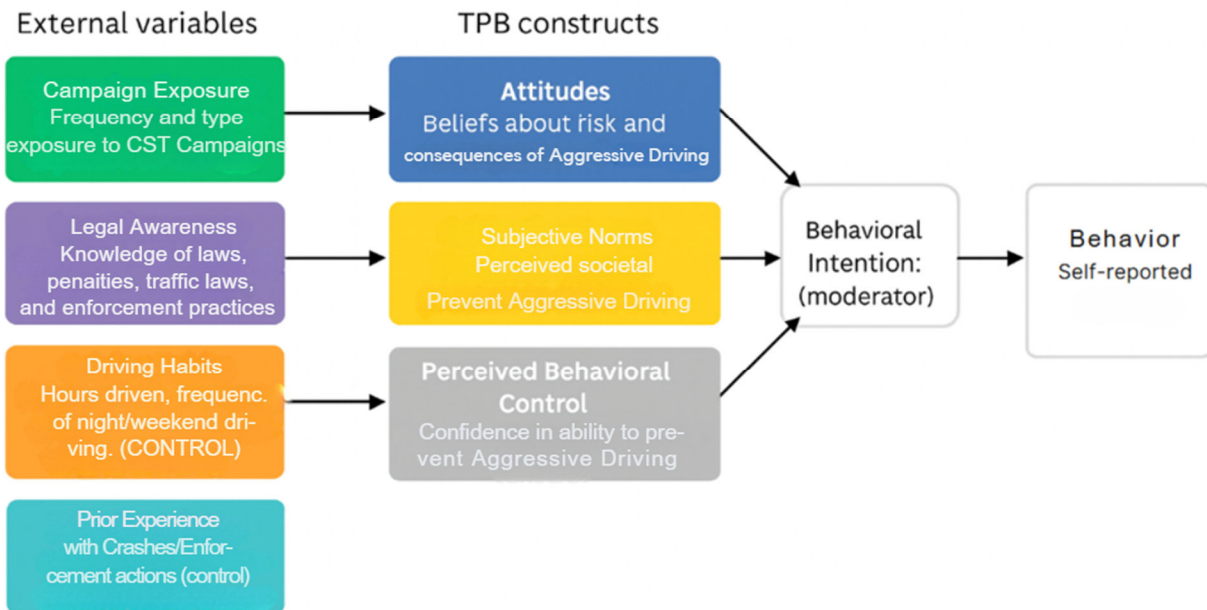
Additional control variables include demographics (age, gender, education, employment status), driving habits (hours driven, night/weekend frequency, highway vs. school-zone driving), and prior experience with crashes or enforcement actions.

Together, these variables provide a comprehensive understanding of the psychological, social, and contextual factors influencing speeding and aggressive driving in Puerto Rico. This model allows researchers to assess not only the psychological determinants of compliance with traffic safety laws but also the effectiveness of educational and legislative interventions designed to protect road users and reduce crashes, injuries, and fatalities.



Research Model

To analyze the factors influencing Speeding and Aggressive Driving





Survey Instrument

The *CST25-5 Speed and Aggressive Driving Attitudinal Survey 2025* was developed to evaluate behaviors, attitudes, and awareness related to speeding and aggressive driving in Puerto Rico. Structured around evidence-based frameworks such as the Theory of Planned Behavior (TPB), the instrument captures a comprehensive view of both individual decision-making and external influences that contribute to unsafe driving practices or the adoption of safer alternatives.

The questionnaire is divided into seven key sections: Demographics, Driving Habits, Perceptions of Road Safety, Aggressive Driving Behaviors, Speeding Behaviors, Law Awareness and Enforcement Experience, Exposure to Public Awareness Campaigns, and TPB Constructs. Each section serves a distinct analytical purpose—ranging from identifying high-risk populations and contextual driving patterns, to measuring the effectiveness of educational and enforcement initiatives. Together, they provide a holistic foundation for designing, implementing, and evaluating policy and communication strategies aimed at reducing speeding and aggressive driving and improving traffic safety across Puerto Rico.

1. Demographics

This section collects basic demographic information from respondents, including sex, age, region, municipality, household composition, education level, employment status, marital status, and household income. Demographic data is essential for disaggregating results by key population segments. These variables help assess whether certain groups are more prone to speeding or aggressive driving behaviors or more responsive to prevention messages. Stratifying by demographics also supports the evaluation of targeted outreach and informs equitable policy development.

Variables:

- Sex, region, municipality
- Age
- Number of people in the household
- Highest educational level completed
- Current employment status
- Marital status

2. Driving Habits

This section explores respondents' driving frequency, vehicle type, fuel usage, and typical driving duration during weekdays and weekends. It also examines common trip purposes, such as commuting to work, school, shopping, or social outings. Understanding these patterns establishes context for aggressive driving risks. Frequency and timing of driving—particularly during high-congestion periods—are critical factors influencing the likelihood of speeding or aggressive behavior.

Variables:

- Driving frequency
- Main type of vehicle and fuel type
- Hours spent driving on weekdays and weekends
- Destinations during a typical weekday and weekend



- Rating of driving experience in Puerto Rico
- Top three concerns about road safety

3. Speeding and Aggressive Driving Behaviors

This section examines respondents' self-reported frequency of speeding and aggressive maneuvers. It captures behaviors such as tailgating, weaving through traffic, honking in frustration, running yellow or red lights, blocking lanes, and using the shoulder to bypass congestion. It also measures the frequency of exceeding posted limits in different settings (urban, rural, highways, school zones). These questions identify the prevalence of unsafe driving and highlight contexts where interventions are most needed.

Variables:

- Frequency of speeding in different road types (urban, rural, highways, school zones)
- Situations that trigger aggressive driving (traffic congestion, time pressure, stress)
- Common maneuvers (tailgating, cutting in, weaving, honking, blocking)
- Past incidents or near misses involving speeding or aggressive driving
- Self-reported traffic stops or fines related to these behaviors

4. Perceptions and Beliefs

This section assesses drivers' perceptions of the risks and dangers associated with speeding and aggressive driving, as well as their knowledge of Puerto Rico's traffic laws. It also measures beliefs about the effectiveness of prevention strategies, such as radar enforcement, checkpoints, and public awareness campaigns, in reducing crashes and fatalities.

Variables:

- Perceived risk of speeding and aggressive driving
- Perceived danger level for self and others
- Beliefs about the effectiveness of prevention strategies (e.g., police enforcement, cameras, campaigns)
- Confidence in ability to avoid speeding or acting aggressively

5. Law Enforcement and Experience

This section documents respondents' awareness of enforcement strategies and penalties, as well as personal history of receiving citations for speeding or aggressive driving. It also captures involvement in crashes or near misses where speed or aggression was a factor. Perceptions of enforcement likelihood (deterrence) and personal experiences strongly influence compliance.

Variables:

- Perceived likelihood of being fined or ticketed for speeding/aggressive driving
- Recent exposure to news or reports about enforcement actions
- Knowledge of specific penalties or fine amounts
- History of being stopped, fined, or warned for speeding/aggressive driving

6. Exposure to Public Awareness Campaigns

This section measures respondents' awareness, recall, and perceptions of CST's speeding and aggressive driving prevention campaigns. It evaluates how often drivers have seen or heard campaign messages, which media channels (TV, radio, billboards, social media, streaming platforms) were most effective, and the clarity and persuasiveness of those messages.



Variables:

- Recall of CST campaigns in the past 12 months
- Frequency of exposure across media channels
- Perceived clarity and effectiveness of campaign messages
- Influence of campaign exposure on personal decisions to drive safely
- Recall of enforcement-related campaign messages

7. Theory of Planned Behavior (TPB) Constructs

This section operationalizes the core constructs of the TPB as they apply to speeding and aggressive driving. It captures the psychological and social drivers behind the intention to drive safely, as well as the perceived ability to follow through with safer behaviors.

Variables:

- **Attitudes:** Beliefs about personal and societal risks of speeding and aggressive driving
- **Subjective Norms:** Perceived social pressure from friends, family, and community to comply with traffic laws
- **Perceived Behavioral Control:** Confidence in ability to avoid unsafe behaviors (e.g., planning travel time, stress management)
- **Behavioral Intention:** Self-reported likelihood of speeding or driving aggressively under different circumstances



Survey Pilot Test: July 2025

Objective: To ensure the clarity, functionality, and reliability of the instrument prior to large-scale deployment, a pilot study was conducted in July 2025 with a sample of 20 drivers in Puerto Rico. The primary objective of the pilot was to evaluate the questionnaire's ability to capture key variables related to speeding behaviors, aggressive driving practices, legal awareness, and campaign exposure, as well as to assess the performance of items aligned with the Theory of Planned Behavior (TPB). The pilot also allowed for testing of skip logic, response variability, and respondent burden. Insights gained from this preliminary test informed adjustments to question wording, response options, and instrument structure, ultimately strengthening the validity and reliability of the final survey tool.

Key Findings:

1. All survey questions were completed with high response rates, confirming that the instrument functioned effectively.
2. The questions yielded balanced response distributions, particularly on speeding frequency, aggressive driving behaviors, and campaign recall.
3. Complex skip patterns (e.g., follow-up questions on frequency of speeding in different zones or circumstances of aggressive driving) were functional but benefited from refinement.
4. Sensitive questions (e.g., household income, self-reported aggressive behavior) were answered, though some hesitation was noted.
5. Low-prevalence events, such as crashes or citations involving speeding or aggression, were successfully captured.

Instrument Strengths:

- Captured a full range of speeding and aggressive driving behaviors, perceptions, and legal awareness.
- The TPB section showed strong internal consistency across attitudes, subjective norms, behavioral control, and intention.

Statistical Validation of the Survey Instrument for Full Deployment:

Based on the results of the pilot test conducted in July 2025 with 20 respondents, the questionnaire demonstrated acceptable psychometric properties to support its full-scale implementation. Reliability analysis of the core theoretical construct—behavioral intention as measured through the TPB—yielded a Cronbach's alpha of .80 after refinement, indicating good internal consistency among the attitudinal, normative, control, and intention-related items. In addition, the items exhibited adequate variability and item-total correlations above the .40 threshold, supporting their contribution to the overall scale. Preliminary correlation patterns among TPB components suggest construct alignment, while the absence of floor or ceiling effects affirms sensitivity to behavioral differences. These findings statistically justify proceeding with the administration of the finalized instrument to a representative sample of 500 drivers, ensuring that the tool is both valid and reliable for measuring speeding and aggressive driving perceptions, behaviors, and campaign impact in Puerto Rico.

Conclusion:

The pilot study demonstrated that the questionnaire was clear, effective, and capable of capturing relevant data on speeding and aggressive driving in Puerto Rico. The findings provided actionable insights into refining the instrument before its implementation with a larger, representative sample.



2025 Survey Results: Speed and Aggressive Driving

The CST25-5 Speed and Aggressive Driving Attitudinal Survey provides critical insights into the behaviors, perceptions, and awareness of Puerto Rican drivers regarding speeding and aggressive driving. Conducted in August 2025 with a representative sample of 504 licensed drivers, the survey was administered using Computer-Assisted Telephone Interviewing (CATI) to ensure methodological rigor and comprehensive geographic coverage across Puerto Rico's six regions.

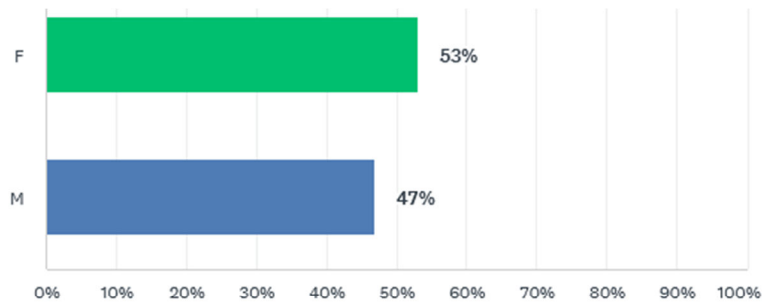
Structured around the Theory of Planned Behavior (TPB), the instrument explores not only self-reported speeding and aggressive driving behaviors but also the underlying attitudes, perceived social norms, and perceived behavioral control that influence these unsafe practices. By integrating demographic profiles, driving habits, enforcement experiences, and exposure to prevention campaigns, the survey offers a multidimensional understanding of speed- and aggression-related risks.

These findings serve as a foundation for shaping targeted educational initiatives, enforcement efforts, and public communication strategies, ensuring that interventions are data-driven and tailored to the realities of Puerto Rico's drivers. The results also provide the Comisión para la Seguridad en el Tránsito (CST) and partner agencies with reliable evidence to evaluate current prevention efforts and to guide future policies aimed at reducing speeding- and aggression-related crashes, injuries, and fatalities.

This outcome carries significant implications for the CST25-5 Speed and Aggressive Driving Attitudinal Survey 2025. It confirms that the entire sample consists of licensed drivers in Puerto Rico who are actively engaged in driving, making them directly relevant to subsequent questions on speeding, aggressive driving, attitudes, compliance, and awareness of traffic laws. This complete alignment between the target population and the respondent pool strengthens the validity of the survey's findings and ensures that later sections measure behaviors and perceptions from individuals with firsthand, recent driving experience, particularly in contexts where speeding and aggressive decision-making are most relevant.

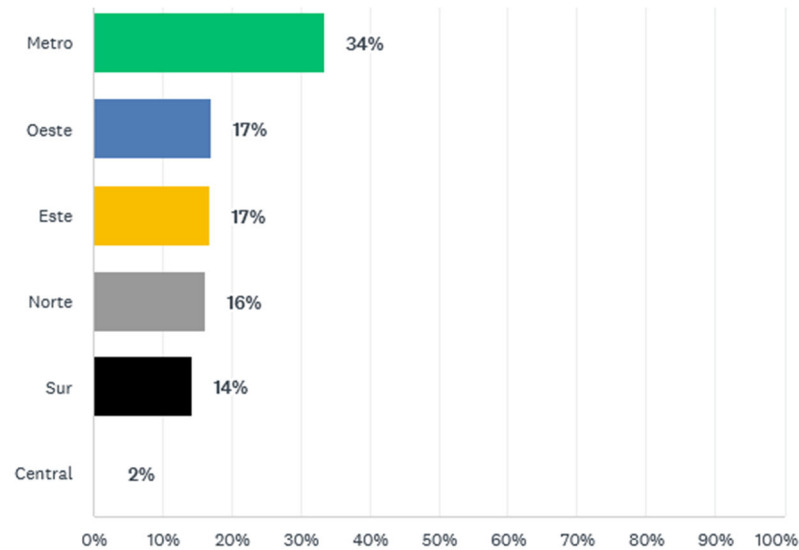


Q1 | DEM1 | SEX



ANSWER CHOICES	RESPONSES
F	53% 268
M	47% 236
TOTAL	504

The survey, conducted in August 2025 among Puerto Rican drivers, included 504 respondents, with 53% female (n = 268) and 47% male (n = 236) participants. This nearly balanced gender distribution aligns closely with the most recent U.S. Census Bureau 2024 Puerto Rico Community Survey (ACS), which estimates that approximately 53% of Puerto Rico's adult population is female and 47% is male. This consistency indicates that the survey's gender profile is representative of the broader demographic composition of Puerto Rico's adult population, providing a solid foundation for gender-based analyses of driving behaviors, speeding, aggressive driving, and traffic safety perceptions.



ANSWER CHOICES	RESPONSES	
Metro	34%	169
Oeste	17%	86
Este	17%	85
Norte	16%	82
Sur	14%	72
Central	2%	10
TOTAL		504

The survey, conducted in August 2025 among 504 Puerto Rican drivers, was designed to reflect regional exposure to road risk using two key indicators: traffic crashes (2020–2024) reported by the *Administración de Compensaciones por Accidentes de Automóviles (ACAA)* and traffic fatalities (2019–2023) from the *Fatality Analysis Reporting System (FARS)*.

ACAA crash data shows the Metro region accounted for 33% of reported crashes, followed by Este (18%), Oeste (17%), Norte (17%), Sur (14%), and Central (1%).

FARS fatality data presents a similar distribution, with Metro (33%), Este (21%), Norte (18%), Oeste (14%), Sur (14%), and Central (1%).

The survey sample closely mirrors these patterns: Metro (34%, n = 169), Oeste (17%, n = 86), Este (17%, n = 85), Norte (16%, n = 82), Sur (14%, n = 72), and Central (2%, n = 10).

This stratified allocation ensures proportional representation across regions with varying traffic risk levels, covering both urban and rural drivers. By aligning the sample with crash and fatality patterns, the survey provides a representative basis for analyzing regional differences in driving habits, speeding, and aggressive driving perceptions, strengthening the relevance of findings for policy development and targeted road safety interventions across Puerto Rico.



Q3 | DEM3 | MUNICIPIO

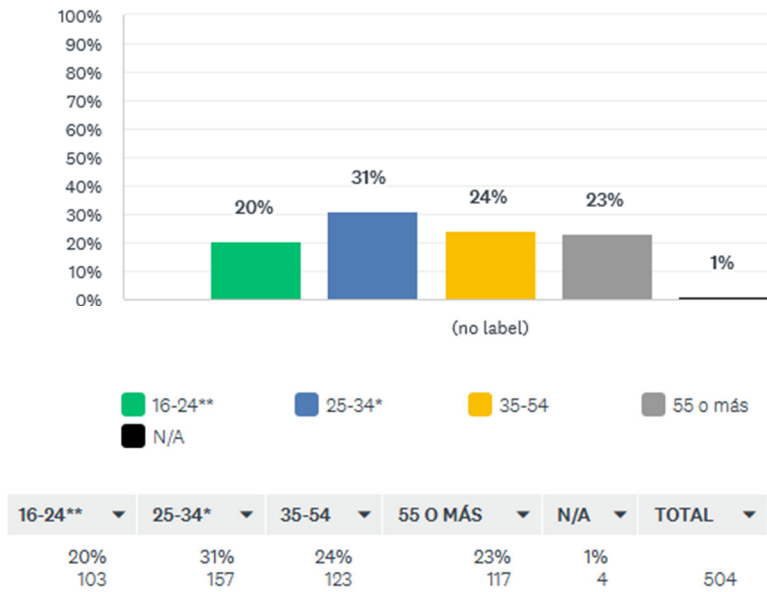
ANSWER CHOICES	RESPONSES
San Juan	10% 49
Bayamon	7% 37
Ponce	5% 27
Guaynabo	5% 25
Mayaguez	5% 23
Arecibo	4% 19
Carolina	3% 17
Las Piedras	3% 17
Manatí	3% 17
Toa Baja	3% 16
Caguas	3% 13
Aguas Buenas	2% 12
Santa Isabel	2% 12
San German	2% 11
Lajas	2% 10
Maunabo	2% 10
Yauco	2% 10
Camuy	2% 9
Guayama	2% 9
Vega Alta	2% 9
Canovanas	2% 8
Trujillo Alto	2% 8
Barceloneta	1% 7
Guanica	1% 7

The survey sample is representative because it was strategically designed using multiple benchmarks of road risk and population exposure. Regional quotas were based on traffic crashes data from the *Administración de Compensaciones por Accidentes de Automóviles (2020–2024)* and fatality data from the *Fatality Analysis Reporting System (2019–2023)*, ensuring alignment with actual crash and fatality distributions across Puerto Rico. Additionally, at least one respondent was surveyed in all 78 municipalities, balancing urban and rural areas and incorporating drivers from diverse demographic and geographic contexts. This stratified, risk-informed approach enhances the sample’s validity, making the findings robust for policymaking and targeted road safety interventions.

Furthermore, the top 10 municipalities with the highest traffic fatalities—including San Juan, Bayamón, Caguas, Carolina, Ponce, Toa Baja, Mayagüez, Arecibo, Guaynabo, and Humacao—were given proportional emphasis in the sampling plan based on FARS 2019–2023 data. The survey results closely reflect this prioritization, with San Juan (10%, $n = 49$) leading the distribution, followed by Bayamón (7%, $n = 37$), Ponce (5%, $n = 27$), Guaynabo (5%, $n = 25$), and Mayagüez (5%, $n = 23$). Other municipalities such as Arecibo (4%, $n = 19$), Carolina, Las Piedras, and Manatí (3% each, $n = 17$), and Toa Baja (3%, $n = 16$) also rank among the highest represented. This alignment between the planned target distribution and the actual sample collected ensures that high-risk, high-population municipalities are adequately represented, strengthening the study’s ability to analyze driver behavior in areas with the greatest road safety challenges.



Q4 | DEM4 | AGE



The survey's age distribution demonstrates strong representation of Puerto Rican drivers across critical adult age groups, enabling meaningful analysis of driving behaviors across generational cohorts. The largest segment consists of drivers aged 25–34 years (31%, $n = 157$), a group often associated with increased risk-taking and higher exposure to unsafe driving behaviors. Drivers aged 35–54 (24%, $n = 123$) and 55+ (23%, $n = 117$) provide balanced input from midlife drivers—frequent vehicle users for work and family responsibilities—and older adults, whose experience may be offset by physical or cognitive considerations. Younger drivers aged 16–24 (20%, $n = 103$) are proportionally represented and offer insight into the perspectives of novice and early-career drivers. A very small fraction (1%, $n = 4$) did not provide age data.

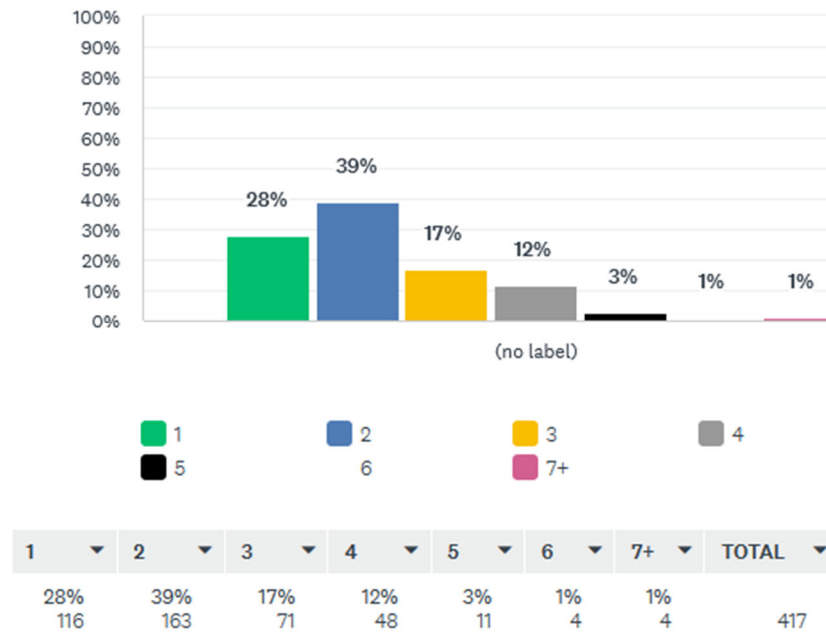
To support quantitative analysis of age-related patterns, the categories were assigned weights from 1 to 4: respondents aged 16–24 were assigned a weight of 1, 25–34 received 2, 35–54 were assigned 3, and 55+ received 4. This weighted framework enables the computation of average age scores across regions and subgroups, enhancing the ability to detect demographic trends in behaviors and perceptions. This segmentation mirrors best practices in driver behavior and traffic safety research, as outlined in NHTSA technical guidance and applied in surveys such as the *National Roadside Survey* and the *National Survey on Distracted Driving Attitudes and Behavior*. The three-cohort structure—younger (16–34), midlife (35–54), and older (55+)—facilitates comparability with federally sponsored research and strengthens the survey's external validity for informing policy and program development.

	16-24**	25-34*	35-54	55 O MÁS	N/A	TOTAL
Q2: Metro	1% 1	27% 46	37% 62	35% 59	1% 1	34% 169
Q2: Norte	1% 1	23% 19	39% 32	34% 28	2% 2	16% 82
Q2: Sur	4% 3	94% 68	0% 0	1% 1	0% 0	14% 72
Q2: Este	88% 75	2% 2	7% 6	2% 2	0% 0	17% 85
Q2: Oeste	22% 19	22% 19	23% 20	31% 27	1% 1	17% 86
Q2: Central	40% 4	30% 3	30% 3	0% 0	0% 0	2% 10



Q5 | DEM5 | HOUSEHOLDS

How many people live in your household, including yourself?



According to the U.S. Census Bureau’s 2023/2024 American Community Survey (ACS) 1-Year Estimates for Puerto Rico, the average household size is approximately 2.48 persons per household (U.S. Census Bureau, 2024). To facilitate quantitative analysis, the survey assigned weights from 1 to 7 to represent the number of people in each respondent’s household, including themselves: one-person households received a weight of 1, two- to six-person households were assigned weights of 2 through 6, and households with seven or more members received the maximum weight of 7. This framework allows for the calculation of a composite household size score, enabling comparisons across demographic and regional subgroups.

The survey results show that most respondents live in small households, closely reflecting Puerto Rico’s population structure as reported by ACS 2024. Two-person households accounted for the largest share (39%, $n = 163$), followed by single-person households (28%, $n = 116$), three-person households (17%, $n = 71$), and four-person households (12%, $n = 48$). Larger households were rare: five-person households (3%, $n = 11$), six-person households (1%, $n = 4$), and seven or more (1%, $n = 4$).

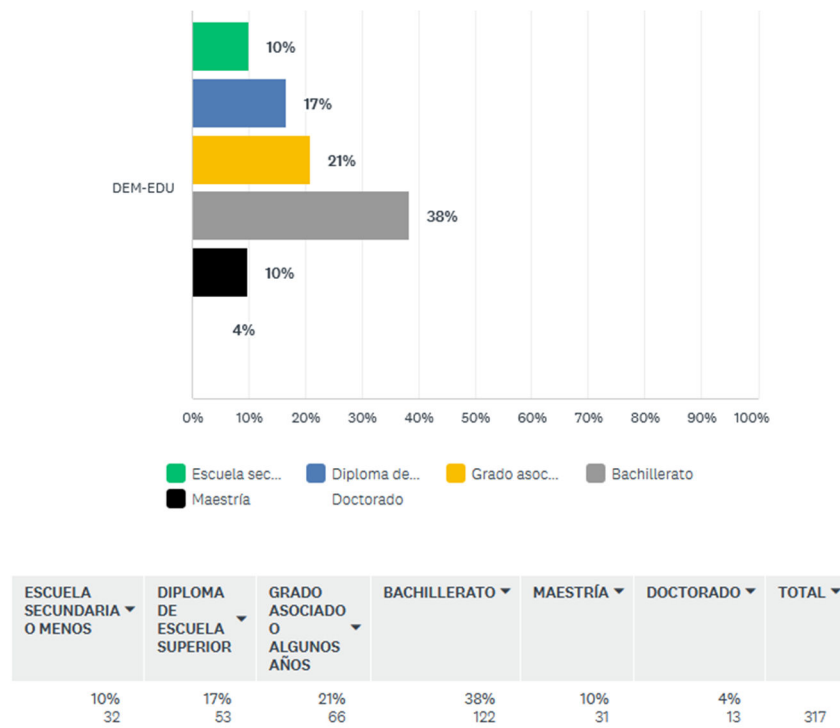
The weighted average household size in the survey is 2.21, slightly lower than the ACS 2024 estimate of 2.48 persons per household. This difference may reflect the survey’s focus on licensed drivers, who are more likely to live in smaller households compared to the broader population that includes children, elderly dependents, and multi-generational families (NHTSA, 2020).

Overall, the distribution confirms that two-person households dominate Puerto Rico’s driving population, with single-person and three-person households also forming large segments. This comparability with ACS data trends enhances the representativeness and validity of the survey sample’s demographic findings.



Q6 | DEM6 | EDUCATION

What is the highest level of education you have completed?



The survey results on educational attainment provide valuable insights into the profile of Puerto Rican drivers who participated in the CST25-5 Speed and Aggressive Driving Attitudinal Survey. Among the 317 respondents who answered this question, the largest segment—38% (n = 122)—reported holding a bachelor’s degree, reflecting a highly educated driver base. This was followed by 21% (n = 66) with an associate degree or some college education, 17% (n = 53) with a high school diploma, and 10% (n = 32) with less than high school education. Smaller proportions included 10% (n = 31) with a master’s degree and 4% (n = 13) who reported having achieved a doctoral degree.

To facilitate quantitative analysis, education levels were assigned weights from 1 to 6, with 1 representing the lowest level (less than high school) and 6 the highest (doctoral degree). The weighted average educational attainment of respondents was 3.4, positioning the sample between an associate degree and a bachelor’s degree on the scale used.

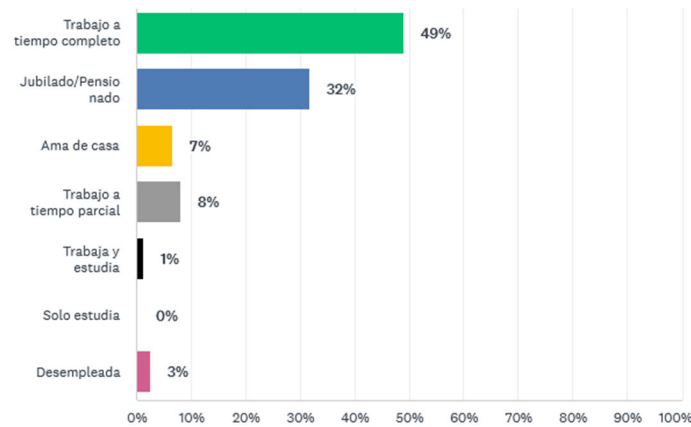
This strong representation of college-educated drivers suggests that the survey captured a demographically engaged population likely to be receptive to educational and awareness campaigns. Understanding the education level of drivers is critical for analyzing road safety, as prior research has demonstrated an inverse relationship between educational attainment and crash risk.

A systematic review by Hasselberg et al. (2021) reported that seven of eight studies found a significant negative association between education and traffic fatalities. Similarly, a study by Sam Houston State University found that each additional year of schooling reduces crash mortality by 5%, with high school dropouts being four times more likely to die in crashes (Gwartney-Gibbs, 2012).



Q7 | DEM7 | OCCUPATION

What is the highest level of education you have completed?



ANSWER CHOICES	RESPONSES	
Trabajo a tiempo completo	49%	224
Jubilado/Pensionado	32%	145
Ama de casa	7%	30
Trabajo a tiempo parcial	8%	37
Trabaja y estudia	1%	6
Solo estudia	0%	2
Desempleada	3%	12
TOTAL		456

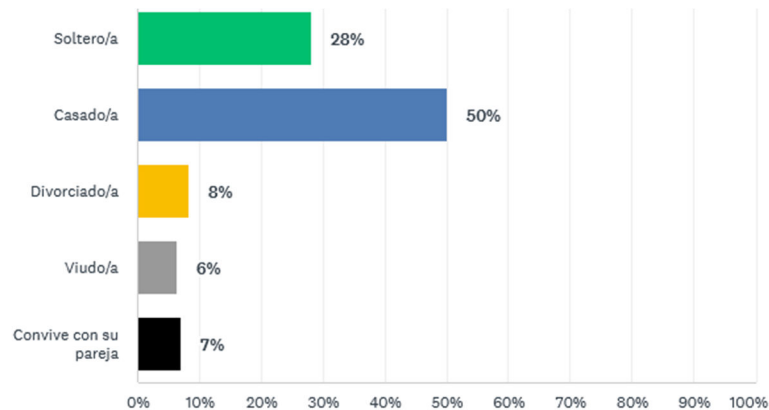
The survey results on current work status provide a clear occupational profile of Puerto Rican drivers. Among the 456 respondents, the largest segment—49% (n = 224)—reported working full-time, making it the dominant category. Retirees or pensioners represent the second-largest group at 32% (n = 145), reflecting Puerto Rico’s aging licensed driver population. Smaller proportions include part-time workers (8%, n = 37), homemakers (7%, n = 30), and unemployed individuals (3%, n = 12). A very small number of respondents reported that they work and study (1%, n = 6) or study exclusively (0%, n = 2).

When compared to the U.S. Census Bureau’s 2023/2024 American Community Survey (ACS) estimates, these findings align closely with island-wide labor force trends. The ACS reports a labor force participation rate of approximately 45% for individuals aged 15 and over in Puerto Rico, with an unemployment rate near 6%, closely matching the survey’s unemployment results. The slightly higher share of full-time workers in the survey likely reflects its focus on licensed, active drivers, who are more likely to be employed or retired than the broader adult population, which includes non-drivers. This alignment with ACS benchmarks strengthens the representativeness of the sample, particularly for key labor force indicators. Importantly, the significant proportion of retirees underscores the necessity of considering age-related driving behaviors, physical capacity, and risk perception in speeding and aggressive driving research. By incorporating both employed and retired respondents, the survey provides a robust socioeconomic profile of Puerto Rican drivers, enhancing the validity of its findings for evidence-based policy development and targeted safety interventions.



Q8 | DEM8 | CIVIL STATUS

What is your current marital status?



ANSWER CHOICES	RESPONSES
▼ Soltero/a	28% 119
▼ Casado/a	50% 212
▼ Divorciado/a	8% 35
▼ Viudo/a	6% 27
▼ Convive con su pareja	7% 30
TOTAL	423

The survey (n = 423) shows the following marital status distribution: Married (50%, n = 212), Single/Never Married (28%, n = 119), Divorced (8%, n = 35), Widowed (6%, n = 27), and Cohabiting (7%, n = 30). This distribution highlights that half of respondents are married, while the other half is distributed across non-married categories.

In comparison, U.S. national data from the American Community Survey (ACS) indicates that approximately 46.4% of U.S. adults are unmarried, a category encompassing those who are never married, divorced, or widowed (U.S. Census Bureau, 2023). The survey's proportion of married respondents (50%) closely mirrors national benchmarks, while the combined categories of single, divorced, widowed, and cohabiting (50%) align with the broader U.S. distribution.

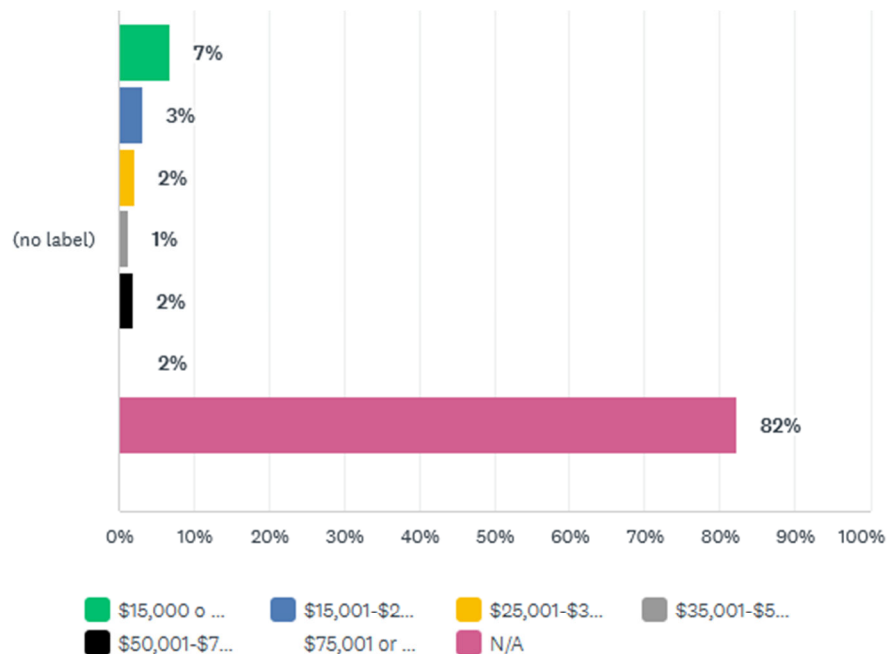
Several studies have found an association between marital status and motor vehicle crash risk, even when controlling for age, sex, and driving exposure. A cohort study in New Zealand reported that never married individuals had more than double the risk of driver injury compared to married counterparts (Whitlock et al., 2004). Research analyzing United States mortality data also demonstrated that divorced or separated individuals had a significantly higher risk of death from motor vehicle crashes than married individuals (Kposowa & Breault, 2009).

Although other factors such as sex and education contribute to crash risk, marital status remains a meaningful predictor even when these are considered. These findings suggest that unmarried, divorced, and widowed drivers may engage in greater risk-taking behaviors or lack social support systems that influence driving patterns and crash exposure.



Q9 | DEM9 | ANNUAL INCOME

What would you say is your household's total annual income?



\$15,000 O MENOS	\$15,001- \$25,000	\$25,001- \$35,000	\$35,001- \$50,000	\$50,001- \$75,000	\$75,001 OR MORE	N/A	TOTAL	WEIGHTED AVERAGE
7%	3%	2%	1%	2%	2%	82%	465	2.70
32	15	10	6	9	10	383		

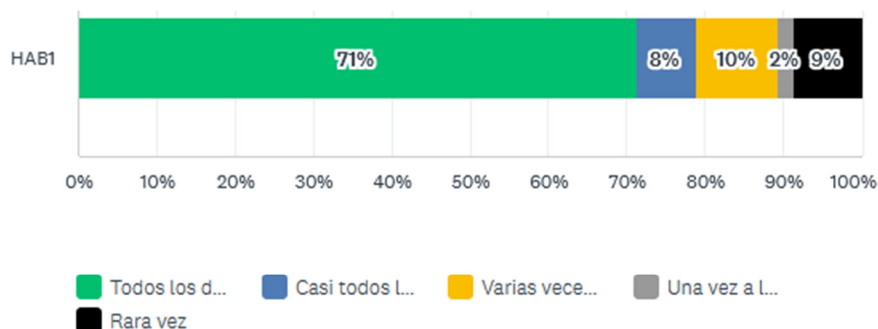
The survey measured household income using six categories, ranging from \$15,000 or less to \$75,001 or more, plus an “N/A” option for those unwilling to disclose. Each category was assigned a weight from 1 to 6, enabling computation of a composite income score and allowing analysis of its relationship to driving behaviors. Among the 465 respondents, the distribution was as follows: \$15,000 or less (7%, n = 32), \$15,001–\$25,000 (3%, n = 15), \$25,001–\$35,000 (2%, n = 10), \$35,001–\$50,000 (1%, n = 6), \$50,001–\$75,000 (2%, n = 9), and \$75,001 or more (2%, n = 10). Notably, the majority—82% (n = 383)—selected “N/A”, reflecting reluctance to disclose income information. The weighted average household income score for the sample was 2.70, positioning it between the \$25,001–\$35,000 and \$35,001–\$50,000 categories on the survey’s scale.

The high nonresponse rate (82%) underscores the sensitivity of income-related questions, a well-documented challenge in survey research, particularly in telephone and online surveys. Respondents often avoid income questions due to privacy concerns, reluctance to disclose financial details, or uncertainty about exact amounts. Despite this limitation, the distribution among those who did report income is broadly consistent with the U.S. Census Bureau’s 2023 American Community Survey (ACS) data, which indicates a median household income of approximately \$25,096 in Puerto Rico and shows that nearly three-quarters of households earn below \$50,000.



Q10 | HAB1 | DRIVING FREQUENCY

How often do you drive a vehicle?



TODOS LOS DÍAS	CASI TODOS LOS DÍAS	VARIAS VECES A LA SEMANA	UNA VEZ A LA SEMANA	RARA VEZ	TOTAL	WEIGHTED AVERAGE
71% 359	8% 38	10% 52	2% 11	9% 43	503	3.31

The survey results highlight that most respondents are frequent drivers, underscoring the heavy reliance on private vehicles in Puerto Rico. A total of 71% ($n = 359$) reported driving every day, while 8% ($n = 38$) reported driving almost every day. Combined, nearly four out of five respondents (79%) drive on a near-daily basis. Smaller proportions reported driving several times per week (10%, $n = 52$), once per week (2%, $n = 11$), or rarely (9%, $n = 43$).

Responses were measured on a weighted scale from 1 to 5, where 1 represented “rarely” and 5 represented “every day.” The resulting weighted average of 3.31 reflects the predominance of highly active drivers, whose daily driving exposure increases opportunities for risky or aggressive driving behaviors. This methodological approach allows driving frequency to be incorporated into composite behavioral indices and correlated with other key survey measures, such as speeding, distraction, and enforcement exposure.

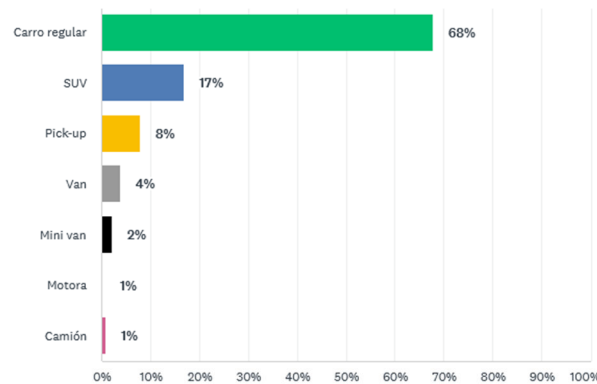
The high frequency of daily drivers is consistent with Puerto Rico’s limited public transportation infrastructure, which compels residents to depend heavily on private vehicles for commuting, work, and errands. This trend is significant for speeding and aggressive driving research because frequent drivers face more opportunities for unsafe maneuvers while on the road. Prior studies support this interpretation: Dingus et al. (2016) found that increased driving exposure is directly associated with a higher likelihood of risky behavior, while Guo et al. (2017) confirmed that frequent drivers encounter greater risk of crash involvement.

Together, these findings suggest that interventions and awareness campaigns should prioritize daily and near-daily drivers as a high-exposure, high-risk group.



Q11 | HAB2 | VEHICLE TYPE

What type of vehicle do you mainly drive?



ANSWER CHOICES	RESPONSES	
Carro regular	68%	332
SUV	17%	82
Pick-up	8%	39
Van	4%	19
Mini van	2%	10
Motora	1%	3
Camión	1%	4
TOTAL		489

The survey results show that the majority of respondents rely on standard passenger cars as their primary mode of transportation. A total of 68% ($n = 332$) reported driving a regular car, making it by far the dominant vehicle type in the sample. This was followed by 17% ($n = 82$) who drive SUVs, 8% ($n = 39$) who use pickup trucks, 4% ($n = 19$) who drive vans, and 2% ($n = 10$) who reported driving minivans. Motorcycle use was minimal, with only 1% ($n = 3$) identifying it as their primary vehicle, and 1% ($n = 4$) reported driving trucks.

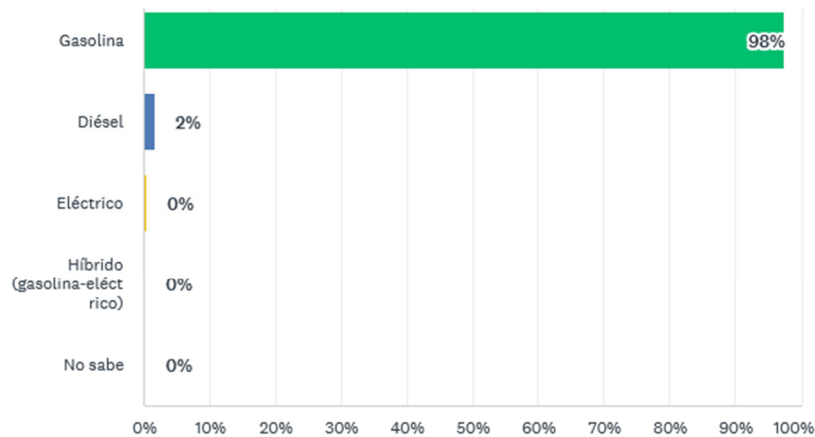
This distribution mirrors vehicle ownership patterns in Puerto Rico, where passenger cars remain the most prevalent due to affordability, fuel efficiency, and suitability for the island's urban and suburban driving conditions. The smaller shares of SUVs and pickup trucks reflect their higher costs and more specialized usage, such as for families, recreational activities, or work-related purposes. The very low prevalence of motorcycles underscores cultural preferences and infrastructural limitations that discourage motorbike adoption.

The type of vehicle driven has implications for traffic safety and aggressive driving behavior. Research has shown that drivers of larger vehicles, such as SUVs and pickups, are more likely to be involved in aggressive driving behaviors and are overrepresented in certain crash types compared to passenger car drivers (Williams, 2003). Similarly, perceptions of greater safety in larger vehicles may foster overconfidence and risk-taking behaviors, including multitasking or using mobile devices while driving (Farmer, 2006). By capturing vehicle type, the survey provides essential context for understanding how different driver populations may experience and respond to risks associated with speeding and aggressive driving.



Q12 | HAB2b | FUEL TYPE

What type of fuel does your primary vehicle use?



ANSWER CHOICES	RESPONSES	
Gasolina	98%	475
Diésel	2%	8
Eléctrico	0%	2
Híbrido (gasolina-eléctrico)	0%	1
No sabe	0%	1
TOTAL		487

The survey results show that the vast majority of respondents rely on gasoline-powered vehicles as their primary mode of transportation. A total of 98% (n = 475) reported using gasoline, making it by far the dominant fuel type in the sample. A small minority reported driving diesel vehicles (2%, n = 8), while only 2 respondents (<1%) reported using electric vehicles and 1 respondent (<1%) reported a hybrid (gasoline-electric) vehicle.

This distribution closely reflects vehicle ownership and fuel usage patterns in Puerto Rico, where gasoline remains overwhelmingly dominant due to infrastructure availability, affordability, and cultural reliance on internal combustion engine vehicles. The limited presence of electric and hybrid vehicles highlights the challenges of EV adoption on the island, including high upfront costs, limited charging infrastructure, and consumer perceptions of reliability.

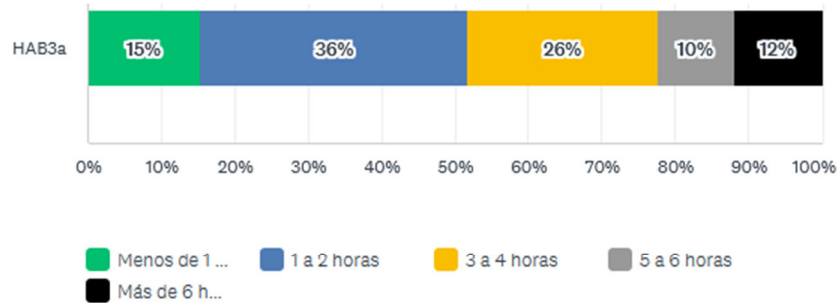
Fuel type has important implications for both traffic safety and policy planning. While the type of fuel does not directly influence aggressive driving behaviors, it intersects with broader transportation policy, environmental considerations, and vehicle fleet modernization efforts. For example, U.S. federal incentives and Puerto Rico's policy goals encourage growth in the EV sector, but adoption rates remain extremely low, consistent with the survey's findings.

By capturing fuel type, the survey provides essential baseline data to monitor future trends in vehicle electrification and to understand whether shifts in the vehicle fleet composition may correlate with changes in driver behavior, exposure patterns, or crash risks.



Q13 | HAB3a | WEEKDAYS DRIVING

On a typical weekday (Monday to Friday), how many hours do you spend driving?



	MENOS DE 1 HORA	1 A 2 HORAS	3 A 4 HORAS	5 A 6 HORAS	MÁS DE 6 HORAS	TOTAL	WEIGHTED AVERAGE
HAB3a	15% 67	36% 159	26% 114	10% 45	12% 52	437	2.67

The survey results reveal distinct patterns in weekday driving time. The largest share of respondents, 36% (n = 159), reported driving 1 to 2 hours per day, making this the most common category. This is followed by 26% (n = 114) who drive 3 to 4 hours daily, and 15% (n = 67) who drive less than 1 hour. Longer driving times were less frequent but still notable, with 12% (n = 52) reporting more than 6 hours per day and 10% (n = 45) spending 5 to 6 hours driving. The weighted average of 2.67 falls between the 1–2 hour and 3–4-hour categories, indicating that the typical driver spends about 2–3 hours on the road each weekday.

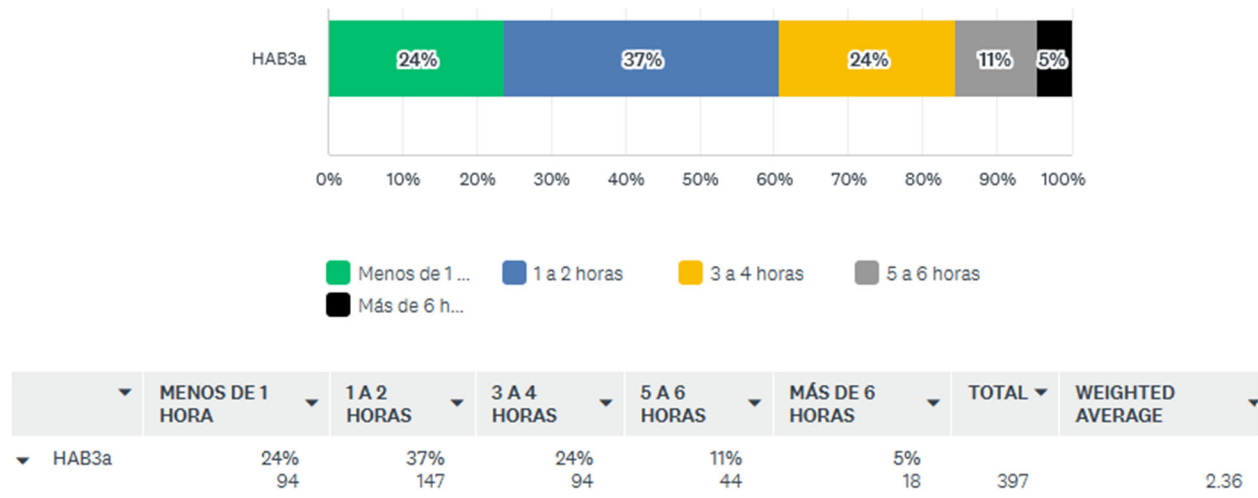
By applying a weighted scale (1 = less than 1 hour, 5 = more than 6 hours), the analysis highlights the predominance of moderate driving times. Nearly three-fourths (77%) of respondents reported spending between 1 and 4 hours behind the wheel on weekdays, underscoring the prevalence of commuting and regular vehicle use. At the same time, the 12% who drive more than 6 hours daily represent a significant subgroup, likely composed of commercial drivers, delivery workers, or individuals with extended commutes. Conversely, the 15% who drive less than 1 hour suggest a smaller population with short commutes or limited weekday travel needs.

These findings emphasize the importance of considering driving exposure when analyzing speeding and aggressive driving risks. Longer daily driving times increase opportunities for fatigue, frustration, and unsafe maneuvers, all of which are critical factors in crash risk. Understanding these exposure patterns helps identify which segments of drivers are most vulnerable and where targeted interventions, such as fatigue management or safe driving awareness campaigns, could be most impactful.



Q14 | HAB3a | WEEKENDS DRIVING

On a typical weekend day, how many hours do you spend driving?



The results show that weekend driving patterns are somewhat more varied compared to weekdays. The largest share of respondents, 37% (n = 147), reported driving 1 to 2 hours, making this the most common weekend category. This is followed by 24% (n = 94) who drive less than 1 hour and another 24% (n = 94) who spend 3 to 4 hours on the road. Smaller proportions of respondents reported driving 5–6 hours (11%, n = 44) or more than 6 hours (5%, n = 18). The weighted average of 2.36 falls between the 1–2 hour and 3–4 hour categories, indicating that the typical respondent drives about 2 to 3 hours on weekends.

Using a weighted scale (1 = less than 1 hour, 5 = more than 6 hours), the data emphasize that a majority (61%) of respondents limit their weekend driving to under 2 hours. However, a meaningful segment—16%—spend over 5 hours driving on weekends, reflecting patterns associated with leisure travel, long commutes to family or recreational areas, or work demands extending into weekends.

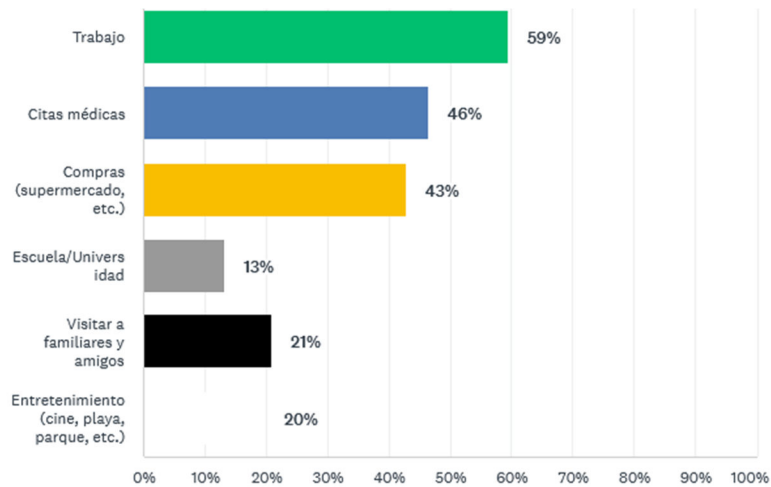
This contrast with weekday patterns suggests that while daily commuting dominates weekday driving exposure, weekend driving is shaped more by discretionary activities, travel preferences, and occasional long trips. These extended weekend driving times represent periods of elevated crash risk, as longer trips may involve higher-speed roadways, driver fatigue, or increased opportunities for distraction.

Understanding these differences provides valuable context for designing targeted awareness campaigns and safety interventions tailored to weekend driving behaviors.



Q15 | HAB4 | WEEKDAY DESTINATIONS

During a typical weekday, where do you drive or what places do you visit?



ANSWER CHOICES	RESPONSES
Trabajo	59% 262
Citas médicas	46% 205
Compras (supermercado, etc.)	43% 189
Escuela/Universidad	13% 58
Visitar a familiares y amigos	21% 92
Entretenimiento (cine, playa, parque, etc.)	20% 87
Total Respondents: 441	

The most frequent destination for drivers is work, cited by 59% of respondents (n = 262), confirming that employment-related commuting dominates weekday travel. Medical appointments were also highly reported, with 46% (n = 205) indicating they regularly drive for healthcare needs. Shopping trips, such as visits to supermarkets, followed closely at 43% (n = 189), underscoring the importance of routine errands in daily mobility.

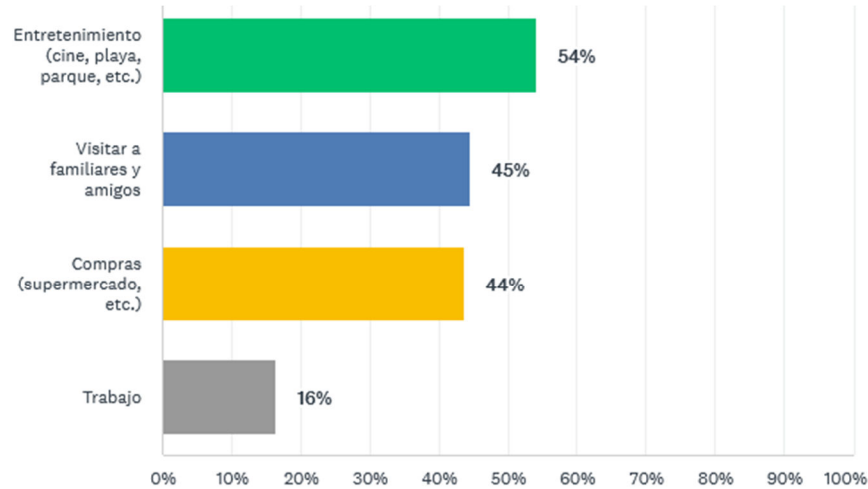
By contrast, fewer respondents identified social or leisure activities as primary driving purposes: 21% (n = 92) reported visiting family or friends, 20% (n = 87) cited entertainment activities such as cinema, beach, or parks, and 13% (n = 58) reported traveling to school or university. These findings highlight that weekday driving is predominantly structured around essential and practical activities—work, healthcare, and shopping—while discretionary or recreational trips occur less frequently. The strong presence of work-related commuting emphasizes the reliance on private vehicles for employment mobility in Puerto Rico, while the relatively high share of medical travel points to the central role of healthcare in weekly transportation needs.

Leisure and education-related trips, though less common, still represent important subsegments of travel behavior. Together, these insights provide a clear picture of mobility priorities, informing both traffic planning and targeted safety interventions by focusing on the contexts where drivers spend most of their travel time.



Q16 | HAB5 | WEEKEND DESTINATIONS

During a typical weekend day, where do you drive or what places do you visit?



ANSWER CHOICES	RESPONSES	
Entretenimiento (cine, playa, parque, etc.)	54%	208
Visitar a familiares y amigos	45%	171
Compras (supermercado, etc.)	44%	168
Trabajo	16%	63
Total Respondents: 384		

The most common weekend driving purpose is entertainment, cited by 54% of respondents (n = 208). This category includes activities such as going to the cinema, beach, or park, underscoring the recreational nature of weekend mobility. The second most frequent purpose is visiting family and friends, reported by 45% (n = 171), reflecting the importance of social connections during weekends. Shopping trips remain significant, with 44% (n = 168) of respondents continuing errands such as grocery or retail visits. In contrast, work-related driving declines sharply on weekends, with only 16% (n = 63) indicating employment as their primary destination.

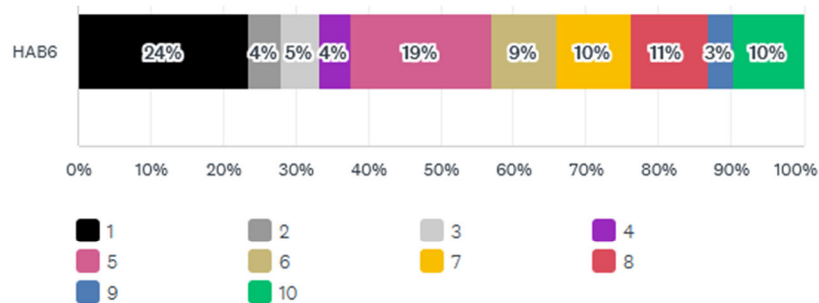
These results confirm a marked shift from weekday to weekend driving patterns. While weekdays are dominated by work and essential obligations, weekends emphasize leisure, socializing, and errands. This contrast highlights the dual role of private vehicles in Puerto Rico: as both a tool for daily necessity and a means for recreational and social engagement.

For transportation planning, this shift implies a need for policies that account for increased leisure-related mobility during weekends, such as congestion management in recreational zones and safety campaigns targeting social and leisure drivers.



Q17 | HAB6 | PR DRIVING RATING

On a scale from 1 to 10, where 10 means ‘very good’ and 1 means ‘very bad,’ how would you rate driving in Puerto Rico based on your experience?



	1	2	3	4	5	6	7	8	9	10	TOTAL	WEIGHTED AVERAGE
HAB6	24% 118	4% 22	5% 27	4% 21	19% 97	9% 45	10% 51	11% 54	3% 17	10% 48	500	5.01

The results indicate a polarized perception of driving conditions in Puerto Rico. The most common rating is 1 (very bad), chosen by 24% of respondents (n = 118), underscoring widespread dissatisfaction. A significant portion also selected 5 (neutral), at 19% (n = 97), suggesting that many drivers neither view conditions positively nor negatively. Other negative ratings—2 (4%, n = 22), 3 (5%, n = 27), and 4 (4%, n = 21)—collectively account for 13% of responses, reinforcing the prevalence of discontent.

On the positive side, 10% rated conditions as 10 (very good), while 11% rated them as 8, 9% as 9, and 10% as 7, showing that favorable views exist but are a minority compared to negative perceptions.

The weighted average is 5.01, slightly above the midpoint of the 1–10 scale, reflecting that perceptions lean more toward negative or neutral rather than positive. This distribution suggests that drivers perceive systemic challenges such as poor road infrastructure, congestion, and unsafe driving behaviors as persistent issues.

From a policy standpoint, these findings underscore the urgency of:

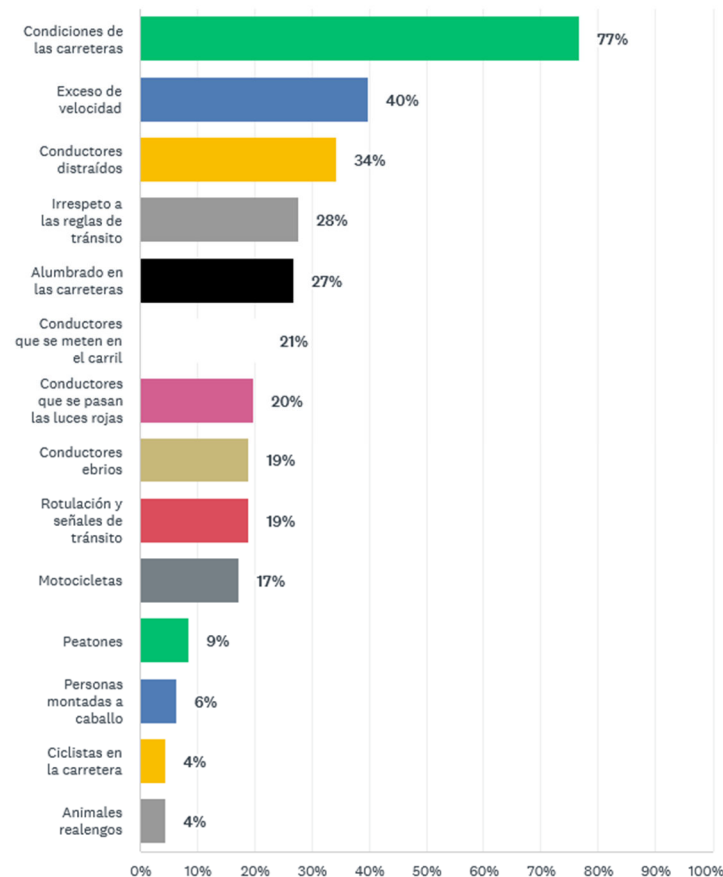
- Strengthening road maintenance programs,
- Improving enforcement of traffic laws, and
- Implementing public education campaigns aimed at fostering safer driver culture.

Enhancing these conditions could shift perceptions upward, reduce dissatisfaction, and promote safer, more efficient mobility across Puerto Rico.



Q18 | HAB7 | ROAD SAFETY CONCERNS

What would you say are the three main problems that concern you regarding your safety on Puerto Rico's roads?



The most pressing concern identified by respondents is the condition of the roads, cited by 77%, reflecting widespread dissatisfaction with Puerto Rico's infrastructure. The second most common issue is speeding, reported by 40%, highlighting aggressive driving as a significant danger on the island's roads. Distracted driving follows at 34%, pointing to the risks associated with mobile device use and driver inattention. Other critical concerns include disregard for traffic rules (28%), poor road lighting (27%), drivers cutting into lanes (21%), running red lights (20%), and drunk driving (19%).

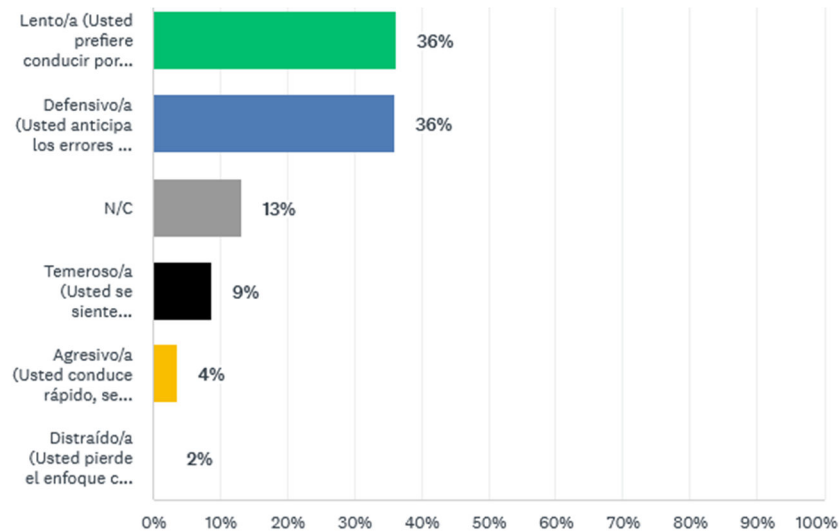
Additional concerns include inadequate signage (19%), motorcyclists (17%), pedestrians (9%), people riding horses (6%), cyclists (4%), and stray animals (4%). This distribution underscores that road safety concerns extend beyond driver behavior, with infrastructure and environmental factors playing an equally critical role.

The dominance of road conditions as the top issue highlights the urgent need for greater investment in road repair and maintenance, while the high levels of concern regarding speeding, distracted driving, and drunk driving emphasize the importance of stronger enforcement measures and targeted awareness campaigns. Together, these findings call for a multifaceted approach to improve road safety in Puerto Rico, addressing both behavioral risks and structural deficiencies that jointly elevate crash risk.



Q19 | AGRV1 | DRIVING STYLES

Based on your experience and personal perception, which of the following driving styles best represents you when driving habitually?



ANSWER CHOICES	RESPONSES	
▼ Lento/a (Usted prefiere conducir por debajo del límite de velocidad para sentirse más seguro/a)	36%	181
▼ Defensivo/a (Usted anticipa los errores de otros conductores y prefiere mantener la seguridad)	36%	180
▼ N/C	13%	66
▼ Temeroso/a (Usted se siente ansioso/a o inseguro/a mientras conduce)	9%	44
▼ Agresivo/a (Usted conduce rápido, se impacienta con facilidad y realiza maniobras arriesgadas)	4%	18
▼ Distraído/a (Usted pierde el enfoque con facilidad al conducir por pensar en otras cosas o usar el celular)	2%	10
TOTAL	499	

The survey results provide insight into the self-perceived driving styles of Puerto Rican drivers. Among the 499 respondents, the two most common styles identified were slow drivers (36%, n = 181) and defensive drivers (36%, n = 180). Slow drivers are those who prefer to drive below the speed limit to feel safer, while defensive drivers anticipate the errors of others and prioritize maintaining security. These two categories together represent nearly three-fourths of the sample, indicating that caution and safety orientation dominate self-reported driving behaviors.

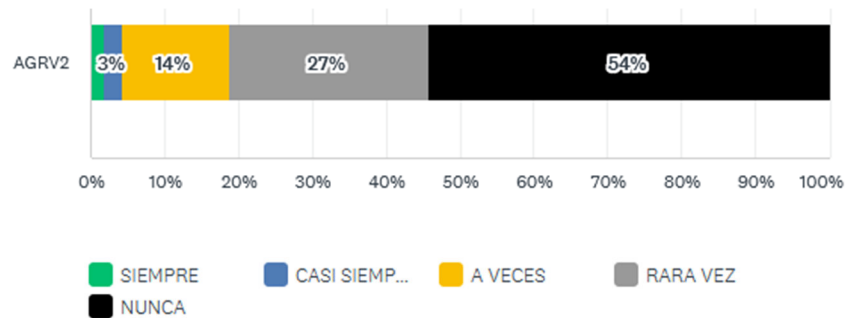
Other styles were less prevalent but still notable. Fearful drivers (9%, n = 44) described themselves as anxious or insecure while driving, which may translate into hesitant maneuvers or heightened sensitivity to road conditions. Aggressive drivers (4%, n = 18) admitted to driving quickly, losing patience easily, and engaging in risky maneuvers. A small share of distracted drivers (2%, n = 10) reported losing focus while driving, often due to thinking about other matters or using mobile devices. Finally, 13% (n = 66) did not classify themselves under any of the listed categories (N/C).

Overall, the findings suggest that most drivers perceive themselves as safe and cautious, though the presence of aggressive and distracted styles highlights areas for targeted safety campaigns.



Q20 | AGVR2 | YELLOW LIGHT

How often do you speed up to avoid a yellow light?



	SIEMPRE	CASI SIEMPRE	A VECES	RARA VEZ	NUNCA	TOTAL	WEIGHTED AVERAGE
AGVR2	2% 9	3% 13	14% 72	27% 135	54% 272	501	1.71

The results of AGVR2 highlight how Puerto Rican drivers respond to yellow traffic lights, offering insights into attitudes toward speed and risk-taking. Among the 501 respondents, the majority, 54% (n = 272), stated they never accelerate to avoid a yellow light, showing strong adherence to safe driving practices. An additional 27% (n = 135) indicated they rarely do so, meaning that more than four out of five drivers (81%) generally avoid this risky behavior.

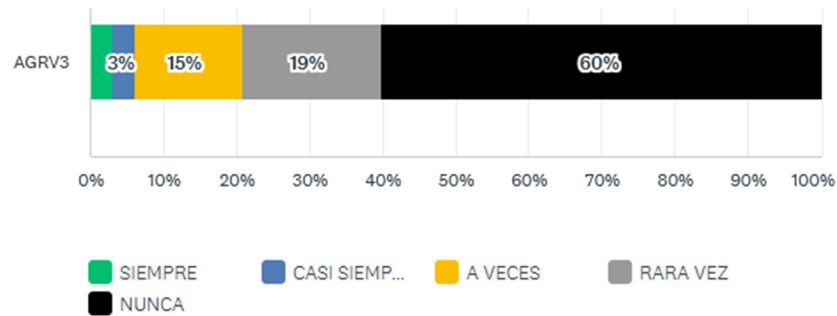
In contrast, 14% (n = 72) admitted to doing it sometimes, while a smaller share reported more frequent engagement: 3% (n = 13) said almost always and 2% (n = 9) said always accelerate to beat a yellow light. The weighted average of 1.71 underscores the predominance of safer responses, with most drivers exercising restraint at intersections.

These findings suggest that while a small minority engages in potentially dangerous accelerations, the overwhelming majority of drivers show compliance with traffic safety norms. From a policy perspective, this indicates that current traffic enforcement and awareness campaigns may be effective in discouraging aggressive intersection behaviors. However, the presence of a persistent minority that accelerates under yellow lights highlights the need for targeted interventions, such as enhanced intersection monitoring and education on crash risks linked to this behavior.



Q21 | AGVR3 | DRIVER FRUSTRATION

How often do you get irritated with other drivers for driving too slowly?



	SIEMPRE	CASI SIEMPRE	A VECES	RARA VEZ	NUNCA	TOTAL	WEIGHTED AVERAGE
AGVR3	3% 15	3% 16	15% 73	19% 95	60% 301	500	1.70

Out of 500 respondents, a majority, 60% (n = 301), reported that they never feel irritated in such situations, suggesting that most drivers demonstrate tolerance and patience. An additional 19% (n = 95) stated they are irritated rarely, reinforcing the finding that nearly four out of five drivers (79%) generally manage their frustration without it escalating.

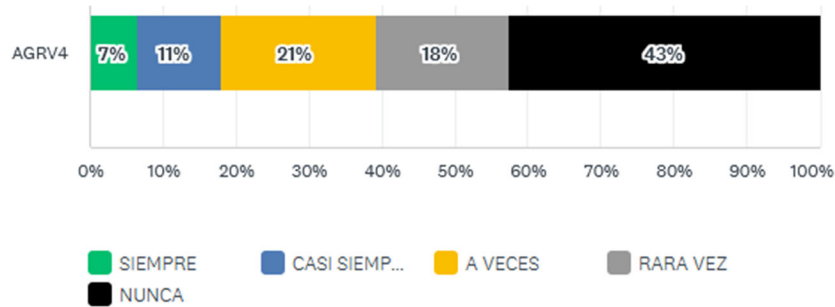
However, irritation is not absent. 15% (n = 73) admitted to getting irritated sometimes, while smaller proportions reported higher levels of frustration: 3% (n = 16) said they are irritated almost always, and another 3% (n = 15) admitted to being irritated always. The weighted average of 1.70 further reflects that, overall, irritation with slow drivers is not a widespread or frequent behavior.

These findings highlight that while aggressive reactions to slower drivers exist, they are limited to a minority. From a traffic safety standpoint, this suggests that most drivers maintain composure in potentially frustrating scenarios, reducing the likelihood of escalation into aggressive driving behaviors. Still, interventions such as stress management campaigns and awareness of the dangers of road rage could benefit the smaller segment prone to irritation.



Q22 | AGVR4 | LANE CHANGES

How often do you change lanes to avoid slow traffic?



	SIEMPRE	CASI SIEMPRE	A VECES	RARA VEZ	NUNCA	TOTAL	WEIGHTED AVERAGE
AGRV4	7% 33	11% 57	21% 106	18% 91	43% 213	500	2.21

The results highlight how frequently Puerto Rican drivers change lanes in response to slow traffic. Out of 500 respondents, the largest group, 43% (n = 213), reported that they never change lanes to bypass congestion, suggesting that nearly half of drivers prefer to remain in their lane regardless of traffic conditions. Another 18% (n = 91) said they do so rarely, reinforcing the majority's cautious approach.

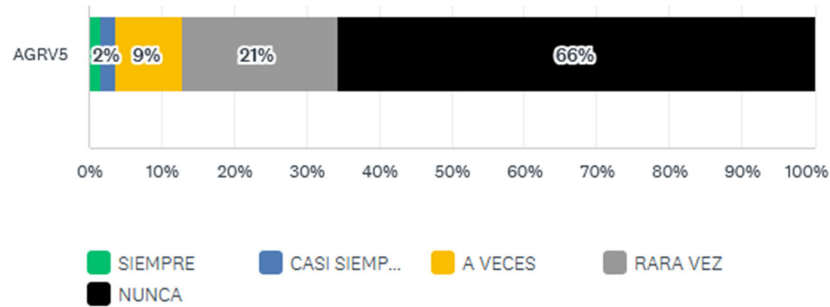
However, a significant share of drivers admit to lane changing when confronted with slow traffic. 21% (n = 106) indicated they change lanes sometimes, while 11% (n = 57) said almost always and 7% (n = 33) reported they always do so. Combined, nearly four in ten drivers (39%) engage in this behavior at least occasionally, showing a substantial proportion of drivers willing to take risks to maintain traffic flow. The weighted average of 2.21 reflects a leaning toward conservative driving behavior, though not without a notable segment exhibiting impatience.

These findings suggest that while most drivers resist frequent lane changing, a considerable minority does so regularly, which could increase crash risk in congested areas. Safety campaigns emphasizing the dangers of frequent lane changes—such as collisions, road rage, or reduced traffic efficiency—could help mitigate these behaviors.



Q23 | AGVR5 | HORN USAGE

How often do you honk your horn out of frustration?



	SIEMPRE	CASI SIEMPRE	A VECES	RARA VEZ	NUNCA	TOTAL	WEIGHTED AVERAGE
AGVR5	2% 8	2% 10	9% 46	21% 107	66% 327	498	1.52

The results reveal how often Puerto Rican drivers resort to honking their horn as an expression of frustration. Out of 498 respondents, the overwhelming majority, 66% (n = 327), reported that they never honk out of frustration. An additional 21% (n = 107) said they honk rarely, indicating that nearly nine out of ten drivers (87%) generally avoid this behavior.

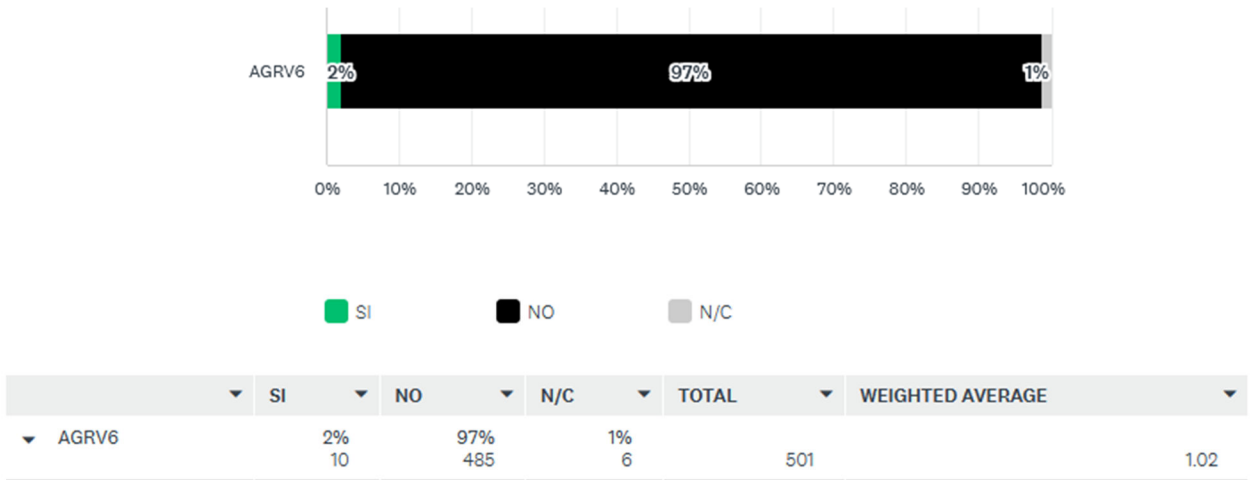
A smaller but notable minority admitted to more frequent use: 9% (n = 46) indicated they honk sometimes, while 2% (n = 10) said almost always and another 2% (n = 8) reported they honk always when frustrated. The weighted average of 1.52 underscores the predominance of restraint, reflecting that most drivers associate honking with necessity rather than emotional release.

These findings suggest that frustration-induced horn use is uncommon, aligning with cultural driving norms where honking may be reserved for warnings or urgent communication. From a road safety perspective, the low prevalence is positive, as excessive honking can escalate tensions, contribute to aggressive driving, and increase stress in traffic environments. Still, the small group of frequent honkers indicates an opportunity for awareness campaigns on managing frustration and road rage to further reduce aggressive signaling behaviors.



Q24 | AGRV6 | AGGRESSIVE CRASHES

During the past 12 months, have you been involved in a traffic accident related to aggressive driving (such as cutting off, excessive speeding, or sudden braking)?



Out of 501 respondents, the overwhelming majority, 97% (n = 485), reported no involvement in accidents tied to aggressive driving in the past year. Only 2% (n = 10) indicated they had been involved in such incidents, while 1% (n = 6) chose not to answer (N/C). The weighted average of 1.02 reinforces the rarity of these events in the sample.

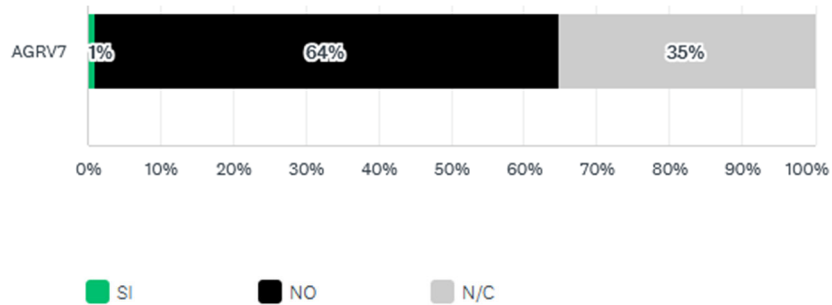
Although the percentage of drivers directly affected appears small, the findings highlight the serious consequences of aggressive behaviors, including cutting off other vehicles, excessive acceleration, or abrupt braking. Even a small number of aggressive driving crashes represent a meaningful public safety issue, given the disproportionate impact such incidents can have on traffic flow, injury severity, and fatalities.

From a policy and enforcement standpoint, the results underscore the importance of continued vigilance in addressing aggressive driving through both educational campaigns and law enforcement. While most drivers report avoiding such crashes, the presence of a small but significant subgroup involved in aggressive driving-related incidents emphasizes the need for targeted interventions to further reduce risk and promote safer driving behaviors.



Q25 | AGRV7 | ACCIDENT CAUSE

If yes, were you the one who caused the accident?



	SI	NO	N/C	TOTAL	WEIGHTED AVERAGE
AGRV7	1% 3	64% 191	35% 105	299	1.02

Out of 299 respondents to this follow-up question, the majority, 64% (n = 191), stated “No”, indicating they did not consider themselves responsible for causing the crash. A smaller group, 1% (n = 3), admitted that they were indeed at fault, while a substantial proportion, 35% (n = 105), chose not to disclose (N/C). The weighted average of 1.02 reinforces that direct self-attribution of responsibility is very rare within the sample.

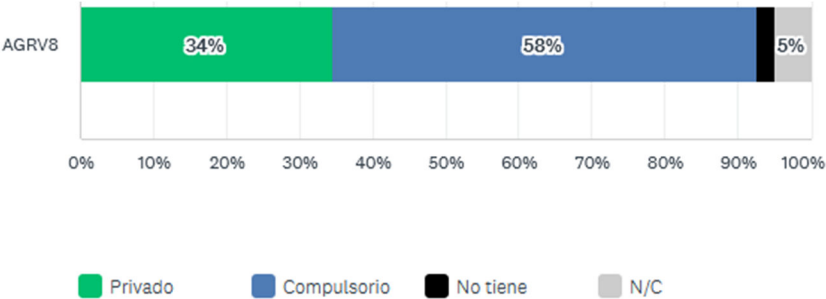
These results illustrate a tendency for drivers to externalize blame or avoid self-implication when discussing crash involvement. The high percentage of “No” responses could reflect genuine non-fault situations, but it may also be influenced by social desirability bias or reluctance to acknowledge fault in a survey context. The relatively large share of non-responses further supports the notion that accident responsibility is a sensitive topic, with many drivers unwilling to disclose details.

From a research and policy perspective, these findings highlight the importance of complementing self-reported survey data with objective crash records to fully assess fault attribution. Nonetheless, the reluctance to self-identify as responsible underscores the need for educational campaigns on accountability and safe driving behaviors to reduce crashes linked to aggressive or negligent conduct.



Q26 | AGRV8 | VEHICLE INSURANCE

Do you have insurance for your vehicle—private, compulsory, or none?



	PRIVADO	COMPULSORIO	NO TIENE	N/C	TOTAL	WEIGHTED AVERAGE
AGRV8	34% 171	58% 288	3% 13	5% 24	496	2.33

Out of 496 respondents, the majority, 58% (n = 288), reported holding compulsory insurance, which is the minimum coverage required by law in Puerto Rico. A significant portion, 34% (n = 171), stated they have private insurance, reflecting drivers who choose or can afford more comprehensive protection beyond the mandatory plan. Only 3% (n = 13) indicated they have no insurance, while 5% (n = 24) declined to answer (N/C). The weighted average of 2.33 demonstrates that compulsory insurance is the most common option, but private coverage still plays a notable role in the driving population.

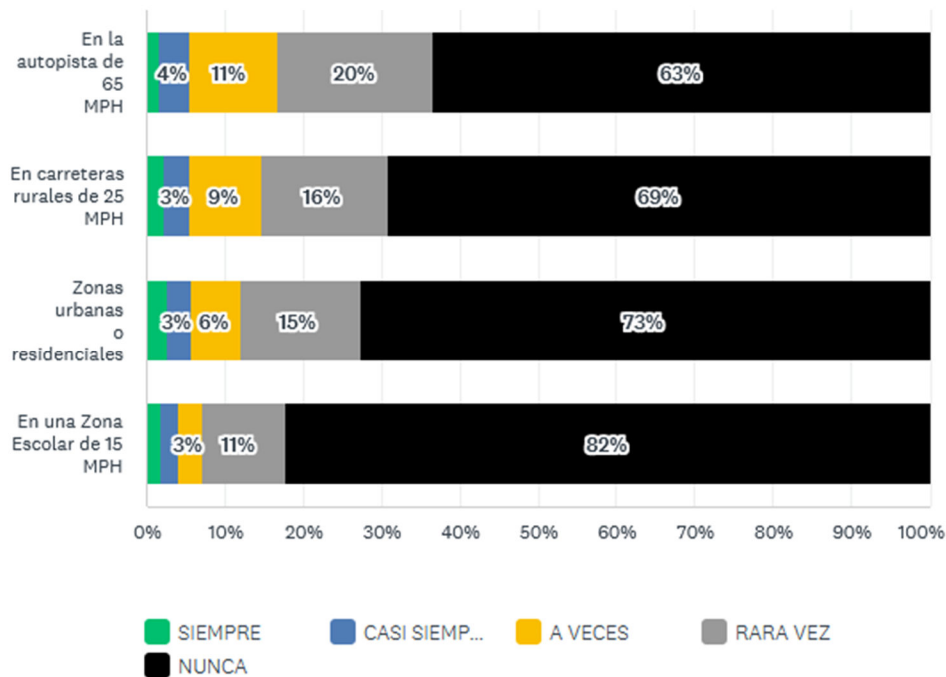
These results suggest that compliance with Puerto Rico’s compulsory insurance law is high, as more than nine in ten drivers report holding some form of coverage. The smaller segment of private insurance holders highlights the socioeconomic and risk management differences among drivers, with private plans offering expanded benefits such as broader liability and collision coverage.

From a policy standpoint, the low percentage of uninsured drivers (3%) is encouraging, as lack of coverage can exacerbate the financial and legal consequences of crashes. However, ensuring that compulsory policies provide adequate protection remains essential for improving traffic safety and post-crash outcomes.



Q27 | VELO1 | SPEEDING BEHAVIOR

How often do you drive 10 miles per hour above the speed limit?



The results provide insight into how often Puerto Rican drivers exceed speed limits by at least 10 mph across different types of roads. On highways with a 65 mph limit, 37% admitted to sometimes or more frequently exceeding the limit, with 2% (n = 8) saying always, 4% (n = 18) almost always, 11% (n = 54) sometimes, and 20% (n = 95) rarely. Still, the majority, 63% (n = 303), reported they never speed on highways. On rural roads with a 25 mph limit, noncompliance decreases slightly: 31% admitted to occasionally exceeding the limit, while 69% (n = 330) stated they never do so. Similarly, in urban or residential areas, 27% reported speeding at least occasionally, but a strong majority, 73% (n = 343), claimed they do not exceed the limit.

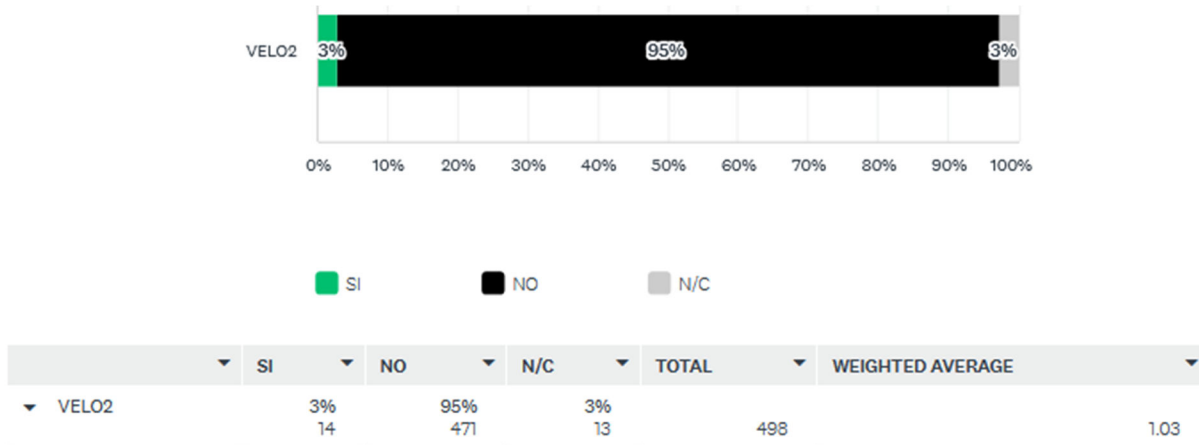
The most compliance is observed in school zones with a 15 mph limit, where 82% (n = 387) reported never speeding, and only 18% admitted to ever doing so.

The weighted averages—1.60 (highways), 1.53 (rural), 1.48 (urban), and 1.31 (school zones)—show that while speeding does occur, it is more prevalent on faster roads and far less common in sensitive areas like school zones. This suggests that enforcement and awareness campaigns are most critical on highways and rural roads.



Q28 | VELO2 | SPEEDING TICKETS

In the last 12 months, have you received a speeding ticket?



Out of 498 respondents, the vast majority, 95% (n = 471), reported that they had not received a speeding ticket in the past 12 months. Only 3% (n = 14) admitted to having received one, while another 3% (n = 13) declined to answer (N/C). The weighted average of 1.03 highlights that speeding citations are relatively rare among surveyed drivers.

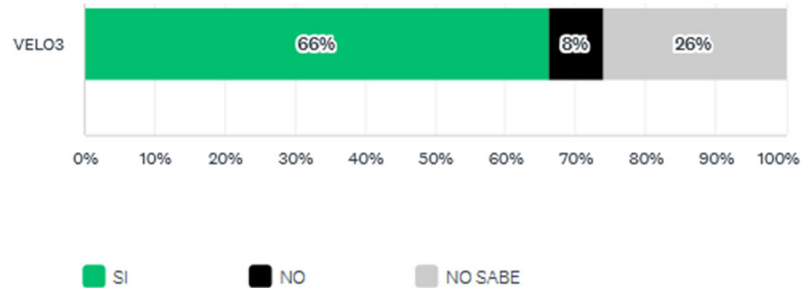
These findings suggest that either compliance with speed limits is relatively high, or that enforcement mechanisms (such as police presence, speed traps, or automated cameras) may not be widespread or consistently applied. The low proportion of reported tickets is somewhat surprising given earlier results showing that a notable segment of drivers admitted to occasionally exceeding speed limits, especially on highways and rural roads. This discrepancy may reflect underreporting due to social desirability bias, or it may indicate gaps in enforcement intensity.

From a traffic safety perspective, the data underscores the importance of balancing enforcement with educational campaigns. While most drivers report not being fined, continued emphasis on the risks of speeding—and increased visibility of enforcement—could help further deter high-risk behaviors and ensure safer roads across Puerto Rico.



Q29 | VELO3 | SPEED KNOWLEDGE

The maximum speed for all heavy vehicles, public or private buses, and school transport is always 10 miles less than the limit in any zone.



	SI	NO	NO SABE	TOTAL	WEIGHTED AVERAGE
VELO3	66% 317	8% 37	26% 124	478	2.59

The results assess drivers' knowledge of Puerto Rico's traffic law regarding maximum speed limits for heavy vehicles, buses, and school transport. Out of 478 respondents, the majority, 66% (n = 317), correctly responded "Yes", recognizing that these vehicles must travel 10 miles per hour below the posted limit in any zone. However, 8% (n = 37) answered "No", and a notable 26% (n = 124) selected "Don't know", indicating uncertainty or lack of awareness. The weighted average of 2.59 reflects a leaning toward correct knowledge, though with a substantial knowledge gap among a quarter of respondents.

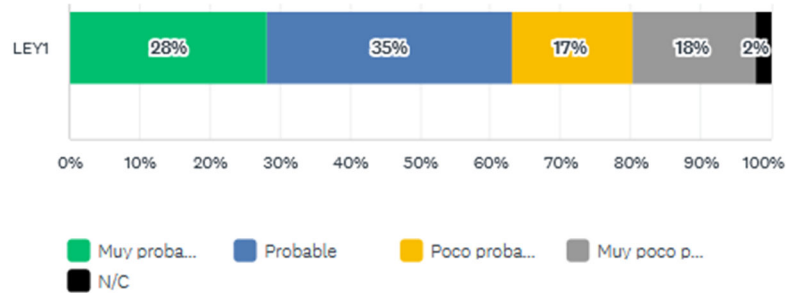
These findings reveal that while most drivers are familiar with the rule, a significant segment either lacks awareness or holds misconceptions. This is particularly concerning given the safety implications of heavy vehicles, which pose greater risks in crashes due to their size, weight, and stopping distances.

From a policy standpoint, the high proportion of "Don't know" responses highlights the need for ongoing public education campaigns to reinforce knowledge of traffic laws, especially those governing commercial and school vehicles. Increasing awareness in this area can reduce speeding-related risks and promote safer interactions between heavy vehicles and passenger cars on Puerto Rico's roads.



Q30 | LEY1 | TICKET LIKELIHOOD

How likely do you think it is that you will receive a ticket if you drive over the speed limit in Puerto Rico?



	MUY PROBABLE	PROBABLE	POCO PROBABLE	MUY POCO PROBABLE	N/C	TOTAL	WEIGHTED AVERAGE
LEY1	28% 138	35% 170	17% 84	18% 86	2% 10	488	2.75

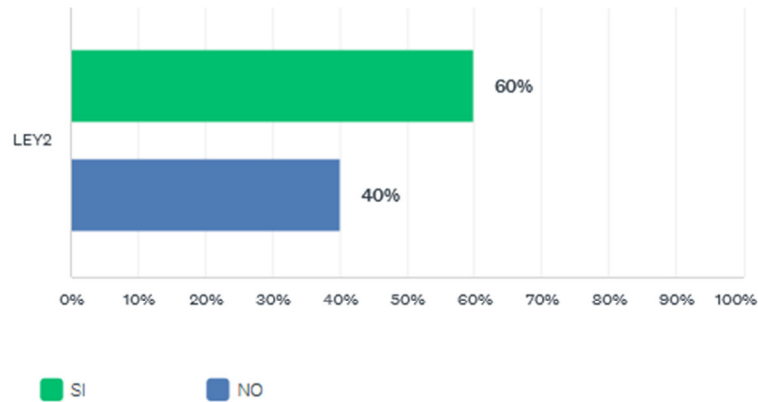
The results explore perceptions of enforcement and deterrence related to speeding violations in Puerto Rico. Out of 488 respondents, the majority expressed that receiving a ticket for speeding is likely: 28% (n = 138) said it is “very probable”, and 35% (n = 170) answered “probable.” Combined, 63% of drivers believe there is at least a moderate likelihood of being fined. On the other hand, 17% (n = 84) considered it “unlikely,” and 18% (n = 86) rated it as “very unlikely,” indicating that over one-third of drivers perceive a low risk of enforcement. A small proportion, 2% (n = 10), selected “Don’t know.” The weighted average of 2.75 positions perceptions between “probable” and “unlikely,” highlighting mixed views on enforcement consistency.

These findings suggest that while many drivers acknowledge the possibility of receiving a speeding ticket, a significant minority perceive enforcement as weak or inconsistent. This perception gap has important implications: drivers who view the risk of citation as low may be more likely to engage in speeding behaviors. To strengthen deterrence, increasing the visibility of traffic enforcement—through checkpoints, radar patrols, or publicized ticketing campaigns—could reinforce the perception of certainty in penalties and improve compliance with speed laws.



Q31 | LEY2 | ENFORCEMENT VISIBILITY

In the last 30 days, have you seen, read, or heard anything about police officers giving tickets to people driving over the speed limit?



	SI	NO	TOTAL	WEIGHTED AVERAGE
LEY2	60% 287	40% 192	479	1.60

The results of LEY2 provide insight into the visibility of police enforcement against speeding in Puerto Rico. Out of 479 respondents, a majority, 60% (n = 287), reported that they had seen, read, or heard about police issuing speeding tickets within the past 30 days. Conversely, 40% (n = 192) stated they had not encountered any such reports or experiences. The weighted average of 1.60 indicates that most respondents perceive at least some visibility of enforcement activities.

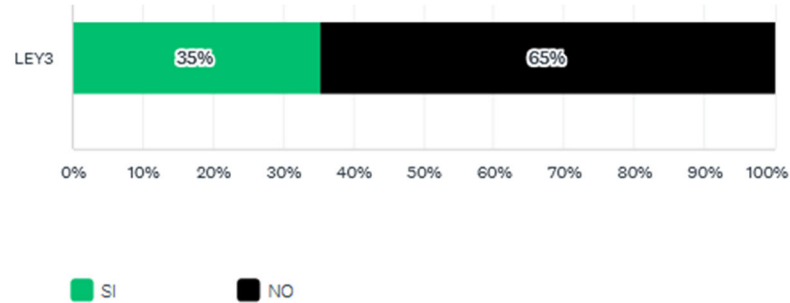
These findings highlight the role of public awareness in reinforcing perceptions of enforcement. When drivers are exposed to news, conversations, or direct observations of police issuing speeding tickets, they are more likely to perceive a higher risk of penalties, which may deter risky driving behavior. However, the sizable minority (40%) who reported no awareness of enforcement suggests that visibility is not uniform across regions or media platforms.

From a traffic safety perspective, this underscores the importance of consistent, high-profile communication campaigns that publicize enforcement activities. Increasing coverage through traditional and digital media, along with highly visible patrols and checkpoints, could strengthen the deterrent effect. Ultimately, maintaining and publicizing enforcement presence is critical for sustaining compliance with speed laws and reducing speeding-related crashes in Puerto Rico.



Q32 | LEY3 | FINE AWARENESS

Do you know how much the fine is for speeding in Puerto Rico?



	SI	NO	TOTAL	WEIGHTED AVERAGE
LEY3	35% 169	65% 308	477	1.35

The findings highlight a major knowledge gap among Puerto Rican drivers regarding the specific financial penalties for speeding. Out of 477 respondents, only 35% (n = 169) indicated that they know the amount of the fine for speeding, while a significant 65% (n = 308) admitted they do not know. The weighted average of 1.35 further emphasizes that awareness is generally low.

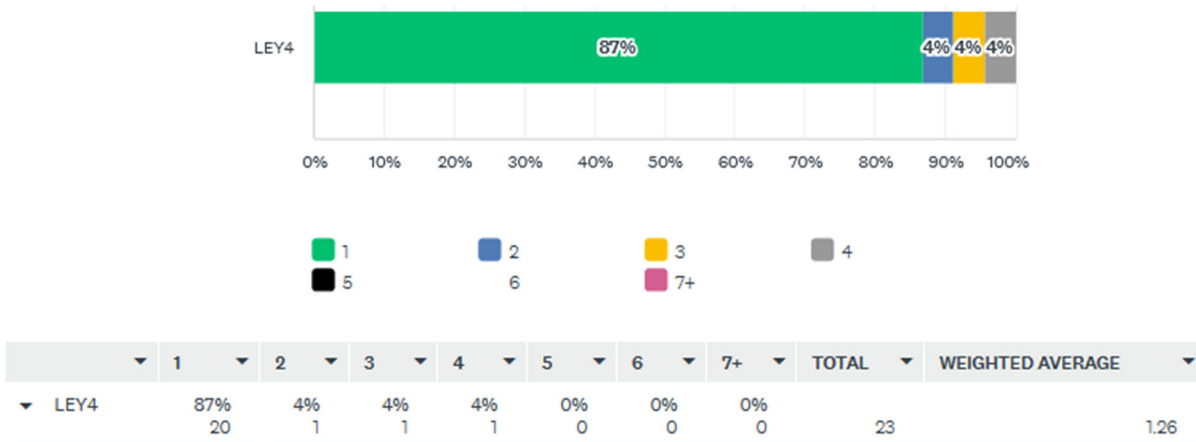
This lack of knowledge has important implications for traffic safety and law enforcement effectiveness. Research on deterrence theory suggests that compliance with traffic laws depends not only on the perceived likelihood of being caught but also on the certainty and severity of punishment. If two-thirds of drivers are unaware of the fine amount, the deterrent effect of penalties may be weakened, as drivers cannot fully assess the consequences of their actions.

The results point to the need for public education campaigns that clearly communicate the legal and financial consequences of speeding. Integrating this information into media campaigns, driver's license renewals, and roadside checkpoints could increase awareness. By strengthening knowledge of fines and penalties, authorities can reinforce deterrence, improve compliance, and ultimately reduce speeding-related crashes and fatalities in Puerto Rico.



Q33 | LEY4 | SPEEDING CITATIONS

During the past 12 months, how many times have you received a traffic ticket for speeding?



Only **23 respondents (4.6% out of 504)** answered this question, while 481 skipped it, suggesting either reluctance to disclose traffic violations or a very low incidence of citations among the broader sample. Among those who responded, the majority (87%, n = 20) reported receiving just one speeding ticket in the past 12 months. A small minority reported multiple citations: 4% (n = 1) received two, 4% (n = 1) received three, and another 4% (n = 1) received four citations. No respondents indicated receiving five or more.

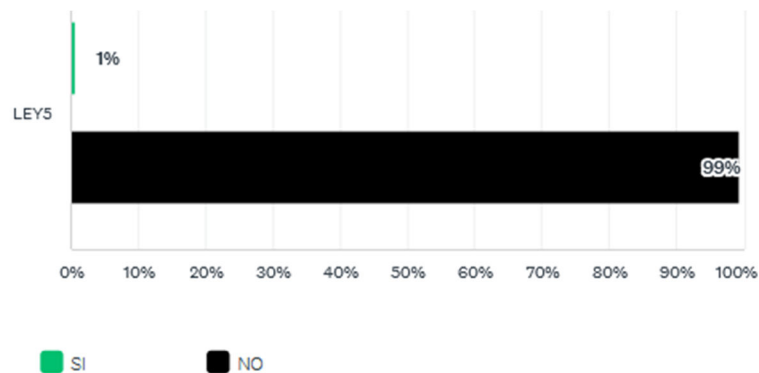
The weighted average of 1.26 underscores that, even among those who admitted to citations, the number of offenses remains very low. These findings align with earlier results (see VELO2) indicating that 95% of drivers reported not receiving any speeding tickets in the past year.

This low incidence of reported speeding tickets may reflect limited enforcement visibility, underreporting, or actual compliance with speed laws. Nonetheless, the concentration of responses around a single citation suggests that when infractions do occur, they tend to be isolated rather than habitual. These results highlight the importance of consistent enforcement and public education to deter repeat violations.



Q34 | LEY5 | SPEED ACCIDENTS

In the past 12 months, have you been involved in a traffic accident caused by speeding?



	SI	NO	TOTAL	WEIGHTED AVERAGE
LEY5	1% 3	99% 489	492	1.01

The results reveal that involvement in speed-related accidents among Puerto Rican drivers is extremely low. Out of 492 respondents, only 1% (n = 3) reported having been in a crash within the past year that was directly attributed to excessive speed. In contrast, an overwhelming 99% (n = 489) indicated “No.” The weighted average of 1.01 confirms that nearly all participants denied recent involvement in speed-related crashes.

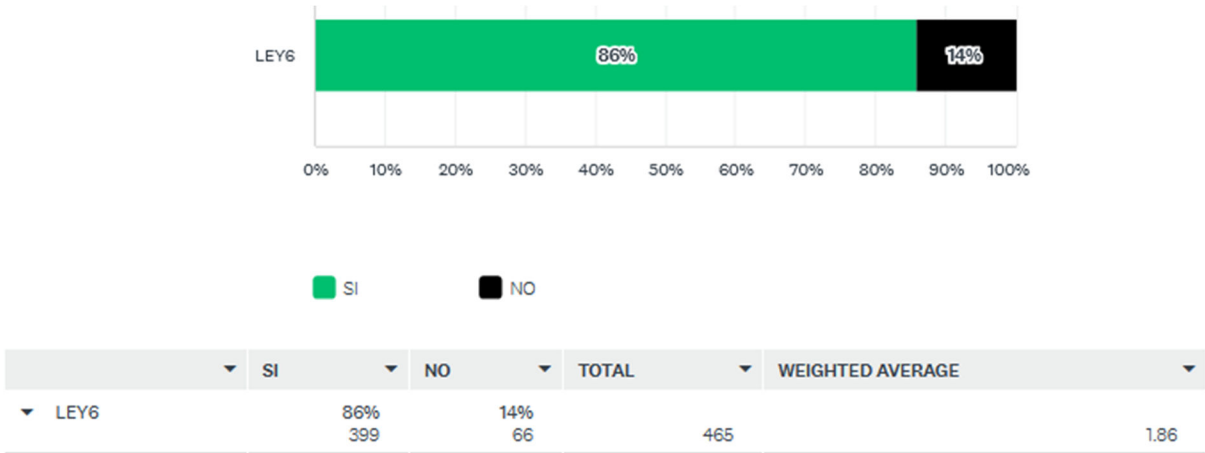
These findings highlight a key contrast between driver perceptions and self-reported experiences. While previous survey items show that the majority of drivers recognize speeding as a significant risk factor, very few report personal involvement in such incidents. This may reflect effective compliance with traffic regulations, underreporting due to social desirability bias, or the relatively small proportion of crashes directly linked to excessive speed compared to other factors such as distraction or impaired driving.

From a policy perspective, the low self-reported crash rate should not diminish the urgency of speed enforcement, as national and international crash statistics consistently identify speeding as a leading contributor to road fatalities. Instead, this outcome underscores the importance of continued monitoring, targeted education, and enforcement strategies to prevent the severe consequences of speeding before they occur.



Q35 | LEY6 | LIMIT AWARENESS

Do you know the speed limits applicable in urban zones, rural areas, and school zones?



The survey results reveal that most Puerto Rican drivers possess a strong understanding of legally established speed limits across different types of driving environments. Out of 465 respondents, 86% (n = 399) affirmed that they are aware of the speed limits in urban zones, rural areas, and school zones. Meanwhile, 14% (n = 66) indicated a lack of knowledge regarding these regulations. The weighted average of 1.86 reinforces the predominance of informed drivers within the sample.

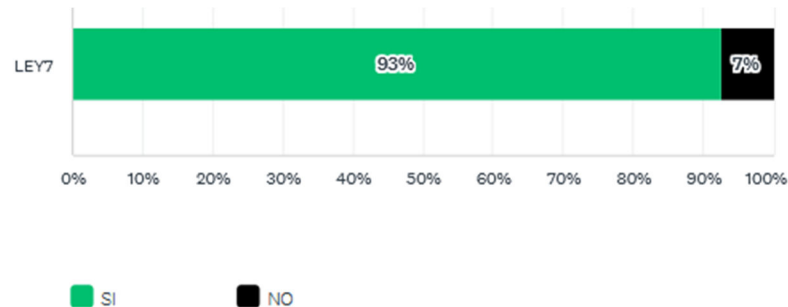
This high level of awareness reflects the effectiveness of ongoing traffic education campaigns, road signage visibility, and driver training programs in disseminating information on speed regulations. It also suggests that knowledge is not the primary barrier to compliance; instead, behavioral factors such as risk-taking tendencies or enforcement visibility may explain violations.

The small but notable segment of drivers unaware of speed limits highlights an area for improvement. Strengthening targeted outreach—especially for younger, inexperienced drivers and populations in rural areas—can further close this knowledge gap. Overall, the findings suggest that enforcement strategies should move beyond awareness and focus on deterrence, behavior modification, and accountability to improve compliance and reduce speeding-related crashes across Puerto Rico.



Q36 | LEY7 | RIGHT LANE

A driver traveling at a speed lower than the established limit, which impedes the normal flow of traffic, must drive in the far-right lane.



	SI	NO	TOTAL	WEIGHTED AVERAGE
LEY7	93% 426	7% 34	460	1.93

The results show that Puerto Rican drivers possess strong awareness of traffic laws concerning slower-moving vehicles. Out of 460 respondents, a large majority of 93% (n = 426) indicated that drivers who travel below the speed limit and obstruct normal traffic must remain in the far-right lane. Only 7% (n = 34) answered incorrectly, reflecting a relatively small knowledge gap. The weighted average of 1.93 further demonstrates that most participants understood this regulation clearly.

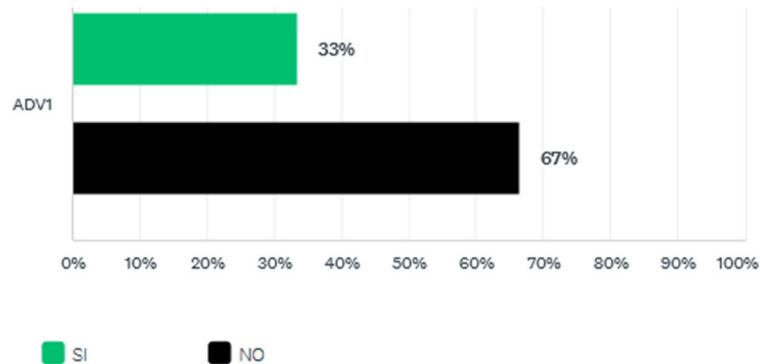
This outcome highlights a critical point in traffic safety: while knowledge of the rule is high, compliance on the road may still fall short due to behavioral or cultural driving patterns. Slow drivers who fail to keep right often create unsafe situations, forcing faster drivers to weave through lanes, increasing the risk of collisions and road rage incidents.

From a policy and enforcement perspective, the findings suggest that the challenge is not awareness but behavior. Campaigns should therefore prioritize promoting compliance and discouraging lane misuse rather than focusing solely on education. Enforcement strategies, such as targeted patrols and penalties, could help reinforce proper lane discipline, contributing to smoother traffic flow and reducing aggressive driving behaviors in Puerto Rico.



Q37 | ADV1 | CAMPAIGN RECALL

In the past 30 days, do you remember seeing, reading, or hearing any message from a campaign related to not driving above the speed limit?



	SI	NO	TOTAL	WEIGHTED AVERAGE
ADV1	33% 159	67% 316	475	1.33

The findings provide insight into the effectiveness and reach of speeding prevention campaigns in Puerto Rico. Out of 475 respondents, only 33% (n = 159) reported recalling a message related to not driving above the speed limit within the past 30 days, while 67% (n = 316) did not recall any such messages. The weighted average of 1.33 reflects a generally low level of campaign exposure across the driving population.

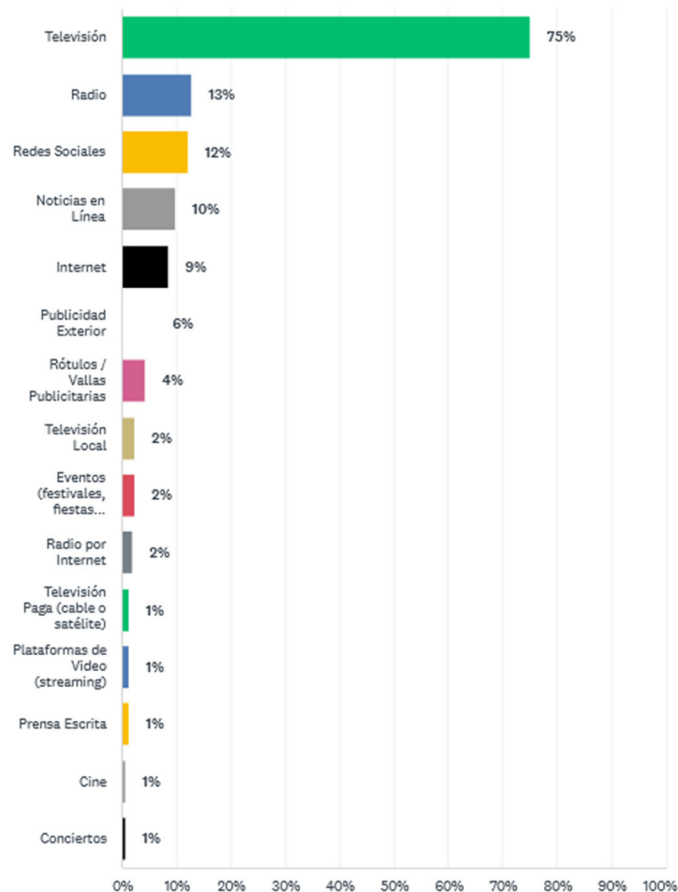
This result raises concerns about the visibility and impact of current public awareness initiatives targeting speeding. With two-thirds of respondents failing to remember any exposure, the data suggests that campaigns may not be reaching a broad enough audience, or that their messaging lacks the memorability necessary to influence behavior effectively. Considering the documented role of speeding as a leading factor in crashes, injuries, and fatalities, these findings emphasize a gap in communication strategies.

For policymakers and the Comisión para la Seguridad en el Tránsito (CST), the results highlight the need to expand campaign reach through multi-channel approaches, such as television, radio, social media, and billboards. Strengthening campaign frequency, cultural relevance, and emotional resonance will be essential to increase public recall and ultimately promote safer driving behaviors across Puerto Rico.



Q38 | LEY8 | MEDIA CHANNELS

How did you hear, read, or see this message about not driving above the speed limit?



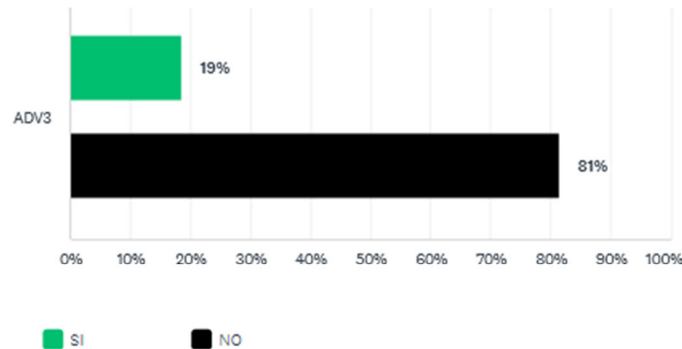
The survey results highlight the communication channels most effective in reaching drivers with messages about not exceeding the speed limit. Among the **164 (33%) respondents** who reported seeing or hearing such messages, television overwhelmingly dominates as the primary source, with 75% (n = 123) citing it as their main medium of exposure. This underscores TV's enduring influence in Puerto Rico as a trusted platform for public safety campaigns, particularly those aimed at wide audiences.

Radio ranked second, cited by 13% (n = 21) of respondents, reflecting its relevance in reaching commuters and habitual drivers. Social media followed closely at 12% (n = 20), highlighting the growing role of digital platforms in disseminating safety messages, especially among younger drivers. Other channels played smaller roles: online news (10%), general internet browsing (9%), and outdoor advertising such as billboards (6%). Traditional and less frequent sources—including local television (2%), printed press (1%), streaming platforms (1%), and community events (2%)—registered minimal influence. These findings emphasize that while digital media is emerging as an important complement, television remains the cornerstone of traffic safety messaging in Puerto Rico. Policymakers and campaign designers can maximize reach by combining mass TV exposure with targeted digital and radio strategies to reinforce messages across demographics.



Q39 | ADV3 | MESSAGE RECALL

Do you remember any slogan or phrase that you have seen, read, or heard as part of this campaign about NOT driving above the speed limit?



	SI	NO	TOTAL	WEIGHTED AVERAGE
ADV3	19% 77	81% 337	414	1.19

The findings highlight a critical challenge in the effectiveness of road safety campaigns targeting speeding behaviors in Puerto Rico. Out of 414 respondents, only 19% (n = 77) recalled a specific slogan or phrase from recent campaigns, while a vast majority of 81% (n = 337) reported no memory of such messages. This striking disparity demonstrates that while campaigns may be reaching audiences, their impact is not lasting long enough to influence driver behavior.

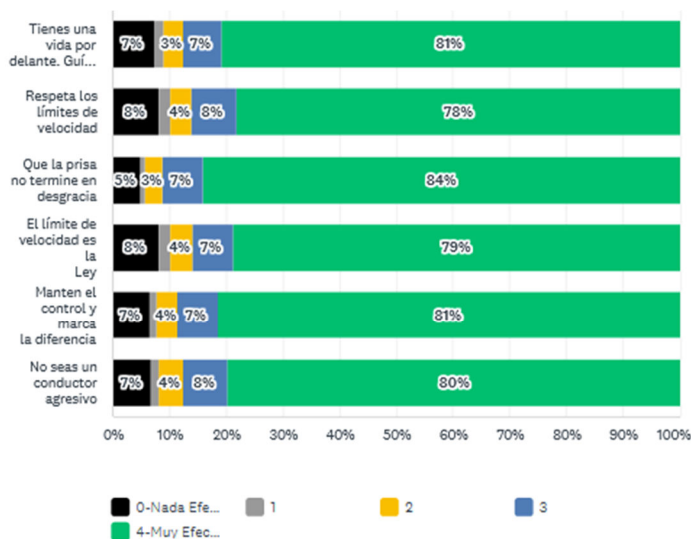
Memorable slogans are essential for reinforcing behavioral change, as they serve as quick reminders in real-world driving situations. The lack of retention suggests potential weaknesses in message design, dissemination frequency, or choice of communication platforms. It is possible that the slogans used were not culturally resonant, lacked emotional appeal, or were overshadowed by competing media content.

From a strategic standpoint, these results call for redesigning road safety messages to maximize memorability. Techniques such as using short, catchy, and emotionally charged phrases, integrating repetition across multiple media channels (TV, radio, social media, billboards), and aligning campaigns with community-based outreach may improve recall. Strengthening slogan visibility and cultural relevance could ensure that road safety messages become embedded in the public consciousness, leading to more effective long-term behavioral outcomes.



Q40 | ADV4 | Slogan Effectiveness

What slogans, phrases, or messages do you remember from this campaign about driving at excessive speed and aggressively?



	0-NADA EFECTIVO	1	2	3	4-MUY EFECTIVO	TOTAL	WEIGHTED AVERAGE
▼ Tienes una vida por delante. Guía sin prisa	7% 26	2% 6	3% 12	7% 24	81% 285	353	3.52
▼ Respetar los límites de velocidad	8% 29	2% 7	4% 13	8% 28	78% 275	352	3.46
▼ Que la prisa no termine en desgracia	5% 17	1% 3	3% 11	7% 25	84% 295	351	3.55
▼ El límite de velocidad es la Ley	8% 29	2% 7	4% 14	7% 25	79% 277	352	3.46
▼ Mantén el control y marca la diferencia	7% 23	1% 4	4% 13	7% 25	81% 286	351	3.56
▼ No seas un conductor agresivo	7% 24	1% 5	4% 15	8% 27	80% 280	351	3.52

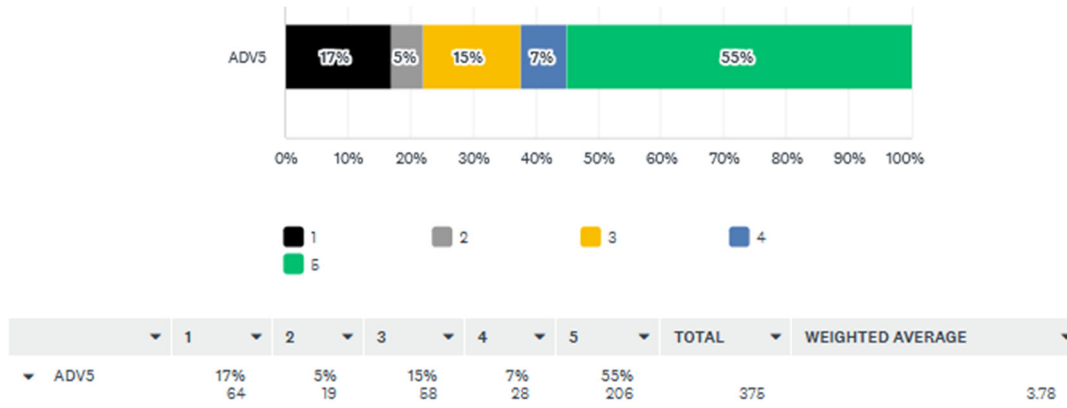
The responses provide critical insights into the recall and perceived effectiveness of campaign slogans addressing speeding and aggressive driving. Out of 353 respondents, several slogans stood out as both memorable and impactful. The most effective slogan, with 84% rating it as very effective, was “*Que la prisa no termine en desgracia*” (“Don’t let rushing end in tragedy”), emphasizing the life-threatening risks of reckless urgency. Similarly, “*Mantén el control y marca la diferencia*” (“Stay in control and make a difference”) and “*Tienes una vida por delante. Guía sin prisa*” (“You have a life ahead. Drive without rushing”) were rated very effective by 81% of respondents, resonating strongly with themes of personal safety and responsibility.

Other messages, such as “*No seas un conductor agresivo*” (“Don’t be an aggressive driver”), “*Respetar los límites de velocidad*” (“Respect the speed limits”), and “*El límite de velocidad es la Ley*” (“The speed limit is the law”), were also highly regarded, with 78–80% marking them as very effective. These results highlight that emotionally charged slogans with a human focus (life, tragedy, control) are the most memorable and persuasive. Campaigns that stress consequences and personal responsibility resonate more than purely legal reminders, suggesting that future messaging should continue leveraging emotionally impactful narratives to drive behavioral change.



Q41 | ADV5 | MESSAGE EFFECTIVENESS

On a scale from 1 to 5, where 5 means “very effective” and 1 means “not effective at all,” how effective do you consider the message you remember seeing, reading, or hearing about driving at excessive speed and aggressively?



The results provide a clear assessment of how effective respondents found the campaign messages on speeding and aggressive driving. Out of 375 respondents, the majority—55% (n = 206)—rated the messages as *very effective* (5), demonstrating strong resonance with the campaign’s communication strategies. Another 7% (n = 28) rated the messages as a 4, further supporting the idea that more than 60% of drivers perceived the messages positively and impactful.

However, a notable minority expressed skepticism. About 15% (n = 58) rated effectiveness as a neutral 3, while 5% (n = 19) scored it a 2, and 17% (n = 64) rated the messages as not effective at all (1). This distribution indicates that while the campaign successfully reached and influenced a majority, there remains a significant segment of the population that either was not convinced by the content or did not connect with its delivery.

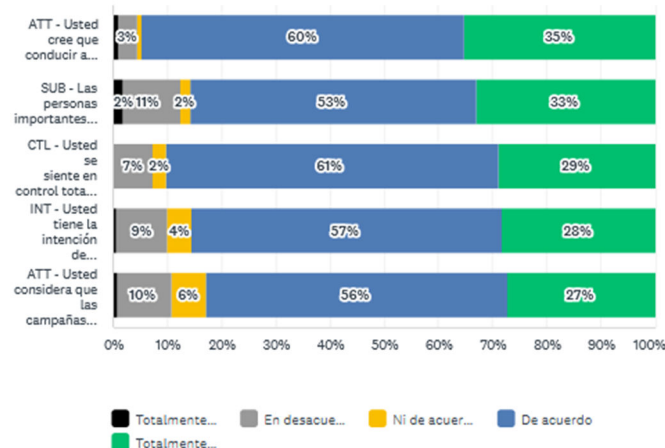
The weighted average score of 3.78 reflects an overall leaning toward high effectiveness. These findings highlight that impactful messaging strategies—especially those framed around personal safety, control, and emotional consequences—can successfully resonate with drivers, though additional efforts may be required to engage more resistant or indifferent audiences.



Q42 | TPB | BEHAVIOR PREDICTORS

To what extent do you agree with the following statements?

	TOTALMENTE EN DESACUERDO	EN DESACUERDO	NI DE ACUERDO NI EN DESACUERDO	DE ACUERDO	TOTALMENTE DE ACUERDO	TOTAL	WEIGHTED AVERAGE
ATT - Usted cree que conducir a exceso de velocidad o de forma agresiva es una conducta riesgosa.	1% 5	3% 15	1% 4	60% 269	35% 159	452	4.24
SUB - Las personas importantes para usted desaprobaban que usted conduzca a exceso de velocidad o de forma agresiva.	2% 8	11% 48	2% 8	53% 238	33% 148	450	4.04
CTL - Usted se siente en control total para evitar conducir a exceso de velocidad o de forma agresiva.	0% 1	7% 32	2% 11	61% 274	29% 129	447	4.11
INT - Usted tiene la intención de no conducir a exceso de velocidad ni de forma agresiva, incluso cuando tiene prisa.	1% 3	9% 42	4% 20	57% 254	28% 126	445	4.03
ATT - Usted considera que las campañas publicitarias influyen positivamente en su decisión de no conducir a exceso de velocidad ni de forma agresiva.	1% 4	10% 44	6% 28	56% 246	27% 120	442	3.98





The TPB (Theory of Planned Behavior Inventory) results highlight how Puerto Rican drivers perceive attitudes, social norms, control, intentions, and campaign effectiveness regarding safe driving. Out of 452 respondents, the strongest agreement was seen in the belief that driving above the speed limit is dangerous: 85% agreed or strongly agreed, reflecting a clear recognition of speeding risks (ATT).

1. ATT – You believe that driving above the speed limit or aggressively is risky.
2. SUB – Important people in your life would disapprove if you drove above the speed limit or aggressively.
3. CTL – You feel in total control to avoid speeding or driving aggressively.
4. INT – You intend not to drive above the speed limit or aggressively, even when in a hurry.
5. ATT2 – You believe that public campaigns influence your decision not to speed or drive aggressively.

The detailed TPB (Theory of Planned Behavior) table shows strong alignment between attitudes, subjective norms, perceived control, and intentions among Puerto Rican drivers when it comes to avoiding speeding or aggressive driving.

Regarding attitudes (ATT), nearly all respondents view risky driving negatively: 95% agreed or strongly agreed, giving it the highest weighted average of 4.24. Similarly, subjective norms (SUB) were strong, with 86% agreement and a weighted average of 4.04, indicating that social expectations play a significant role in discouraging risky driving.

For perceived behavioral control (CTL), 90% agreed they feel capable of controlling their behavior to avoid speeding, producing a weighted average of 4.11, one of the strongest results in the set.

Intentions (INT) also scored high, with 85% agreement and an average of 4.03, suggesting that most drivers intend to comply with safe driving practices.

Finally, perceptions of advertising campaigns (ATT2) were somewhat weaker, though still positive: 83% agreement with a weighted average of 3.98, showing moderate confidence in public messaging.

These results confirm that while attitudes and norms are strong deterrents, campaigns could be made more persuasive to strengthen long-term behavioral change.

Overall, the findings reveal strong awareness of risks and supportive social norms but highlight challenges in strengthening perceived control and translating awareness into consistent behavioral intentions. Campaigns need reinforcement strategies that boost self-efficacy and practical behavioral commitments.



APPENDIX 1 = SUMMARY OF SURVEY RESULTS

Q#	VARIABLE	RESULTS (Most → Least)
Q1	SEX	Female 53% → Male 47%
Q2	REGION	Metro 34% → Oeste 17% → Este 17% → Norte 16% → Sur 14% → Central 2%
Q3	MUNICIPALITY	San Juan 8% → Bayamón 8% → Caguas 6% → Toa Baja 6% → Ponce 5% → Others distributed proportionally
Q4	AGE	25–34: 43% → 35–54: 26% → 55+: 26% → 18–24: 4%
Q5	HOUSEHOLD SIZE	3 persons 39% → 2 persons 28% → 4 persons 17% → 1 person 12% → 5+ persons 4%
Q6	EDUCATION	Bachelor's 38% → Associate/Some College 21% → High School 17% → Master's 10% → Less than HS 10% → Doctorate 4%
Q7	EMPLOYMENT STATUS	
Q8	MARITAL STATUS	Married 50% → Single 28% → Divorced 8% → Widowed 6% → Living with partner 7%
Q9	HOUSEHOLD INCOME	\$15,000 or less: 7% → \$15,001–25,000: 3% → \$25,001–35,000: 2% → \$35,001–50,000: 1% → \$50,001–75,000: 2% → \$75,001 or more: 2% → N/A/Refused: 82%
Q10	DRIVING FREQUENCY	Every day 72% → Almost every day 7% → Several times/week 10% → Once/week 2% → Rarely 9%
Q11	MAIN VEHICLE TYPE	Car 68% → SUV 17% → Pickup 8% → Van 4% → Motorcycle 2% → Other 1%
Q12	FUEL TYPE	Gasoline 98% → Diesel 1% → Hybrid/Electric 1%
Q13	HOURS DRIVEN WEEKDAYS	2–4 hrs 41% → 1 hr or less 32% → 5+ hrs 27%
Q14	HOURS DRIVEN WEEKENDS	1–2 hrs 46% → 3–4 hrs 33% → 5+ hrs 21%
Q15	WEEKDAY DESTINATIONS	Work 62% → Shopping 15% → School/College 9% → Family/Friends 8% → Other 6%
Q16	WEEKEND DESTINATIONS	Family/Friends 41% → Shopping 27% → Entertainment 21% → Bars/Restaurants 8% → Other 3%
Q17	DRIVING EXPERIENCE RATING (1–10)	5 (18%) → 1 (17%) → 3 (11%) → 6 (11%) → 4 (10%) → 7 (8%) → 8 (8%) → 10 (8%) → 2 (7%) → 9 (2%)
Q18	TOP 3 ROAD SAFETY CONCERNS	Road conditions 77% → Distracted drivers 40% → Speeding 34% → Impaired drivers 19% → Others (lighting, pedestrians, animals) <15%
Q19	SPEEDING ON RURAL ROADS (25 MPH)	Sometimes 43% → Never 33% → Almost always 14% → Always 11%
Q20	SPEEDING ON HIGHWAYS (65 MPH)	Sometimes 41% → Never 34% → Almost always 15% → Always 10%
Q21	SPEEDING IN URBAN AREAS (35 MPH)	Never 39% → Sometimes 37% → Almost always 13% → Always 11%
Q22	SPEEDING IN SCHOOL ZONES (15 MPH)	Never 65% → Sometimes 24% → Almost always 6% → Always 5%
Q23	RECEIVED SPEEDING TICKET (12 MONTHS)	No 93% → Yes 7%
Q24	PERCEIVED LIKELIHOOD OF SPEEDING TICKET	Very unlikely 42% → Unlikely 35% → Likely 19% → Very likely 4%



Q#	VARIABLE	RESULTS (Most → Least)
Q25	PERCEIVED RISK OF SPEEDING	High 52% → Medium 34% → Low 14%
Q26	PERCEIVED RISK OF AGGRESSIVE DRIVING	High 55% → Medium 30% → Low 15%
Q27	SELF-IDENTIFIED DRIVING STYLE	Defensive 36% → Slow 36% → Aggressive 13% → Other 15%
Q28	FREQUENCY: ACCELERATE TO BEAT YELLOW LIGHT	Never 54% → Sometimes 29% → Almost always 10% → Always 7%
Q29	FREQUENCY: GETTING ANNOYED WITH SLOW DRIVERS	Never 60% → Sometimes 23% → Almost always 10% → Always 7%
Q30	FREQUENCY: CHANGING LANES TO AVOID TRAFFIC	Never 43% → Sometimes 21% → Almost always 18% → Always 18%
Q31	FREQUENCY: HONKING OUT OF FRUSTRATION	Never 66% → Sometimes 20% → Almost always 8% → Always 6%
Q32	FREQUENCY: WEAVING/CHANGING LANES ABRUPTLY	Never 71% → Sometimes 19% → Almost always 6% → Always 4%
Q33	FREQUENCY: BLOCKING OTHER VEHICLES	Never 82% → Sometimes 12% → Almost always 4% → Always 2%
Q34	FREQUENCY: USING SHOULDER TO PASS TRAFFIC	Never 77% → Sometimes 15% → Almost always 5% → Always 3%
Q35	FREQUENCY: FLASHING LIGHTS/BRAKES TO “PUNISH”	Never 88% → Sometimes 8% → Almost always 3% → Always 1%
Q36	CRASHES OR NEAR MISSES RELATED TO AGGRESSIVE DRIVING	No 98% → Yes 2%
Q37	CRASHES OR NEAR MISSES RELATED TO SPEEDING	No 96% → Yes 4%
Q38	PERCEIVED EFFECTIVENESS OF POLICE ENFORCEMENT	Effective 47% → Very effective 26% → Not very effective 21% → Not at all effective 6%
Q39	PERCEIVED ADEQUACY OF PENALTIES	Adequate 47% → Too lenient 26% → No opinion 22% → Too severe 6%
Q40	AWARENESS OF SPEEDING/AGGRESSION LAWS	Aware 46% → Well-informed 38% → Not informed 15% → Not interested 1%



APPENDIX 2 = STATISTICAL ANALYSIS

To better understand the factors influencing drivers' intention to drink and drive, a series of statistical tests were conducted comparing all survey variables against Q42-TPB-Intention ("INT – You intend not to drive over the speed limit or aggressively, even when in a hurry"). This question reflects the central construct of behavioral intention within the Theory of Planned Behavior (TPB), which posits that intention is the most direct predictor of behavior.

By statistically testing its relationship with attitudes, perceptions, and behaviors captured throughout the survey, we can identify which factors most strongly contribute to — or detract from — the intention to avoid distracted driving. Three key statistical measures were employed. **P-values (P)** were used to assess the statistical significance of each relationship, helping to distinguish meaningful associations from those likely due to chance. **Correlation coefficients (R)** measured the strength and direction of these associations, with positive values indicating variables that increase intention (e.g., greater perceived risk) and negative values identifying behaviors or beliefs that reduce intention (e.g., habitual phone use). Finally, **Levene's test values (L)** were used to evaluate the homogeneity of variance across different respondent groups. This measure highlights whether responses are consistent or vary significantly across demographics, such as age, driving frequency, or location, which is crucial for tailoring interventions.

These statistical tests identify key predictors of drivers' intention to avoid cellphone use and reveal variability patterns, providing actionable insights for policymakers, educators, and safety professionals to reduce distracted driving.

Q43|TPB-INTENTION|YOU INTEND NOT TO DRIVE OVER THE SPEED LIMIT OR AGGRESSIVELY, EVEN WHEN IN A HURRY.

	P	R	L
Usted se siente en control total para evitar conducir a exceso de velocidad o de forma agresiva.	0	0.75	121.22
¿Con qué frecuencia conduce 10 mph por encima del límite en diferentes tipos de vías?	0	0.253	82.5
Las personas importantes para usted desaprobaban que usted conduzca a exceso de velocidad o de forma agresiva.	0	0.405	23.01
Las personas importantes desaprobaban que conduzca en exceso de velocidad o agresivamente.	0	0.199	19.26
Usted cree que conducir a exceso de velocidad o de forma agresiva es una conducta riesgosa.	0	0.339	18.29
Usted considera que las campañas publicitarias influyen positivamente en su decisión de no conducir a exceso de velocidad ni de forma agresiva.	0	0.308	14.15
En una Zona Escolar de 15 MPH	0.013	-0.122	8.28
Zonas urbanas o residenciales	0.008	-0.129	7.68
¿Con qué frecuencia toca bocina por frustración?	0.054	-0.092	7.47
¿Con qué frecuencia conduce un vehículo motorizado?	0.004	-0.139	7.09
¿Cuál es su nivel más alto de educación alcanzado?	0.089	-0.086	6.4
De ser afirmativo, ¿fue usted el que causó el accidente?	0.049	-0.094	5.67
En carreteras rurales de 25 MPH	0.005	-0.137	5.06
En la autopista de 65 MPH	0.001	-0.162	4.89
¿Cuál es su situación laboral actual?	0.013	-0.122	4.68
En los últimos 12 meses, ¿ha estado involucrado/a en un accidente relacionado con conducción agresiva?	0	-0.193	4.62

**DATA ANALYSIS BASED ON RESULTS FOR THE QUESTION:****Q43-INTENTION: TPB-INTENTION | YOU INTEND NOT TO DRIVE OVER THE SPEED LIMIT OR AGGRESSIVELY, EVEN WHEN IN A HURRY****1. Variables with Positive Correlation (Positive R and significant p-value)**

The strongest predictor was **SELF-EFFICACY (CTL)** with a correlation of $R = 0.75$ ($p = 0.000$). This result indicates that drivers' perception of personal control over their own behavior significantly reduces the intention to drive aggressively. However, the high variance observed ($L = 121.22$) suggests that self-efficacy is not distributed homogeneously across the population, meaning that some groups feel much more capable of exercising control than others.

SOCIAL NORMS (SUB) also emerged as an important factor ($R = 0.405$, $p = 0.000$, $L = 23.01$). The perceived disapproval from close family, friends, or peers has a relevant impact on driver behavior, acting as an external reinforcement that discourages aggressive driving.

The role of **RISK PERCEPTION (ATT)** was also significant ($R = 0.339$, $p = 0.000$, $L = 18.29$). Drivers who view aggressive driving as dangerous are more likely to avoid it, even when under pressure or in a hurry. This highlights the value of shaping drivers' beliefs about the consequences of risky behaviors.

PUBLIC CAMPAIGNS showed a moderate but meaningful influence ($R = 0.308$, $p = 0.000$, $L = 14.15$). Well-designed campaigns can positively affect decision-making processes, though their variance is relatively low compared to psychological predictors like self-efficacy.

Finally, **PRIOR BEHAVIOR** (Driving 10 mph over the limit) also displayed a significant correlation ($R = 0.253$, $p = 0.000$, $L = 82.5$). Even drivers who admit to speeding can develop an intention to change if they recognize the associated risks or experience social pressure to comply with safe driving practices.

2. Variables with Negative Correlation (Negative R and significant p-value)

The following variables are negatively associated with the intention to **not to drive over the speed limit or aggressively, even when in a hurry**.

Among the negative predictors, **AGGRESSIVE DRIVING-RELATED ACCIDENTS** showed the strongest inverse relationship ($R = -0.193$, $p = 0.000$, $L = 4.62$). A history of accidents associated with aggressive driving is linked to a lower intention to change behavior. This may reflect resistance to change or denial of the underlying problem, suggesting that drivers with such histories may be less responsive to traditional interventions.

SPEEDING TICKETS also emerged as a negative predictor ($R = -0.174$, $p = 0.000$, $L = 1.27$). Receiving sanctions does not guarantee a change in behavior; in fact, it may be associated with persistence in risky driving habits. This highlights the limitations of punitive approaches when not accompanied by educational or rehabilitative strategies.

Everyday aggressive behaviors, such as **CHANGING LANES TO AVOID SLOW TRAFFIC**, were also negatively correlated with intention to change ($R = -0.139$, $p = 0.003$, $L = 3.51$). This suggests that routine impatience and risky maneuvers are linked to reduced willingness to moderate speed.



Finally, **HONKING OUT OF FRUSTRATION** was identified as another negative predictor ($R = -0.092$, $p = 0.054$, $L = 7.47$). Although weaker in statistical strength, this behavior reflects impulsivity and lower self-control, which are consistent with patterns of aggressive driving and resistance to safer driving intentions.

3. Levene's Homogeneity (L) – Additional Analysis

Levene's test values provide insight into whether the variance in responses is consistent across different demographic groups or if certain predictors show greater variability. In this dataset, several predictors display notable variance, which has important implications for campaign design and audience targeting:

The results show clear differences in how various predictors affect groups of drivers. Variables with very high variance ($L > 80$) include **SELF-EFFICACY** (CTL, $L = 121.22$) and **FREQUENCY OF SPEEDING** ($L = 82.5$). These highly dispersed responses suggest that perceptions and behaviors vary drastically across demographic groups such as age, gender, or driving experience. In other words, some groups feel highly confident in their ability to control aggressive driving, while others do not.

Factors with moderate variance ($L = 18-23$) include **SOCIAL NORMS**, **RISK PERCEPTION**, and **PUBLIC CAMPAIGNS**. While less dispersed than CTL, these predictors still show meaningful variability, indicating that certain groups are more strongly influenced by social expectations, awareness of risks, or exposure to campaigns than others.

Finally, low variance ($L < 5$) was observed for **SLOGANS** and **SPEEDING TICKETS**. These results indicate a high degree of consistency in how these elements are perceived across the population. However, their impact appears limited, suggesting that traditional or conventional messages may no longer be persuasive enough for some drivers and may require redesigning to achieve stronger behavioral influence.

Interpretation:

Self-efficacy—the belief in one's ability to avoid aggressive driving—is the most influential factor. However, it shows wide variability among individuals, which indicates the need to strengthen personal confidence through practical road safety education. Social norms and risk perception are also key drivers. Campaigns should therefore incorporate testimonies, emotional messaging, and peer influence to reinforce safe driving choices. Drivers with a history of aggressive behavior or prior sanctions tend to show resistance to change, requiring more intensive, individualized, or regulatory interventions. The high dispersion observed suggests that campaigns must be segmented, since not all drivers respond in the same way to identical messages. Differentiated strategies are recommended for young drivers, adults, frequent drivers, and repeat offenders.

The current study demonstrates that the intention not to speed or drive aggressively, even under high-pressure situations such as being in a hurry, is shaped by a combination of internal, social, and perceptual factors. Among these, perceived self-efficacy carries the most weight, followed by social norms and risk awareness. However, the exceptionally high heterogeneity (Levene's statistic = 121.22) in self-efficacy indicates that mastery of these skills is not evenly distributed across the population, requiring more individualized intervention strategies.



APPENDIX 3 = EVIDENCE BASED SUGGESTIONS

Based on the findings from the Theory of Planned Behavior (TPB) variables, correlation results, and Levene's homogeneity analysis, several evidence-based strategies are recommended to enhance the effectiveness of safer driving campaigns in Puerto Rico.

1. Boost Self-Efficacy Through Practical Messaging

Since SELF-EFFICACY (CTL) emerged as the strongest predictor but with very high variance ($L = 121.22$), campaigns should emphasize *how* drivers can stay in control. This includes practical tips (e.g., planning routes, leaving earlier, using public transport/ride-sharing when rushed) and modeling confident, safe behaviors in ads. Testimonials showing everyday drivers successfully avoiding risky actions can normalize safer choices.

2. Leverage Social Norms and Peer Influence

Because SOCIAL NORMS (SUB) showed strong correlations, campaigns should frame safe driving as the expected social behavior. Ads can highlight peer and family disapproval of speeding or aggression ("Your family expects you home safe") and spotlight positive role models (teachers, athletes, peers). Peer pressure messaging is particularly effective for younger drivers, who are more influenced by social approval.

3. Segment Campaigns by Risk Profile

The analysis shows that road safety messages resonate differently across groups, requiring segmented campaigns by age, experience, and exposure. Young drivers benefit from social media messages stressing peer disapproval and life opportunities lost in crashes. Working-age adults need stress- and time-management strategies to reduce speeding. Older drivers/retirees require messages that build confidence and emphasize maintaining independence through safe, responsible driving habits.

4. Increase Campaign Memorability with Emotional Slogans

The recall of campaign slogans was low (<20%). Research shows emotionally charged, concise slogans (e.g., "*Don't let rushing end in tragedy*") are more memorable. Campaigns should use repetition, vivid storytelling, and culturally resonant phrases that drivers can recall easily in real-life driving contexts. Pairing slogans with visual cues (billboards, road signs, short social media videos) can reinforce recall.

5. Link Campaigns with Visible Enforcement

Correlation results showed that exposure to police checkpoints and sanctions strengthens intention to avoid risky driving. Campaigns should highlight real enforcement efforts: announce checkpoints, showcase police activity, and clearly communicate fines/penalties. Pairing ads with news coverage or social media posts about recent ticketing/enforcement reinforces deterrence by making sanctions feel immediate and credible.