

Puerto Rico Observational Survey of Seat Belt Use, 2021

Final Report

Submitted to: Traffic Safety Commission of Puerto Rico



September 28, 2021

TABLE OF CONTENT

INTRODUCTION	3
METHODOLOGY	3
FINDINGS	5
General Findings	5
Information by Seating Position	11
Conclusions.....	15
APPENDIX 1: LIST AND MAP OF SAMPLED ROAD SEGMENTS	16
APPENDIX 2: TABLE B	21

INTRODUCTION

The Traffic Safety Commission of Puerto Rico (CST by its Spanish acronym), with the collaboration of Estudios Técnicos, Inc., conducted the Seat Belt Use Survey for 2021. The purpose of the study is to estimate seat belt use in Puerto Rico at a specific point in time.

The sample design is similar to the one approved by the National Highway Traffic Safety Administration (NHTSA) on November 9, 2011. For this year, we used the same road selection from 2017 following the Uniform Criteria for State Observational Surveys of Seat Belt Use, approved by NHTSA on May 30, 2017.

The fieldwork team was composed of twelve (12) members. All team members participated in a one-day training session on August 30, 2021. The session included all the different aspects for the field observations and quality control. The training was organized in two sections. The first section addressed the objectives of the survey, operational definitions concerning field observations, and data gathering protocols. The second section consisted of examples, the recreation of the different situations, and possible scenarios in the field. This second part also included role playing exercises for observers, counters, and quality control monitors.

Observations were conducted from September 1 to September 16, 2021. Seventeen (17) counties were visited, for a total of 6,800 vehicle observations.

METHODOLOGY

The methodology used for this Seat Belt Survey is similar to the one implemented in 2011 and approved by NHTSA. For 2017 a new road selection was made following the Uniform Criteria for State Observational Surveys of Seat Belt Use, approved by NHTSA on May 30, 2017. As mentioned in the introduction, for 2021 the same 68 road segments from 2020 were visited.

Two main units were considered in the sample design. The primary sample unit (PSU) is composed by counties, and the second sample unit (SSU) by road segments, followed by: time segment, road direction, lane and vehicle selection. The PSU was stratified following a geographic distribution of the Island, composed of five regions. A sample of 17 counties was selected from a sample frame of 45, after considering an exclusion of 15 percent of passenger vehicle occupant fatalities in the 78 counties that compose Puerto Rico. Counties were stratified by region. The selection was established according to the number of active driver's licenses by county.

The road sample was stratified in each county by three road types: (1) Primary, (2) Secondary and (3) Local. A total of four roads segments were selected in each county,

including at least one road for each road type in every county. The selection was made using segment length as the measure of size (MOS). The four road segments by county represented one workday of data collection. Observations were scheduled ensuring that they were made during the seven days of the week. A universal period of observation of 45 minutes was used, with an estimation of 45 minutes of traveling time between segments. The starting time for each day was randomly chosen between 7:00 AM and 1:00 PM to warrant the observation probability between 7:00 AM and 6:00 PM.

Site locations for observations were selected deterministically by the first intersection or ramp encountered. Observations were conducted by three team members: two data collectors and one vehicle counter. The team recorded roadway directions of the selected segments and chose randomly roadway directions to be observed when there were more than two directions. Seven percent of the segments were visited without advance notice by an independent monitor for quality control purposes.

An observation protocol was used to guide field observations. The protocol established the roles for each team member, how to choose roadway directions, place to collect the information, how to identify the right vehicles to be observed, people to be observed inside the vehicles, and how to record the observations. A total of four protocols were developed to guide their actions in special situations. These included the following: (1) temporarily unavailable locations, (2) permanently unavailable locations, (3) nonresponse rates that exceed 10% and (4) process for non-usable data. The protocols ensured that sample units were represented, and that standard error did not exceed 2.5 percentage points.

For data entry and processing, the following software programs were used: SPSS, Excel and SUDAAN. The belt use rate estimation was calculated through a ratio estimator and the standard error with SUDAAN software. Both procedures were included in the Sample Design submitted and approved by NHTSA.

FINDINGS

General Findings

The five (5) regions of Puerto Rico were covered with the visits of the 17 counties (four road segments in each county selected for the sample). The number of observations per segment was 100 vehicles, for a total of 6,800 observed vehicles and 8,611 occupants (6,800 drivers and 1,811 front passengers).

The 68 segments visited were the same as 2020 (following NHTSA procedure) within the same time and days of the week. There was no need to change road segments do to the fact that all 100 observations were completed in each of the 68 roads segments used in 2017, 2018, 2019 and 2020.

Quality control was conducted in seven percent of the observed segments. These segments, included in table one, were randomly selected.

TABLE 1: QUALITY CONTROL BY ROAD SEGMENTS

County	Type	Road Segment	Latitude	Longitude	Date	Hour
Carolina	Local	Ave Iturregui	18.417931	-66.000311	September 5,2021	10:00
Fajardo	Local	Ave el Conquistador	18.33948	-65.65620	September 7,2021	10:30
Hatillo	Secondary	Ave Dr Susoni	18.487730	-66.824029	September 9,2021	12:00
Hatillo	Local	Marg.CII Comercio	18.485504	-66.818322	September 9,2021	16:30

Observers recorded the belt use information of 6,702 drivers and 1,802 front seat passengers. The number of occupants with unknown belt use was 107 (98 drivers and 9 front passengers) for a nonresponse rate of 1.2% (nonresponse rate =107/8,611). Table two includes the number of observations of drivers and passengers per county and region.

TABLE 2: NUMBER OF VALID OBSERVATIONS OF FRONT SEAT OCCUPANTS PER COUNTY/REGION

	Drivers	Passengers	Total
North Region	1,178	371	1,549
Arecibo	390	93	483
Hatillo	400	123	523
Toa Baja	388	155	543
West Region	1,189	290	1,479
Aguada	393	103	496
Isabela	400	90	490
Mayagüez	396	97	493
South Region	1,565	413	1,978
Ponce	389	102	491
Cayey	400	134	534
Juana Díaz	387	88	475
Salinas	389	89	478
East Region	1,979	474	2,453
Caguas	399	110	509
Canóvanas	399	104	503
Fajardo	383	94	477
Juncos	400	92	492
Naguabo	398	74	472
Metropolitan Región	791	254	1,045
Carolina	391	193	584
San Juan	400	61	461
Total	6,702	1,802	8,504

The overall belt use measured combining drivers and passengers (once weights were applied as indicated in the sample design) was 88.24percent, with a standard error of 1.57 percent.

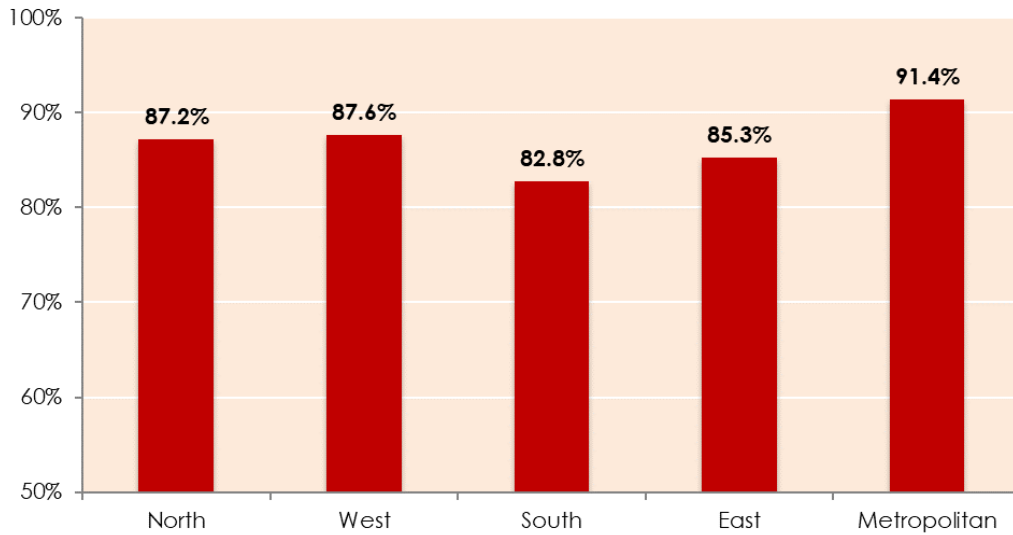
TABLE 3: WEIGHTED SEAT BELT USE RATE FOR PUERTO RICO 2021

Rate of belt use	Standard Error	95 Percent Confidence Interval	
88.24%	1.57%	85.16%	91.32%
n = 8,504			

Significant¹ difference was found in belt use by region. In the Metropolitan Area (91.4%), and West (87.6%) regions belt use is more intense than the other regions, especially in the South (82.8%).

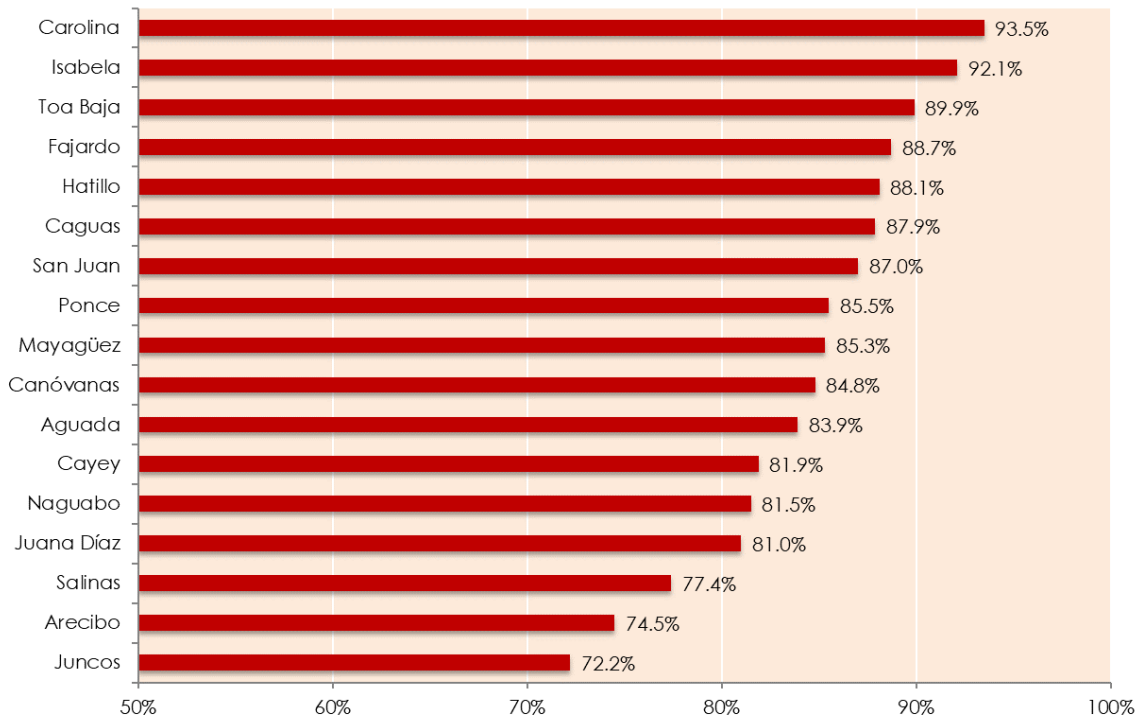
¹ A Chi Square Test of Independence was calculated to identify relations between belt use and the rest of the observed variables.

GRAPH 1: OBSERVED BELT USE BY REGION



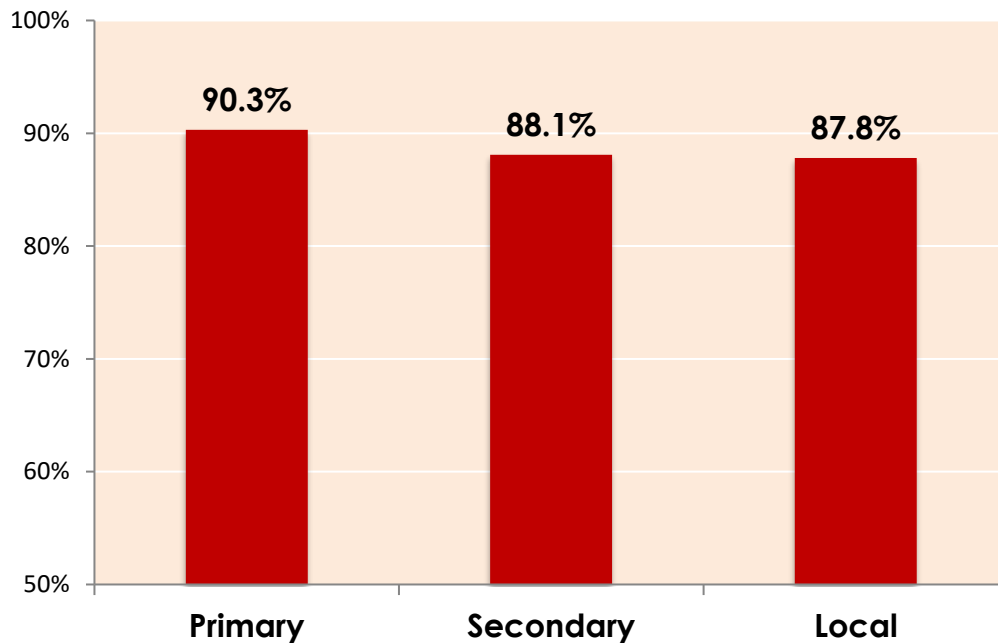
Belt use measurements by county showed that Carolina is the county with the highest belt use with 93.5%. Other county that reached belt usage close to 90 percent were Isabela (92.1%). In contrast, the lowest level of belt use was recorded in Juncos (72.2%) and Arecibo (74.5%).

GRAPH 2: OBSERVED BELT USE BY COUNTY



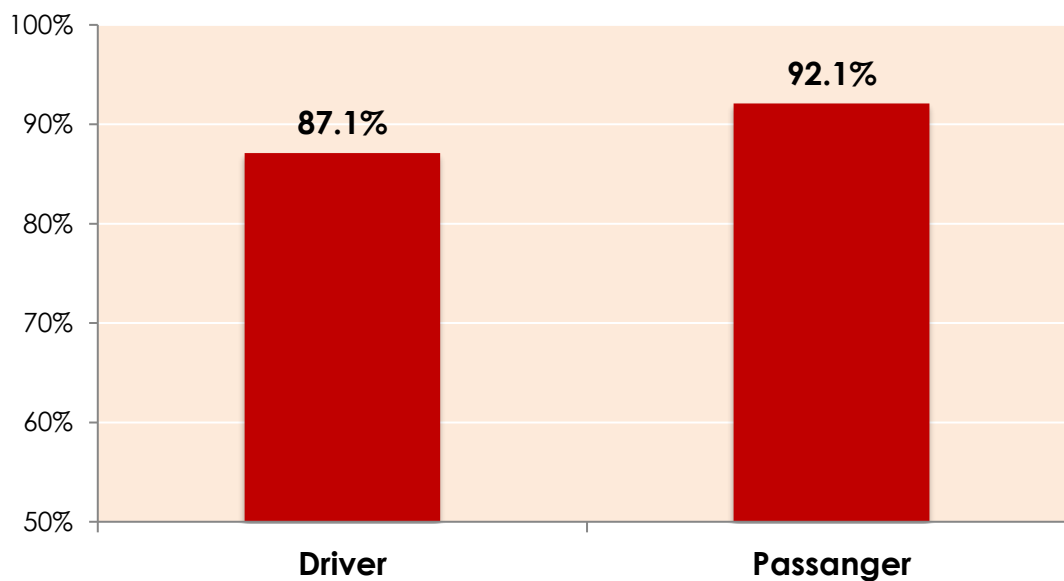
Differences were observed by road type. The lowest percentage of seat belt use (87.8%) was found in Local Road types.

GRAPH 3: OBSERVED BELT USE BY ROAD TYPE



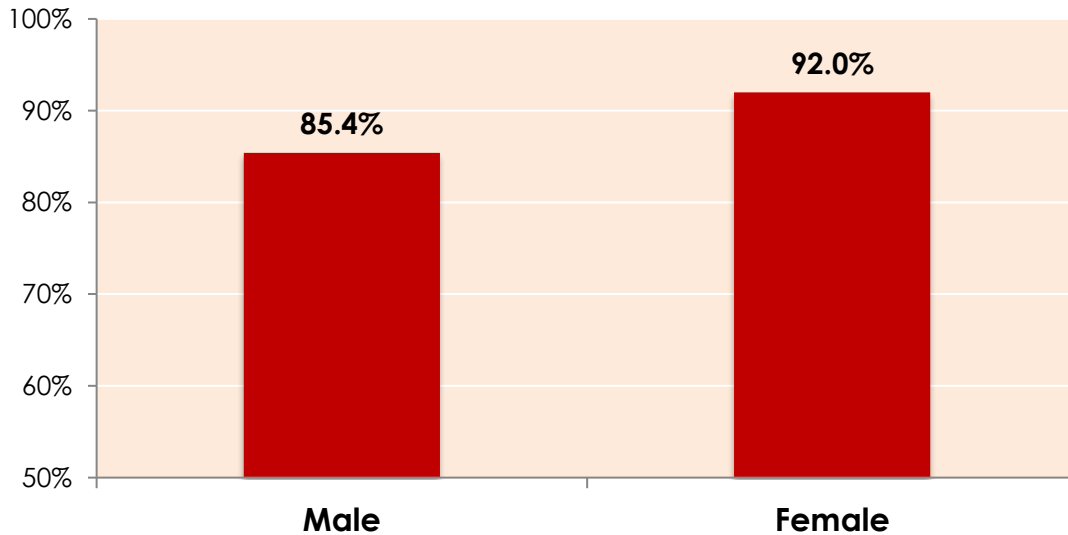
A difference was observed between drivers and passengers. Belt use is higher in passengers (92.1%) than in drivers (87.1%).

GRAPH 4: OBSERVED BELT USE BY SEATING POSITION



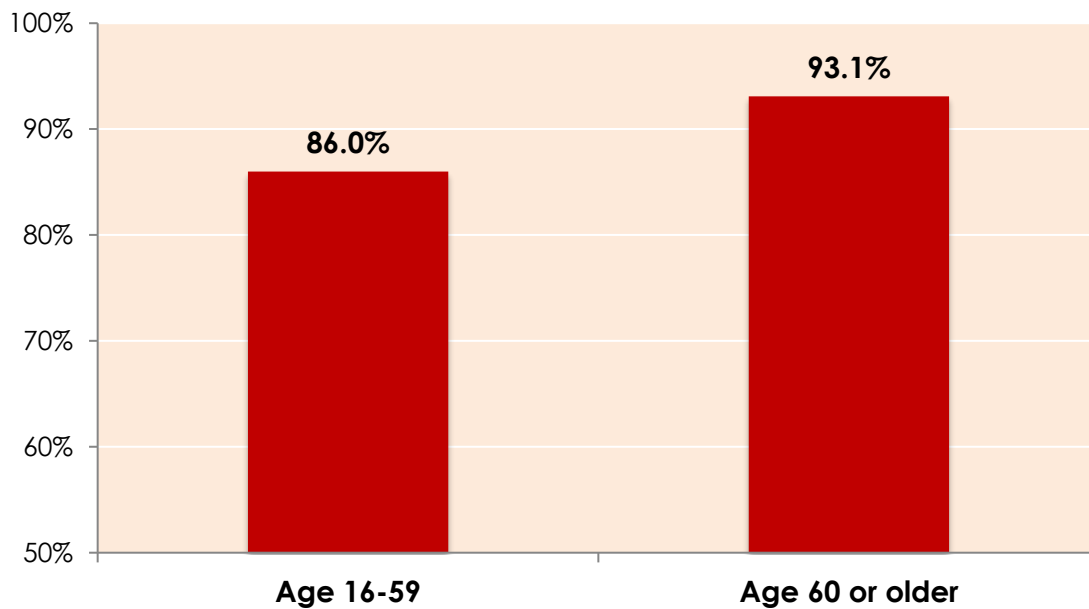
The survey results showed a higher percentage in belt use by females compared to males (92.0 percent and 85.4 percent, respectively).

GRAPH 5: OBSERVED BELT USE BY GENDER



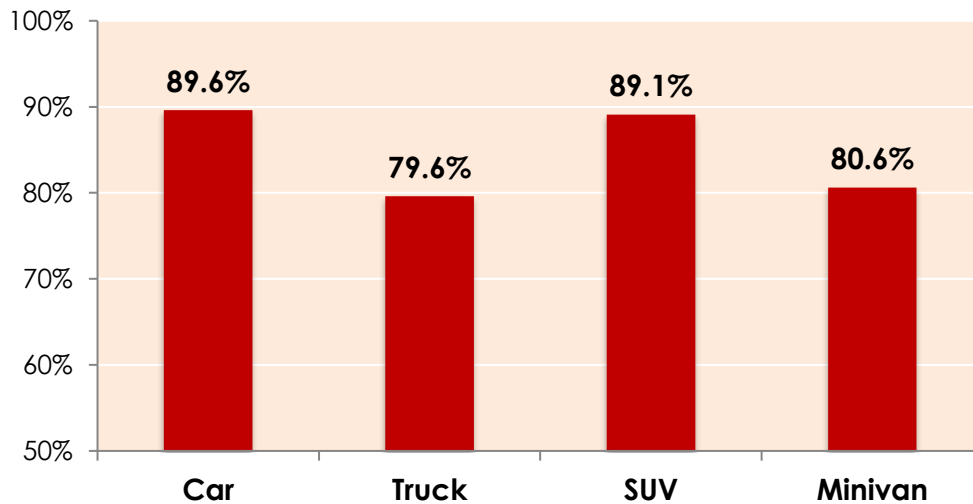
Statistical difference was found related to the use of seat belt and age group, between the 16 to 59 years group (86%) and 60 years or older group (93.1%).

GRAPH 6: OBSERVED BELT USE BY AGE



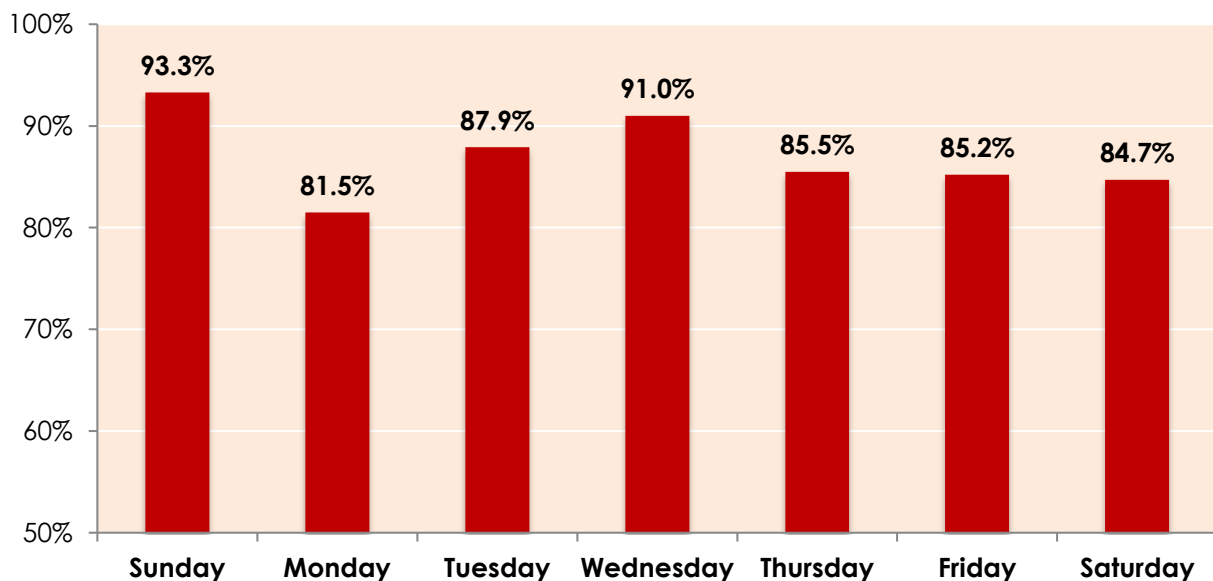
A significant difference of belt use was observed by vehicle type. As Graph 7 shows, 89.6 percent of belt use was registered on cars, while 89.1 percent on SUVs, 80.6 percent on minivan and 79.6 percent on trucks.

GRAPH 7: OBSERVED BELT USE BY VEHICLE TYPE



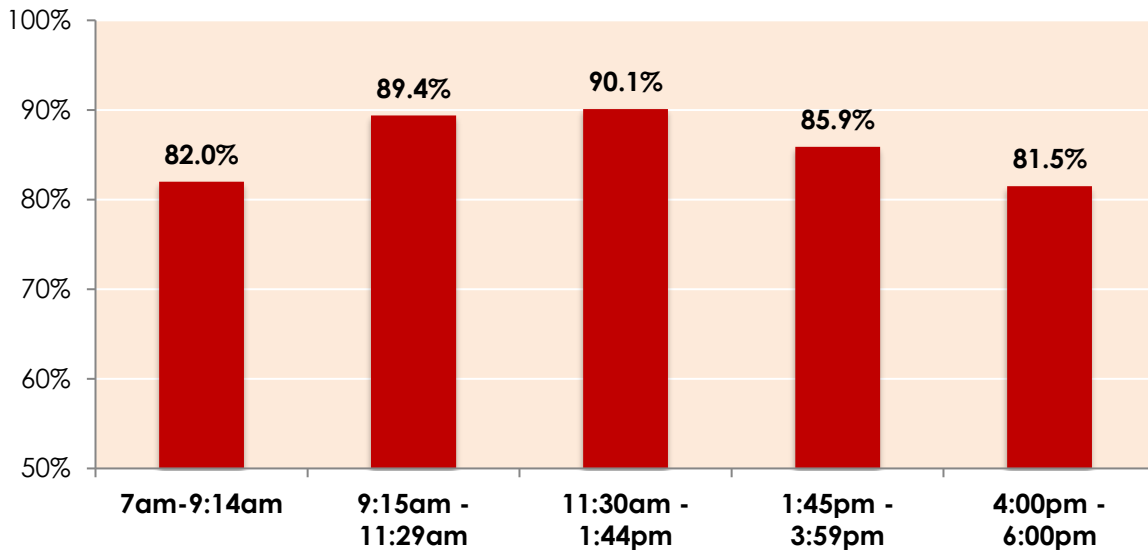
The days of the week that recorded a higher belt use were Sunday and Wednesday, with 93.3 percent and 91 percent, respectively. The days of the week that recorded the lowest belt use were Monday and Saturday, with 81.5 and 84.7 percent, respectively. Those results were associated with the municipalities visited those days.

GRAPH 8: OBSERVED BELT USE BY DAY OF THE WEEK



The time interval corresponding from 11:30 AM to 1:44 PM (90.1%) reflected higher belt use.

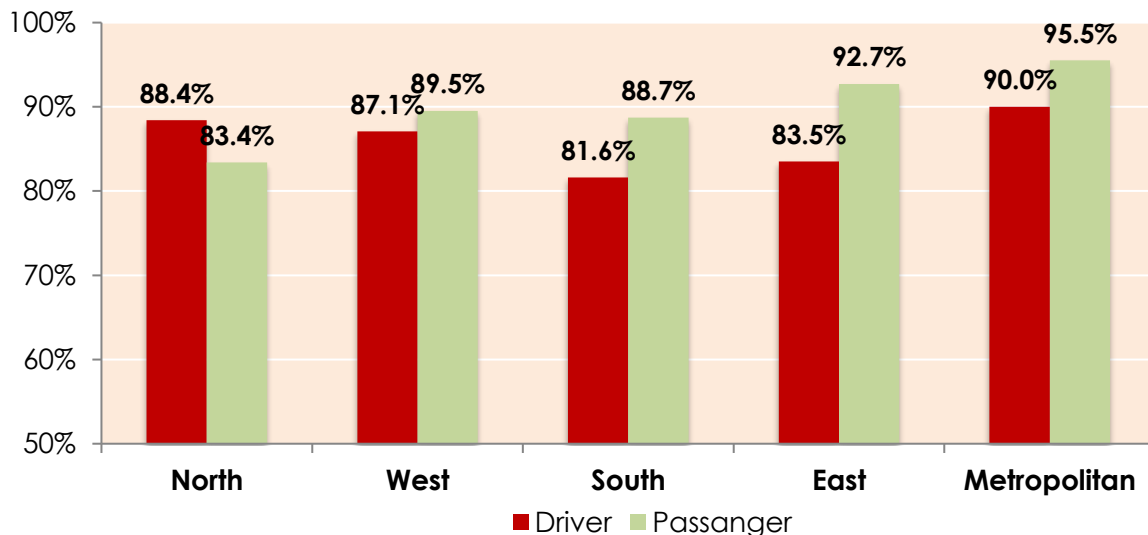
GRAPH 9: OBSERVED BELT USE BY TIME INTERVALS



Information by Seating Position

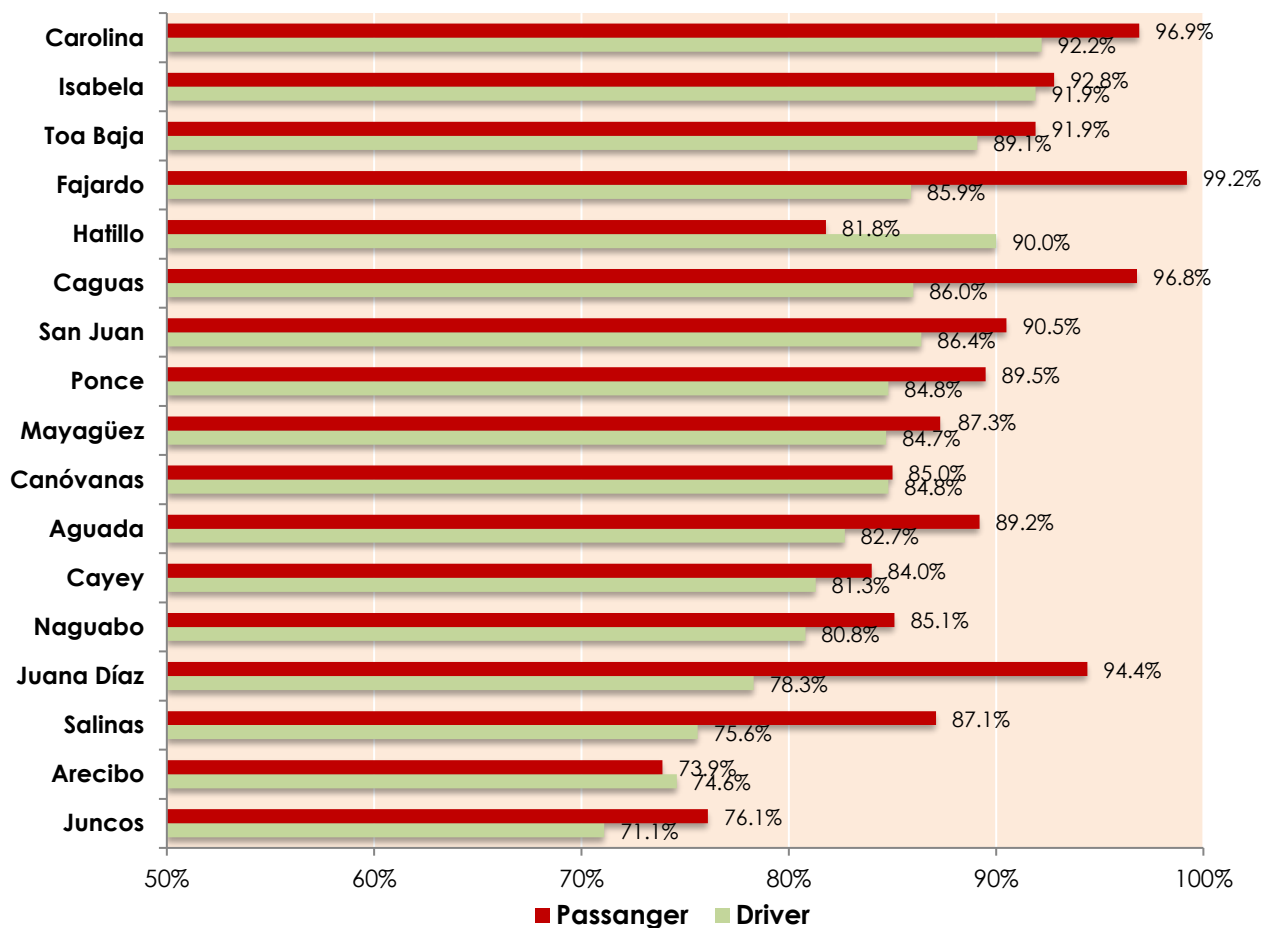
The measurements in belt use by seating position by region were similar to the regions in general. The South region recorded the lowest belt use. It should be noted that the East and South regions showed great difference between driver and passengers -9.2% and 6.1%, respectively.

GRAPH 10: OBSERVED BELT USE BY REGION PER SEATING POSITION



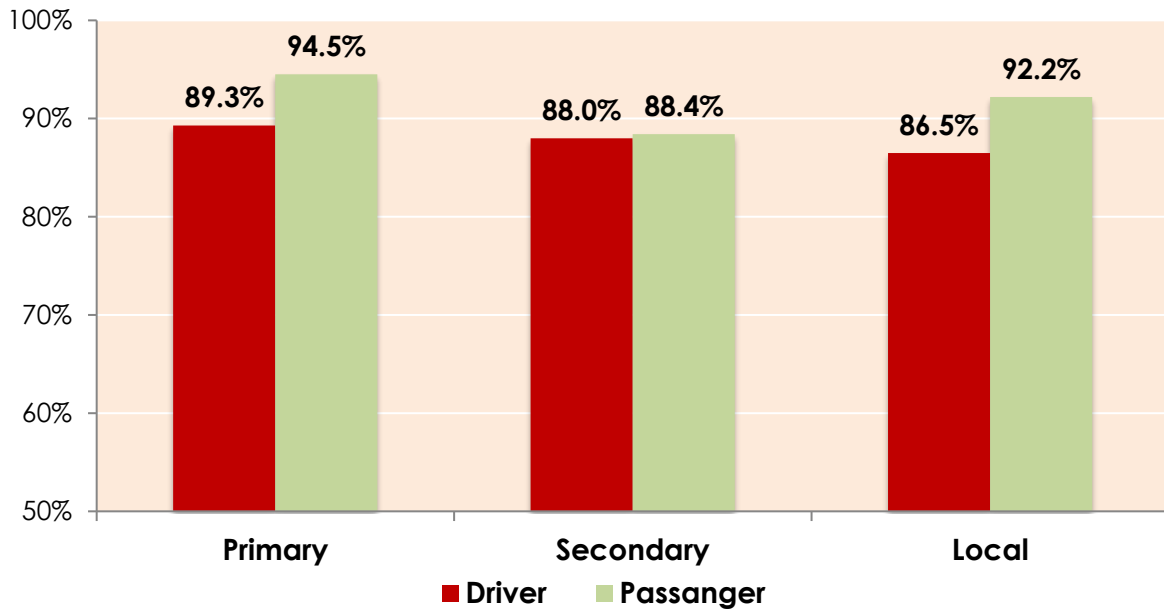
As Graph 11 shows, differences in belt use were observed when counties are considered separately. The counties that recorded the biggest differences between drivers and passengers were Juana Díaz, Fajardo and Salinas. Juana Díaz recorded a belt use of 94.4 percent for passengers, while drivers recorded a belt use of 78.3 percent, for a difference of 16.1 percentage points. In the case of Fajardo, passengers recorded 99.2 percent of belt use, while drivers recorded 85.9 percent, for a difference of 13.3 percentage points. In Salinas, the difference in belt use between drivers (75.6 percent) and passengers (87.1 percent) was of 11.5 percentage points.

GRAPH 11: OBSERVED BELT USE BY COUNTY PER SEATING POSITION



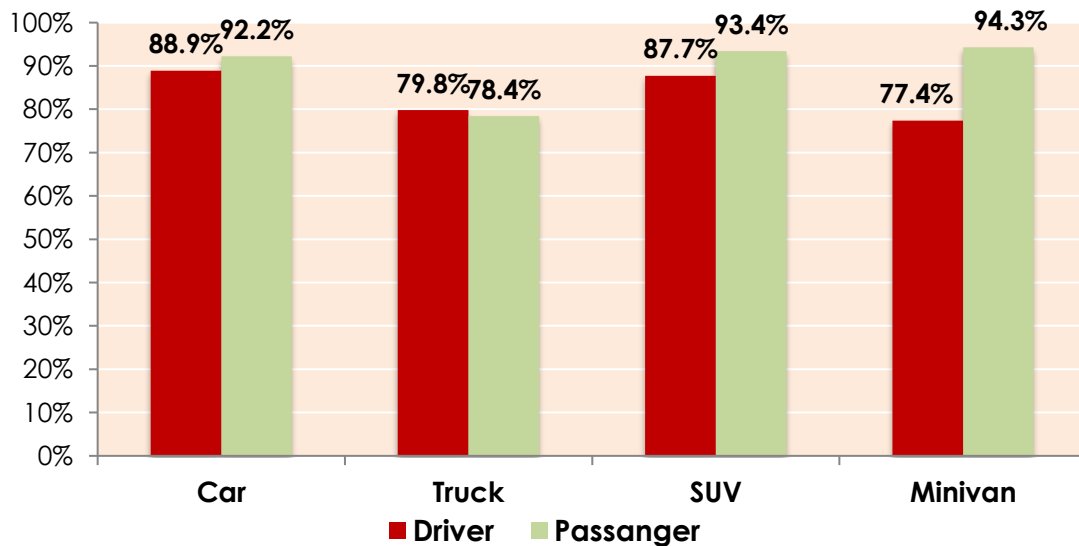
The biggest difference of belt use between drivers and passengers by road type was observed in the local roads. Passengers recorded 92.2 percent of belt use, while drivers recorded 86.5 percent, for a difference of 5.7 percentage points.

GRAPH 12: OBSERVED BELT USE BY ROAD TYPE PER SEATING POSITION



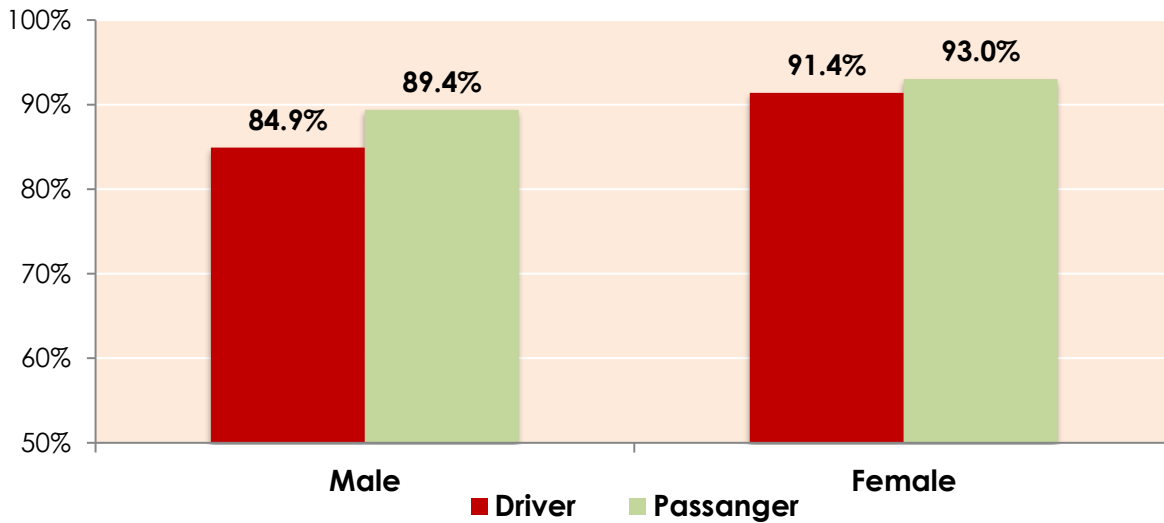
In relation to belt use by type of vehicle, the biggest difference of belt use between drivers and passengers was observed in Minivans. Passengers recorded 94.3 percent of belt use, while drivers recorded 77.4 percent, for a difference of 16.9 percentage points.

GRAPH 13: OBSERVED BELT USE BY VEHICLE TYPE PER SEATING POSITION



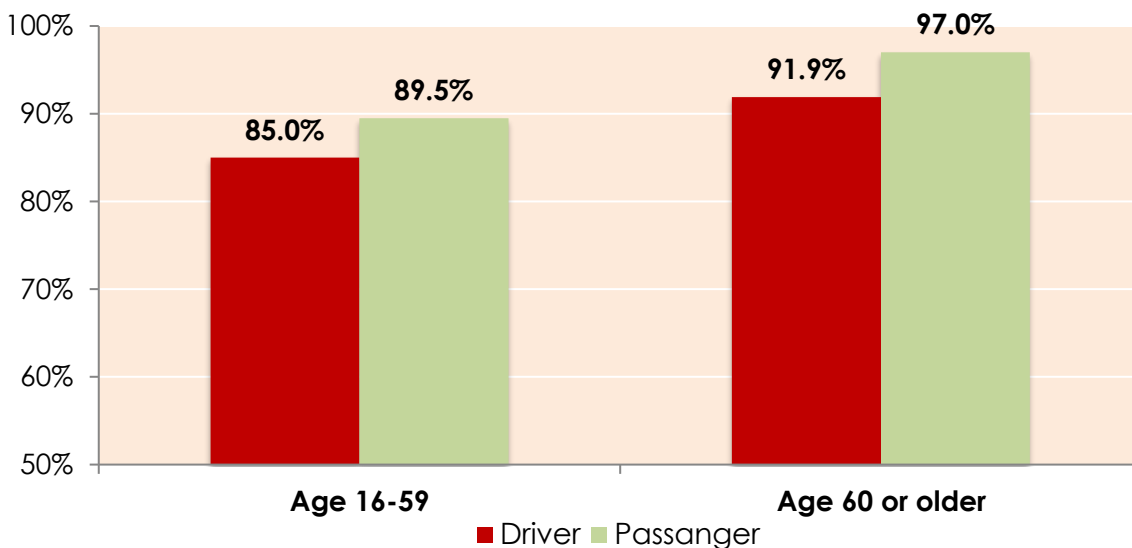
As Graph 5 shows, more females than males were observed using the belt. This tendency, as Graph 14 shows, is similar for drivers and passengers. In the case of drivers, a difference was observed by gender: females recorded 91.4 percent of belt use, while males recorded 84.9 percent, for a difference of 6.5 percentage points.

GRAPH 14: OBSERVED BELT USE BY GENDER PER SEATING POSITION



Regarding the people of 60 years or older a 5.1 percentage point difference was registered in belt use between drivers (with 91.9 percent) and passengers (97 percent). For persons between 16 and 59 years old drivers recorded 85 percent, while passengers recorded 89.5 percent, for a difference of 4.5 percentage point.

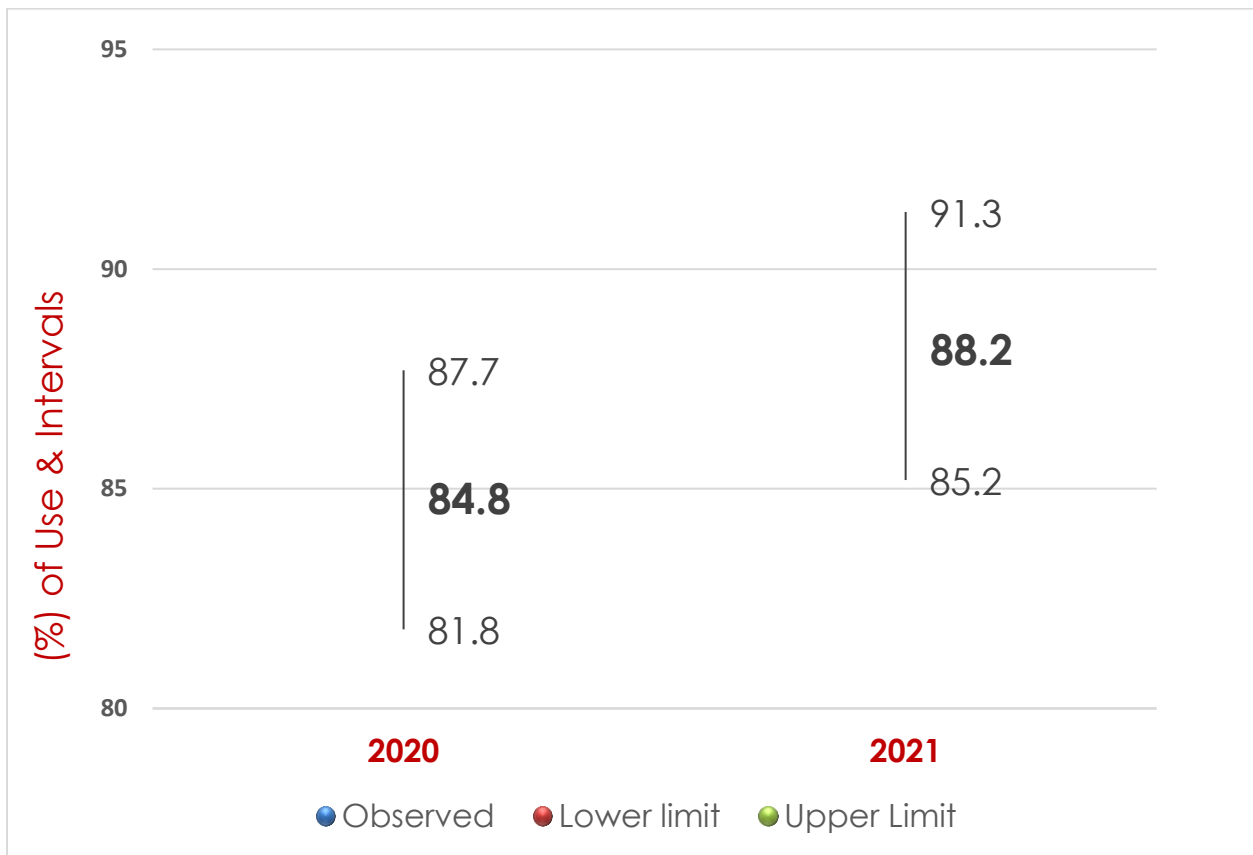
GRAPH 15: OBSERVED BELT USE BY AGE PER SEATING POSITION



Conclusions

In Puerto Rico, the belt use rate has been similar and consistent throughout recent studies. The last valid study was conducted in 2020 and the general belt use rate was 84.8%, being 83.8% for drivers and 88.3% for passengers. In the present study (2021), the belt use recorded an 88.2%; being 87.1% for drivers and 92.1% for passengers, with a standard error of 1.57%. As shown in Graph 16, with a 95 percent confidence level, the belt use rate difference between 2020 and 2021 is not statistically significant.

GRAPH 16: 2019-2020 RATE OF BELT USE WITH A 95 PERCENT CONFIDENCE LEVEL.



APPENDIX 1: LIST AND MAP OF SAMPLED ROAD SEGMENTS

Region	County	Type	Road Segment	X Coordinate	Y Coordinate	Day	Time	Belt use percentage
West	Aguada	Secondary	Pr- 417	18.360792	-67.141408	Wednesday	12:30	66.4%
West	Aguada	Local	Pr- 419	18.326512	-67.152832	Wednesday	11:00	70.9%
West	Aguada	Local	Marginal 2	18.356027	-67.162926	Wednesday	8:00	61.7%
West	Aguada	Local	PR-4416	18.354545	-67.166826	Wednesday	9:30	89.7%
North	Arecibo	Primary	Expreso Jose de Diego	18.436628	-66.586889	Saturday	14:30	97.5%
North	Arecibo	Secondary	Pr- 656	18.420692	-66.684354	Saturday	10:00	60.2%
North	Arecibo	Local	Cll Las Carolinas	18.403766	-66.595401	Saturday	13:00	65.9%
North	Arecibo	Local	Cll Municipal	18.459663	-66.590922	Saturday	11:30	75.0%
East	Caguas	Primary	Autopista Luis A Ferre	18.297559	-66.044480	Sunday	13:30	97.6%
East	Caguas	Secondary	Pr- 789	18.222181	-66.022902	Sunday	9:00	81.6%
East	Caguas	Local	Ave. Gautier Benitez	18.212775	-66.045942	Sunday	12:00	89.0%
East	Caguas	Local	Ave Degetau	18.222341	-66.039008	Sunday	10:30	92.2%
East	Canovanas	Primary	Pr- 66	18.367641	-65.886149	Tuesday	12:00	87.5%
East	Canovanas	Secondary	Pr- 185	18.313359	-65.891835	Tuesday	10:30	87.6%
East	Canovanas	Local	Cll 12	18.394256	-65.888067	Tuesday	13:30	62.1%
East	Canovanas	Local	Cll 1	18.339961	-65.894689	Tuesday	9:00	61.2%
Metropolitan	Carolina	Primary	Pr- 26	18.400937	-65.981510	Sunday	14:30	93.5%
Metropolitan	Carolina	Secondary	Pr- 874	18.395630	-65.934822	Sunday	11:30	82.7%
Metropolitan	Carolina	Local	Carr. Boca Cangrejos	18.443467	-66.006781	Sunday	13:00	92.0%
Metropolitan	Carolina	Local	Ave Iturregui	18.417931	-66.000311	Sunday	10:00	85.2%
South	Cayey	Primary	Autopista Luis A Ferre	18.104720	-66.161588	Monday	12:00	93.4%
South	Cayey	Secondary	Pr- 1	18.132996	-66.128660	Monday	13:30	80.3%
South	Cayey	Local	Cll Nuñez Romeu	18.113004	-66.164986	Monday	15:00	79.5%
South	Cayey	Local	Pr- 7722	18.108191	-66.209815	Monday	16:30	86.2%
East	Fajardo	Primary	Pr- 53	18.285711	-65.649759	Tuesday	13:30	96.6%

Seat Belt Usage: Final Report

Region	County	Type	Road Segment	X Coordinate	Y Coordinate	Day	Time	Belt use percentage
East	Fajardo	Secondary	P R- 195	18.332613	-65.632474	Tuesday	9:00	77.2%
East	Fajardo	Local	Pr- 3	18.296082	-65.642378	Tuesday	12:00	96.8%
East	Fajardo	Local	Ave el Conquistador	18.339485	-65.656198	Tuesday	10:30	100.0%
North	Hatillo	Primary	Pr- 2	18.488131	-66.799438	Thursday	13:30	92.9%
North	Hatillo	Secondary	Ave Dr Susoni	18.487730	-66.824029	Thursday	12:00	95.2%
North	Hatillo	Local	Calle E	18.487776	-66.789458	Thursday	15:00	88.5%
North	Hatillo	Local	Marg.Cll Comercio	18.485504	-66.818322	Thursday	16:30	84.1%
West	Isabela	Secondary	Pr- 2	18.468321	-67.031808	Wednesday	11:30	89.8%
West	Isabela	Local	Cll Dr Gonzalez	18.501772	-67.020247	Wednesday	14:30	84.4%
West	Isabela	Local	Cll Lamela	18.500950	-67.026652	Wednesday	10:00	78.0%
West	Isabela	Local	Cll la Sierra	18.504912	-67.061166	Wednesday	13:00	85.8%
South	Juana Díaz	Primary	Autopista Luis A Ferre	18.032402	-66.434595	Monday	15:30	84.9%
South	Juana Díaz	Secondary	Pr- 14	18.052872	-66.521361	Monday	12:30	88.7%
South	Juana Díaz	Local	Cll Ext Munoz Rivera	18.053821	-66.504846	Monday	11:00	71.1%
South	Juana Díaz	Local	Avecamino Real	18.011116	-66.493727	Monday	14:00	76.9%
East	Juncos	Primary	Expreso Cruz Ortíz Stella	18.244460	-65.940350	Thursday	13:30	97.5%
East	Juncos	Secondary	Pr- 189	18.240805	-65.932685	Thursday	12:00	89.9%
East	Juncos	Local	Cll Martínez	18.228180	-65.921854	Thursday	9:00	72.4%
East	Juncos	Local	Cll Algarin	18.227368	-65.927396	Thursday	10:30	57.7%
West	Mayagüez	Secondary	P R - 105	18.203182	-67.145643	Thursday	12:30	81.1%
West	Mayagüez	Local	Cll Simon Carlos	18.202173	-67.149470	Thursday	14:00	64.2%
West	Mayagüez	Local	Calle M Columbus Lndg	18.198214	-67.150428	Thursday	15:30	60.9%
West	Mayagüez	Local	Cll Nenadich E	18.197356	-67.143562	Thursday	11:00	77.6%
East	Naguabo	Primary	Pr- 53	18.214525	-65.718318	Friday	8:00	87.3%
East	Naguabo	Secondary	Pr- 3	18.201024	-65.711556	Friday	9:30	71.5%

Region	County	Type	Road Segment	X Coordinate	Y Coordinate	Day	Time	Belt use percentage
East	Naguabo	Local	Cll Goyco	18.212429	-65.734183	Friday	12:30	83.9%
East	Naguabo	Local	Cll 7	18.206030	-65.737460	Friday	11:00	67.5%
South	Ponce	Primary	Autopista Luis A Ferré	18.002135	-66.583322	Thursday	14:00	87.6%
South	Ponce	Secondary	Pr- 2	17.974190	-66.680717	Thursday	12:30	91.1%
South	Ponce	Local	Ave Padre Noel	17.982400	-66.622295	Thursday	15:30	83.8%
South	Ponce	Local	Cll 2	18.018618	-66.604890	Thursday	11:00	60.8%
South	Salinas	Primary	Autopista Luis A Ferre	17.993180	-66.261345	Friday	13:30	99.2%
South	Salinas	Secondary	Pr- 1	18.039239	-66.240620	Friday	12:00	84.0%
South	Salinas	Local	Cll Miguel Ten	17.976603	-66.297964	Friday	15:00	80.5%
South	Salinas	Local	Cll Victoria Mateo Serrano	17.977954	-66.296859	Friday	16:30	75.8%
Metropolitan	San Juan	Primary	Expreso Las Americas	18.389778	-66.071626	Friday	10:00	91.5%
Metropolitan	San Juan	Secondary	Ave John F Kennedy	18.431885	-66.089463	Friday	7:00	79.3%
Metropolitan	San Juan	Local	Cll Hoare	18.450362	-66.081601	Friday	11:30	92.5%
Metropolitan	San Juan	Local	Cll 7 S	18.401591	-66.090262	Friday	8:30	87.2%
North	Toa Baja	Primary	Pr- 22	18.415249	-66.207233	Saturday	16:00	92.7%
North	Toa Baja	Secondary	Pr- 2	18.403435	-66.216572	Saturday	17:30	84.8%
North	Toa Baja	Local	Pr- 866	18.416051	-66.200846	Saturday	13:00	89.5%
North	Toa Baja	Local	Cll Canarios	18.425498	-66.172550	Saturday	14:30	60.8%

APPENDIX 2: TABLE B

Seat Belt Usage: Final Report

Region	County	Road type	ID_RS	Road Segment	Direction	Site Type	Date	W _{gchijkim}	Number of Drivers	Number of front Passengers	Number of occupants	Numbers de occupants belted	Numbers de occupants unbelted	Numbers de occupants with unknown belt use
West	Aguada	Secondary	1	Pr- 417	N & S	Original	Wednesday, 9-1-2021	2541536.33	100	36	136	112	23	1
West	Aguada	Local	2	Pr- 419	N & S	Original	Wednesday, 9-1-2021	9074309.20	100	28	128	108	19	1
West	Aguada	Local	3	Marginal 2	N & S	Original	Wednesday, 9-8-2021	8205889.89	100	18	118	89	29	0
West	Aguada	Local	4	PR-4416	E & W	Original	Wednesday, 9-1-2021	43572217.39	100	21	121	99	17	5
North	Arecibo	Primary	5	Expreso Jose de Diego	W	Original	Saturday, 9-4-2021	5501931.49	100	20	120	97	18	5
North	Arecibo	Secondary	6	Pr- 656	N & S	Original	Saturday, 9-11-2021	3915599.24	100	23	123	84	39	0
North	Arecibo	Local	7	Cil Las Carolinas	E & W	Original	Saturday, 9-11-2021	26162534.28	100	30	130	92	34	4
North	Arecibo	Local	81	Cil Municipal	E & W	Original	Saturday, 9-4-2021	46206071.56	100	21	121	89	30	2
East	Caguas	Primary	9	Autopista Luis A Ferre	S	Original	Sunday, 9-5-2021	3933542.50	100	45	145	137	8	0
East	Caguas	Secondary	10	Pr- 789	N & S	Original	Sunday, 9-5-2021	3131668.32	100	29	129	117	12	0
East	Caguas	Local	111	Ave. Gautier Benitez	N & S	Original	Sunday, 9-5-2021	37012758.08	100	13	113	107	6	0
East	Caguas	Local	121	Ave Degetau	E & W	Original	Sunday, 9-5-2021	64768817.23	100	23	123	102	20	1
East	Canovanas	Primary	13	Pr- 66	S	Original	Tuesday, 9-7-2021	403189.01	100	28	128	111	17	0
East	Canovanas	Secondary	14	Pr- 185	N & S	Original	Tuesday, 9-7-2021	15639278.84	100	25	125	112	13	0
East	Canovanas	Local	151	Cil 12	E & W	Original	Tuesday, 9-7-2021	122859620.87	100	30	130	112	18	0
East	Canovanas	Local	16	Cil 1	E & W	Original	Tuesday, 9-14-2021	16986001.01	100	21	121	84	36	1
Metropolitan	Carolina	Primary	17	Pr- 206	S	Original	Sunday, 9-5-2021	92000593.39	100	49	149	139	8	2
Metropolitan	Carolina	Secondary	18	Pr- 874	W	Original	Sunday, 9-5-2021	22433572.24	100	37	137	117	17	3
Metropolitan	Carolina	Local	191	Carr. Boca Cangrejos	E	Original	Sunday, 9-5-2021	108401670.11	100	69	169	156	9	4
Metropolitan	Carolina	Local	201	Ave Iturregui	W	Original	Sunday, 9-5-2021	1687743815.92	100	40	140	129	9	2
South	Cayey	Primary	21	Autopista Luis A Ferre	N	Original	Monday, 9-6-2021	9661133.05	100	50	150	145	5	0
South	Cayey	Secondary	221	Pr- 1	N & S	Original	Monday, 9-6-2021	34691655.26	100	23	123	113	10	0
South	Cayey	Local	231	Cil Nuñez Romeu	N	Original	Monday, 9-6-2021	59079730.56	100	34	134	97	36	1
South	Cayey	Local	24	Pr- 7722	N & S	Original	Monday, 9-6-2021	31188559.79	100	28	128	107	21	0
East	Fajardo	Primary	25	Pr- 53	S	Original	Tuesday, 9-7-2021	2132542.26	100	21	121	102	11	8
East	Fajardo	Secondary	26	P R- 195	E	Original	Tuesday, 9-7-2021	3023570.45	100	32	132	108	23	1
East	Fajardo	Local	271	Pr- 3	E	Original	Tuesday, 9-7-2021	543820798.08	100	28	128	109	13	6
East	Fajardo	Local	28	Ave el Conquistador	N	Original	Tuesday, 9-7-2021	128653731.17	100	13	113	95	16	2
North	Hatillo	Primary	29	Pr- 2	E	Original	Thursday, 9-9-2021	35838424.38	100	39	139	131	8	0
North	Hatillo	Secondary	30	Ave Dr Susoni	E & W	Original	Thursday, 9-9-2021	31167427.81	100	32	132	108	24	0
North	Hatillo	Local	31	Calle E	N & S	Original	Thursday, 9-9-2021	475102441.36	100	30	130	116	14	0
North	Hatillo	Local	321	Marg.Cil Comercio	E & W	Original	Thursday, 9-9-2021	87010812.90	100	22	122	99	23	0
West	Isabela	Secondary	33	Pr- 2	W	Original	Wednesday, 9-1-2021	305818575.96	100	31	131	124	7	0
West	Isabela	Local	34	Cil Dr Gonzalez	N & S	Original	Wednesday, 9-1-2021	20334074.93	100	25	125	103	22	0
West	Isabela	Local	351	Cil Lamela	N & S	Original	Wednesday, 9-1-2021	31172732.61	100	15	115	95	20	0
West	Isabela	Local	36	Cil la Sierra	N & S	Original	Wednesday, 9-8-2021	21612213.58	100	19	119	89	30	0
South	Juana Diaz	Primary	37	Autopista Luis A Ferre	E	Original	Monday, 9-6-2021	2258171.89	100	21	121	109	5	7
South	Juana Diaz	Secondary	38	Pr- 14	E	Original	Monday, 9-6-2021	10420370.61	100	28	128	110	15	3
South	Juana Diaz	Local	39	Cil Ext Munoz Rivera	N & S	Original	Monday, 9-13-2021	81701995.58	100	20	120	97	22	1
South	Juana Diaz	Local	40	Avecamino Real	E & W	Original	Monday, 9-13-2021	45675186.28	100	19	119	91	26	2
East	Juncos	Primary	41	Expreso Cruz Ortiz Stella	W	Original	Thursday, 9-2-2021	10143613.67	100	22	122	111	11	0
East	Juncos	Secondary	42	Pr- 189	E & W	Original	Thursday, 9-2-2021	3047929.01	100	16	116	102	14	0
East	Juncos	Local	43	Cil Martinez	E	Original	Thursday, 9-2-2021	42068031.84	100	17	117	92	25	0
East	Juncos	Local	441	Cil Algarin	E & W	Original	Thursday, 9-2-2021	60721036.90	100	37	137	89	48	0
West	Mayagüez	Secondary	45	P R - 105	W	Original	Thursday, 9-2-2021	63633688.62	100	23	123	112	11	0
West	Mayagüez	Local	46	Cil Simon Carlos	N & S	Original	Thursday, 9-9-2021	51355006.10	100	16	116	88	28	0
West	Mayagüez	Local	47	Calle M Columbus Lndg	N & S	Original	Thursday, 9-9-2021	14755252.68	100	33	133	82	50	1
West	Mayagüez	Local	481	Cil Nenadich E	W	Original	Thursday, 9-2-2021	560371654.36	100	25	125	105	17	3
East	Naguabo	Primary	49	Pr- 53	E	Original	Friday, 9-3-2021	61707280.28	100	10	110	99	11	0
East	Naguabo	Secondary	50	Pr- 3	N & S	Original	Friday, 9-3-2021	53687167.40	100	24	124	102	22	0
East	Naguabo	Local	51	Cil Goyco	E & W	Original	Friday, 9-3-2021	32053814.43	100	21	121	94	27	0
East	Naguabo	Local	52	Cil 7	N & S	Original	Friday, 9-3-2021	76710566.05	100	22	122	89	28	5
South	Ponce	Primary	53	Autopista Luis A Ferré	N	Original	Thursday, 9-9-2021	14251658.13	100	35	135	123	9	3
South	Ponce	Secondary	541	Pr- 2	E	Original	Thursday, 9-9-2021	58066107.18	100	22	122	113	3	6
South	Ponce	Local	55	Ave Padre Noel	E	Original	Thursday, 9-9-2021	390407202.67	100	18	118	98	19	1
South	Ponce	Local	56	Cil 2	E & W	Original	Thursday, 9-16-2021	9378604.39	100	27	127	94	32	1
South	Salinas	Primary	57	Autopista Luis A Ferre	E	Original	Friday, 9-3-2021	19493441.56	100	27	127	113	11	3
South	Salinas	Secondary	58	Pr- 1	N	Original	Friday, 9-3-2021	10764727.18	100	30	130	120	7	3
South	Salinas	Local	59	Cil Mguel Ten	N	Original	Friday, 9-10-2021	47038324.48	100	18	118	85	29	4
South	Salinas	Local	601	Cil Victoria Mateo Serrano	W	Original	Friday, 9-10-2021	92698781.66	100	15	115	83	30	2
Metropolitan	San Juan	Primary	61	Expreso Las Americas	N	Original	Friday, 9-10-2021	859574971.26	100	20	120	107	13	0
Metropolitan	San Juan	Secondary	62	Ave John F Kennedy	S	Original	Friday, 9-10-2021	138356283.78	100	18	118	90	28	0
Metropolitan	San Juan	Local	63	Cil Hoare	N	Original	Friday, 9-10-2021	22667216.25	100	17	117	84	33	0
Metropolitan	San Juan	Local	64	Cil 7 S	N & S	Original	Friday, 9-10-2021	86574966.79	100	6	106	92	14	0
North	Toa Baja	Primary	65	Pr- 22	E	Original	Saturday, 9-4-2021	44980826.66	100	42	142	129	7	6
North	Toa Baja	Secondary	66	Pr- 2	E	Original	Saturday, 9-4-2021	17849195.87	100	47	147	137	7	3
North	Toa Baja	Local	67	Pr- 866	E	Original	Saturday, 9-4-2021	64322378.95	100	41	141	128	10	3
North	Toa Baja	Local	68	Cil Canarias	N & S	Original	Saturday, 9-11-2021	16738826.21	100	26	126	71	54	1
TOTAL									6800	1811	8611	7173	1331	107

Nonresponse rate: 1.2%
Ratio estimator: 88.24%
Standard error: 1.57% (SUDAAN Software)