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**April 2009**

**MOTORCYCLE HELMET USAGE:  
SURVEY OF MISSOURI ADULTS**

Commissioned by  
**Missouri Department of Transportation**

Survey Report

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## **Executive Summary**

## Executive Summary

When asked for their opinions toward Missouri's mandatory motorcycle helmet law, Missourians strongly support the law as it currently stands. Supporters for the mandatory helmet law outnumber opponents by more than a 9-to-1 ratio.

Fifteen percent (15%) of Missourians have ridden—as an operator or a passenger—on a motorcycle in the past year, but three times as many have ridden a motorcycle at least once. Four out of 5 Missourians who have ridden a motorcycle say they wear their helmet all or most of the time.

### Motorcycle Riders, Helmet Use And Opinions Toward Helmet Laws

*Missourians overwhelmingly support the state's mandatory helmet law.*

- Fifteen percent (15%) of Missourians have driven or ridden on a motorcycle in the past year, and 44% have ridden on one at least once in their lifetime.
- ***Among those Missourians who have been on or driven a motorcycle in the past year, nearly four-fifths (80%) report wearing a helmet all of the time when they are on a motorcycle.***
  - Eighty-six percent (86%) of Missourians who have ridden a motorcycle this year say they wear a helmet either "all of the time" or "most of the time."
  - Eighty percent (80%) of Missourians who have *ever* ridden a motorcycle say they wear a helmet either "all of the time" or "most of the time."
  - Seven percent (7%) of residents who have ridden a motorcycle in the past year say they wear a helmet rarely or never, while 13% of residents who have ridden a motorcycle at least once say they wear a helmet rarely or never.
- ***Eighty-four percent (84%) of Missourians support the state's mandatory helmet law*** including 79% of residents who "strongly" support the law. Only 9% of Missourians oppose the law. This leaves us with a ratio of 9 supporters for every 1 opponent.

- There is very little difference in terms of ones age and support for the law. Missouri adults under 30 years of age support the law the least, with 81% supporting it. Missourians over 60 years of age are the most supportive, with 85% supporting it.
- Support for the mandatory helmet law is strongest among those who have never ridden motorcycles and weaker for those who have ridden in the past year. Yet even 3 out of 4 those who have ridden in the past year support the law (75% support to 19% oppose).

## **The Report**

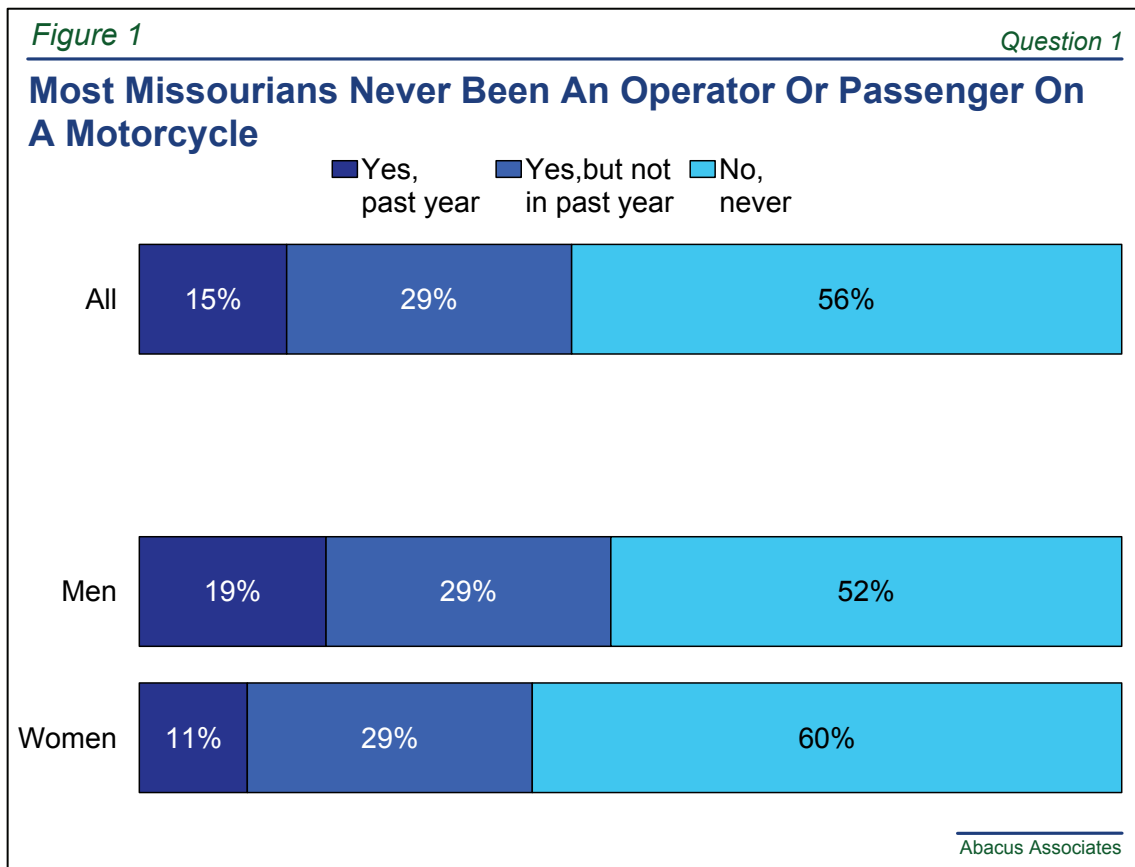
**Purpose.** This report examines the motorcycle behaviors of Missouri adults and their attitudes toward Missouri's existing helmet law. The report discusses the behaviors and opinions of Missourians as a whole as well as differences that we find in different regions of the state and among different types of Missourians.

## Motorcycle Riders And Passengers

Few Missouri residents drive a motorcycle as their primary vehicle. However, this does not mean that Missourians do not have experience with motorcycles. **Fifteen percent (15%) of Missourians have been on a motorcycle as either an operator or a passenger in the past year**, and 44% say they have ridden on a motorcycle at least once (Figure 1). Men are more likely to have ridden motorcycles recently, but the percentage of women who have never ridden a motorcycle (60%) is not too much larger than it is for men (52%).

**Question:** *In the past year, have you ever been on a motorcycle as either an operator or a passenger? [IF "NO"] Have you ever, at any time, been on a motorcycle as either an operator or a passenger?*

The younger a resident is, the more likely it is that they have ridden a motorcycle in



the past year, but in terms of ever having ridden on a motorcycle, Missouri residents between 30 and 59 years of age are the most likely to have done so (Figure 2).

Across MoDOT districts, the highest rate of motorcycle use in the past year can be found in the southern part of the state, with the exception of the Southeast District. Although there is not a tremendous amount of difference among MoDOT districts, there is certainly nothing that falls much beyond the margin of error (Figure 3).

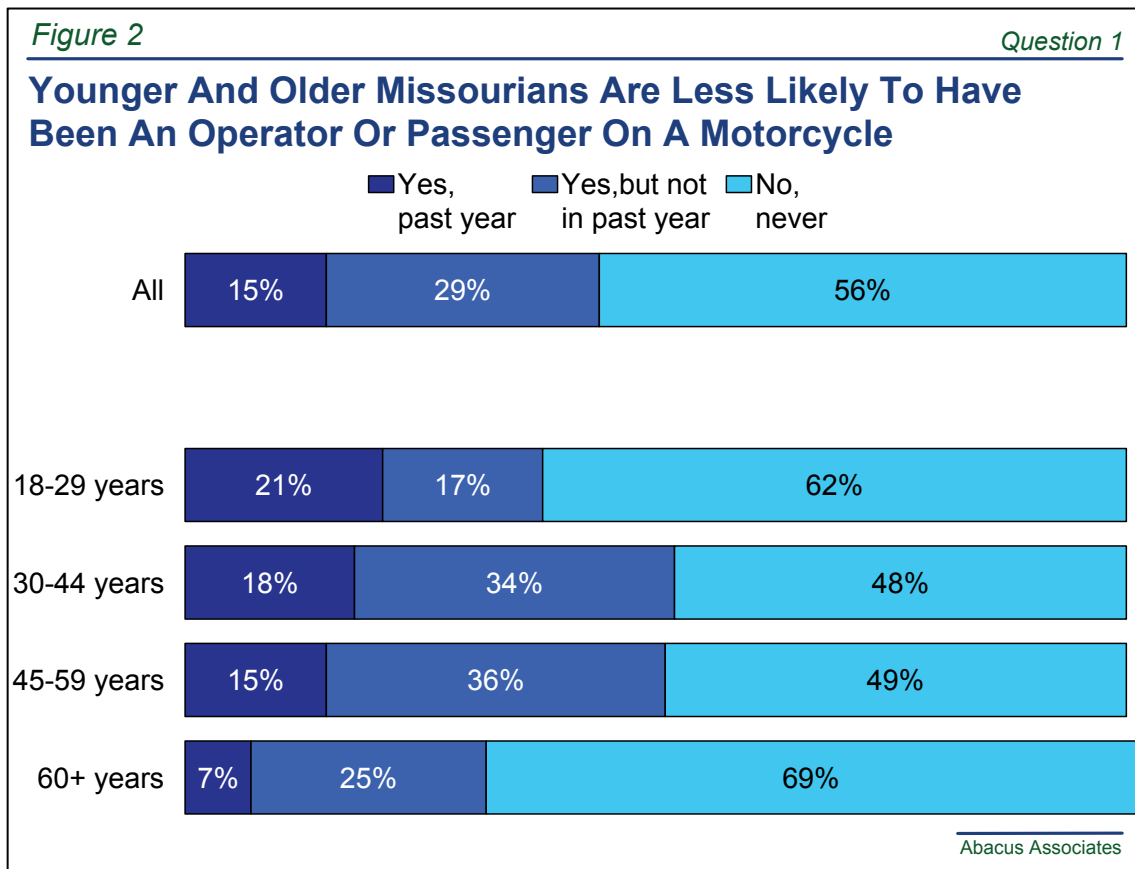
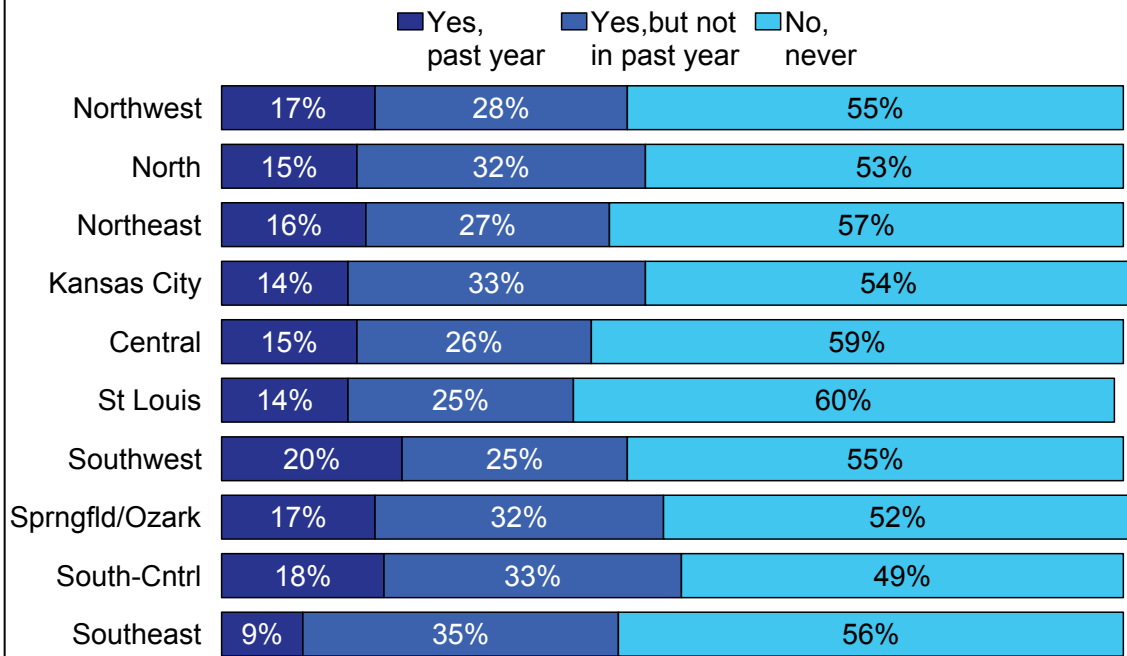


Figure 3

Question 1

### Missourians From St Louis And Central Districts Are Less Likely To Have Ridden A Motorcycle



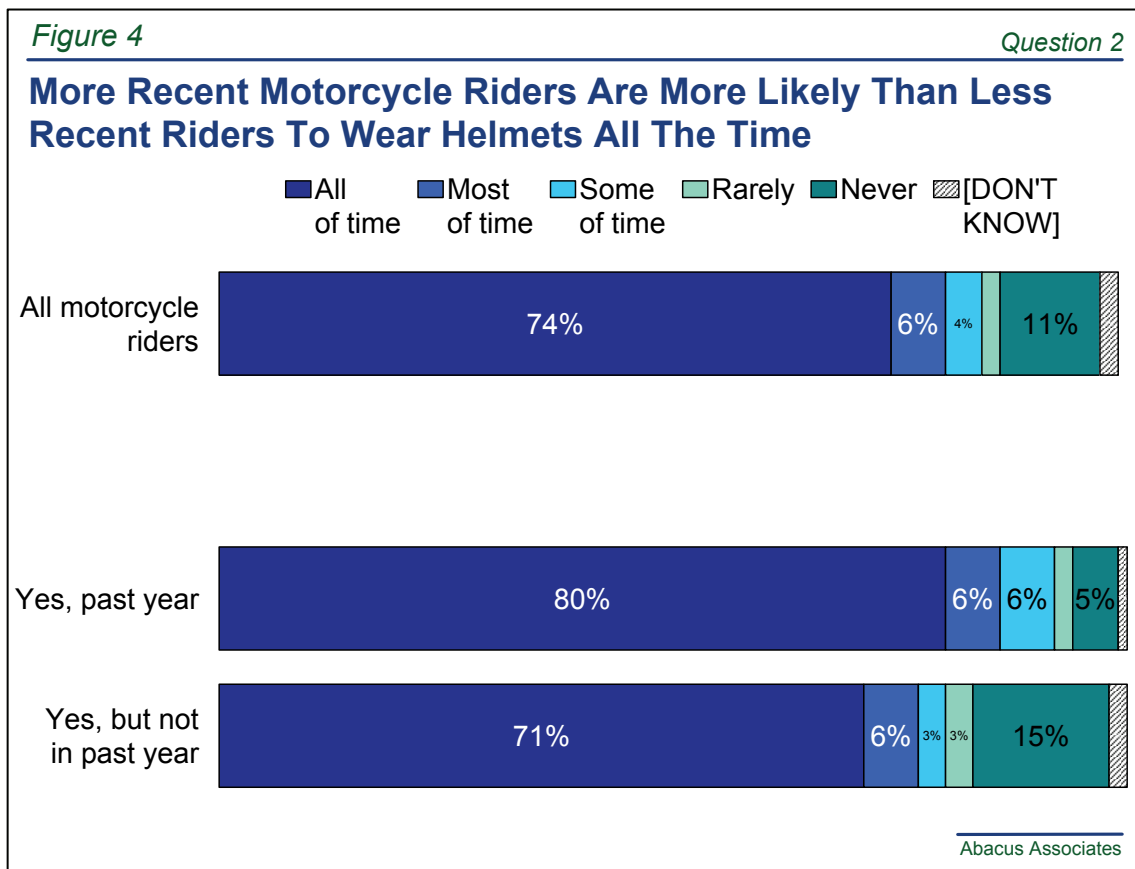
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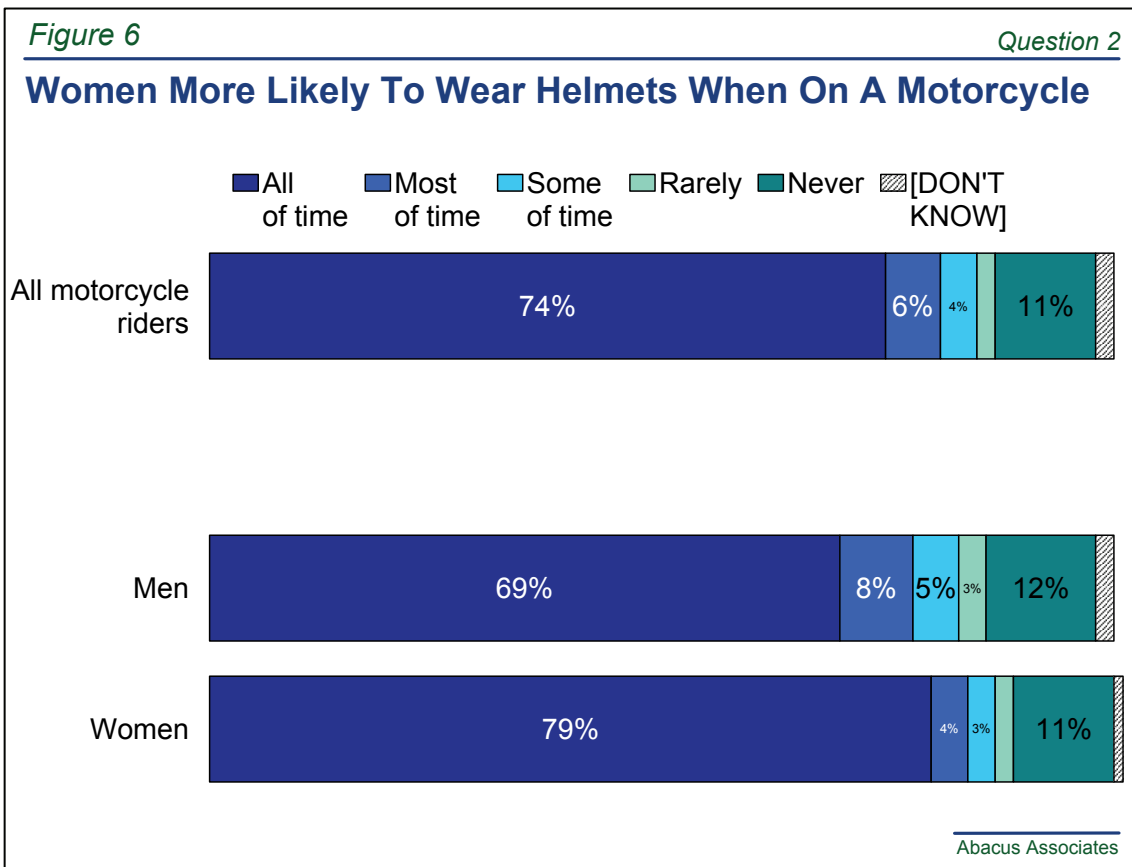
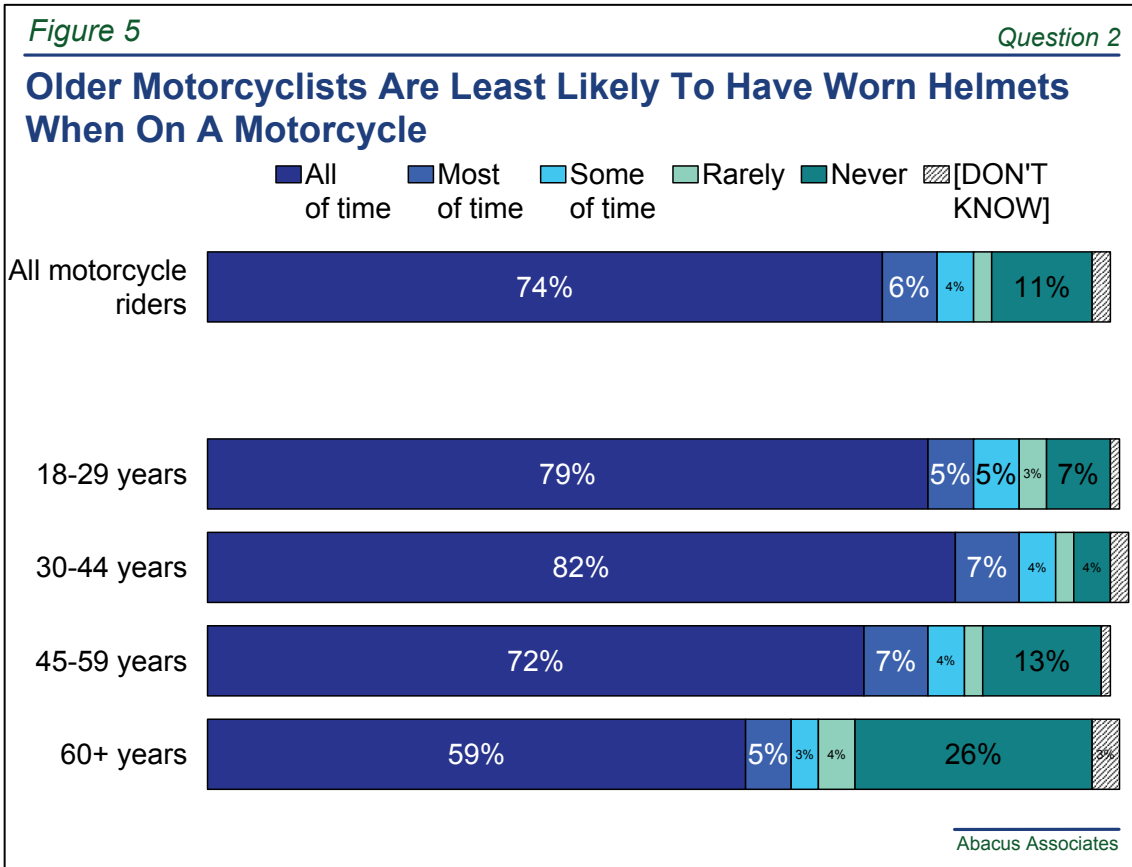
## Motorcycle Helmet Use

### Nearly Three-Fourths Of Recent Motorcycle Riders And Passengers Wear Their Helmets All The Time

Among those Missourians who have ever ridden on a motorcycle, *nearly three-fourths (74%) report wearing a helmet all of the time* when they are on a motorcycle (Figure 4), with up to 80% saying they have worn a helmet either all of the time or most of the time. The question, of course, is in essence asking a resident about illegal behavior—riding a motorcycle without a helmet. The social desirability effect of not wanting to admit to illegal behavior may well result in more reporting of helmet usage than that which is really accurate. Those who have ridden a motorcycle within the past year are more likely to report using a helmet. This is tied in with age. Missouri residents over 60 years of age—those who are less likely to have ridden in the past year—are also lower in frequency of helmet use (Figure 5). Of course, they are also more likely to have ridden motorcycles before helmet laws came into effect in the state. Female motorcycle riders report a higher frequency than male motorcycle riders of helmet usage (Figure 6).

**QUESTION:** *When on a motorcycle, how often have you worn a helmet? Would you say all of the time, most of the time, some of the time, rarely, or never?*



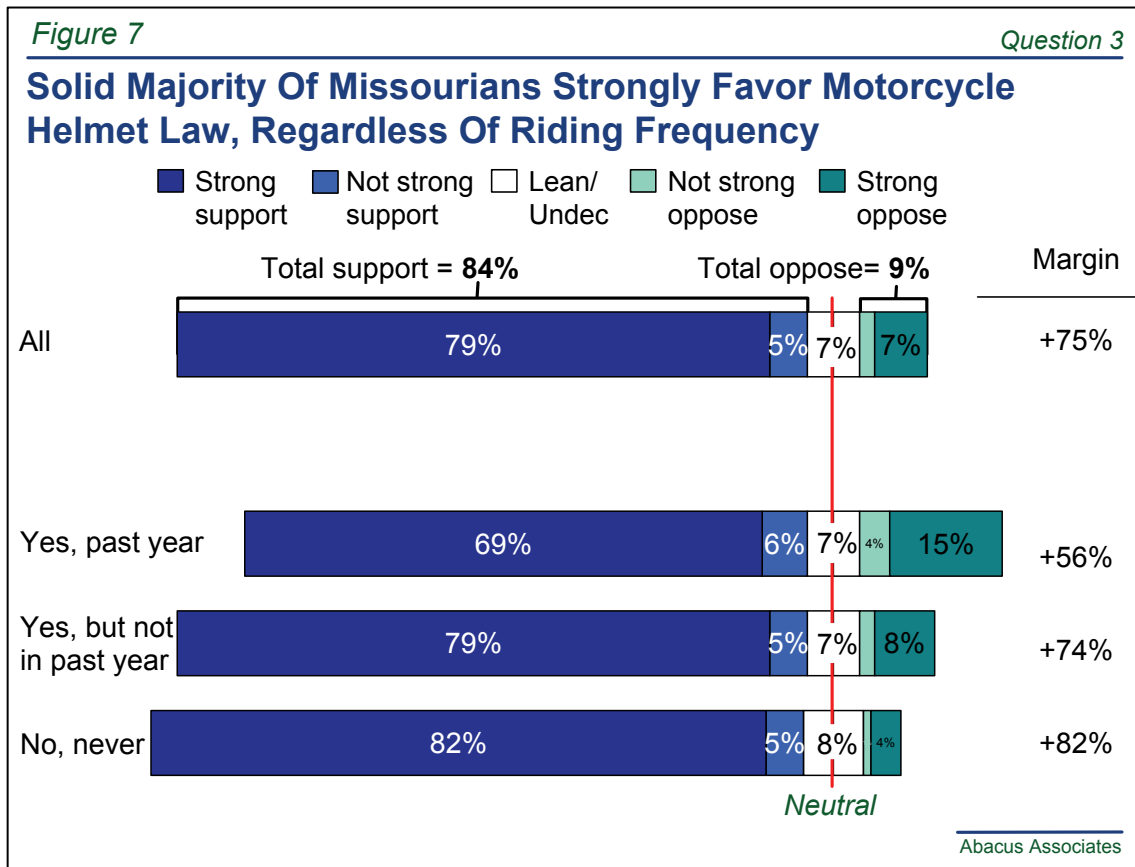


## Opinions Toward Missouri's Motorcycle Helmet Laws

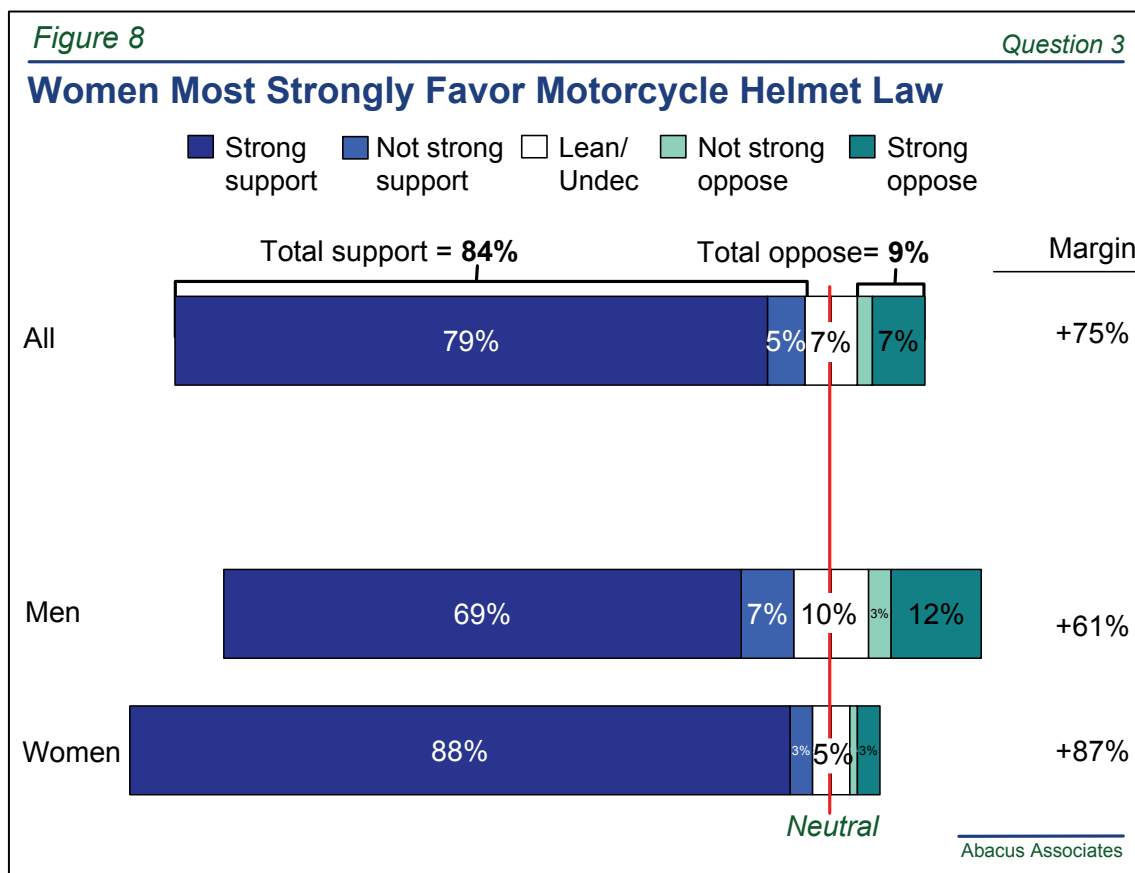
### Missourians Overwhelmingly Support Missouri's Motorcycle Helmet Law

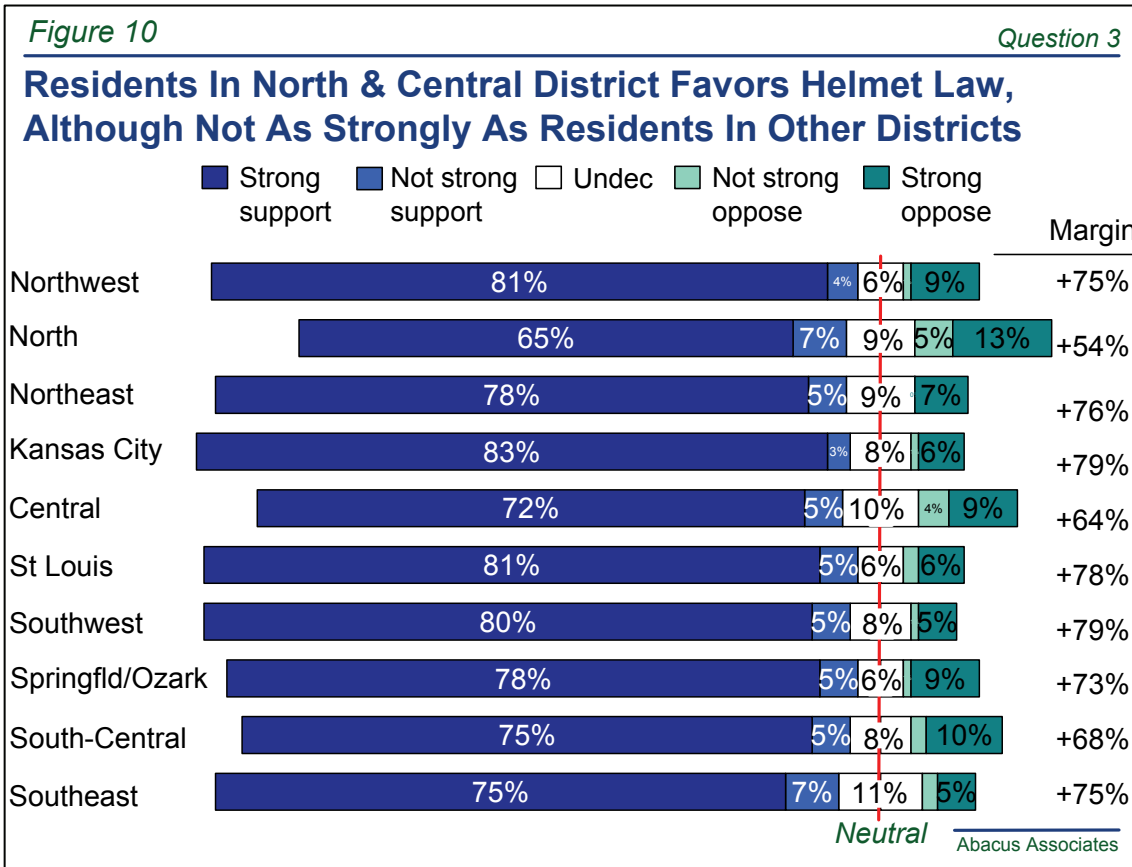
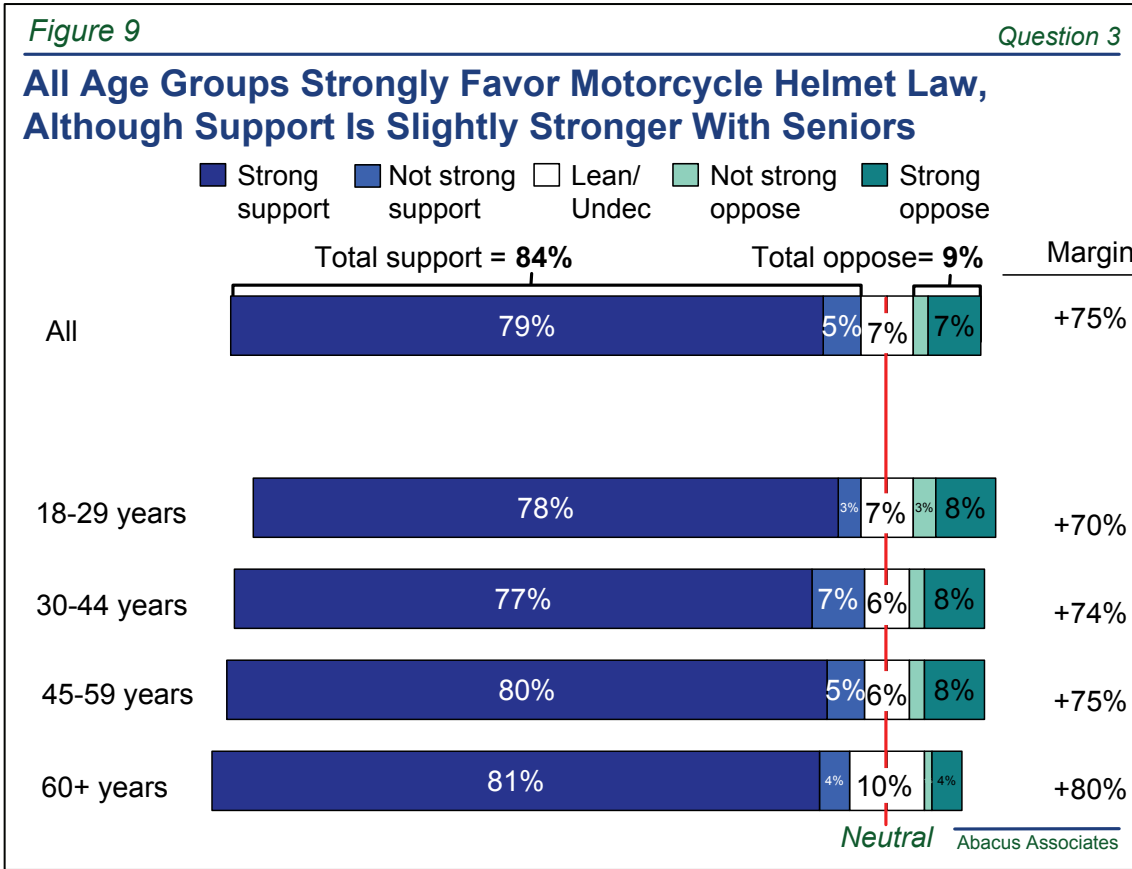
When we ask all respondents (not just motorcycle riders) whether they support Missouri's mandatory motorcycle helmet law, we find overwhelming support for the law. Eighty-four percent (84%) of Missourians support the helmet law, and 79% of residents "strongly" support the law (Figure 7). Those who have ridden a motorcycle and, especially those who have ridden in the past year, are less supportive. The difference in support for the helmet law between motorcycle riders and non-riders or between recent riders and non-recent riders is statistically significant using Pearson's chi-square test ( $p < .001$ ). Clearly, riding a motorcycle will have an impact on support for the law. However, it is important to underscore, while the difference between motorcycle riders and non-riders is statistically significant, even those who have ridden a motorcycle in the past year are overwhelmingly supportive of the law, with 75% in favor of the law and only 19% opposing it—a margin of 56%.

**QUESTION:** *In Missouri, all riders and passengers on motorcycles are required to wear helmets. Do you support or oppose this law? Is your opinion strong or not so strong?*



Demographic variances reflect motorcycle usage, with those groups who ride motorcycles more being less supportive and those riding motorcycles less being more supportive. That is at least part of the reason women are more supportive of the law than men (Figure 8). Voters over 60 years of age are more supportive of the law, although the difference between age groups is quite small (Figure 9). Regionally, support is much weaker in the North MoDOT District (District 2), followed by the Central District (Figure 10). All others do not vary much. However, in all regions and with all age and gender groups, support for the law is much greater than opposition.





## **Appendix A**

## Methods

A random sample of 2050 adult residents of Missouri were interviewed between April 16 and 23, 2009. Potential respondents were contacted through random digit dialing (RDD), with numerous callback attempts. The cooperation rate—using American Association of Public Opinion Research (AAPOR) standardized formula “Cooperation Rate 2” was 25%.<sup>1</sup>

***Quotas, oversampling, and weighting.*** We divided the state into the 10 MoDOT districts. In order to complete a sufficient number of interviews that would allow us to make reliable conclusions about opinions in each of the 10 districts, we set a quota and oversampled the less populated districts. All districts had between 150 and 400 randomly selected interviews. Data was then weighted proportionally based on the size of the adult population determined in the 2000 census and estimated growth from the 2004 census estimates.

Quotas were also set for gender to match the known proportion of men and women in the adult population within each of the 10 districts. After the data was collected, we also weighted the data by age and household income to match the known proportion in the adult population.

***Margin of error.*** The margin of error at the 95% confidence level is about  $\pm 2.2\%$  for a sample of 2050. However, due to the geographic oversampling, a true margin of random error for the entire sample is closer to  $\pm 2.9\%$ . The margin of error is larger for subgroups, depending on subgroup size.

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<sup>1</sup>AAPOR. *Standards and Definitions: Final Disposition of Case Codes and Outcome Rates for Surveys*. 2008. [http://www.aapor.org/uploads/Standard\\_Definitions\\_04\\_08\\_Final.pdf](http://www.aapor.org/uploads/Standard_Definitions_04_08_Final.pdf)

## **Appendix B**

**Marginals\***  
**2050 Missouri Adults**  
**April 16-23, 2009**

MoDot Districts [SAMPLE]:

	Weighted Percentage	Unweighted N
Northwest (1).....	4%	150
North (2).....	3%	150
Northeast (3).....	4%	150
Kansas City (4).....	20%	300
Central (5).....	8%	200
St Louis (6).....	34%	400
Southwest (7).....	6%	200
Springfield/Ozark (8).....	10%	200
South-Central (9).....	5%	150
Southeast (10).....	7%	150

Hello. My name is \_\_\_\_\_ and I am calling from Mountain West Research, a national public opinion firm. We are conducting a very brief survey about highway safety issues facing people in Missouri. We are not selling anything, and this number was selected at random.

Q1a. [SCREENER] According to my instructions, I am to interview the youngest adult man [ALTERNATE WITH: YOUNGEST ADULT WOMAN, OLDEST MAN, OLDEST WOMAN] in your household. Would that be you?

[RESPONDENT MUST BE 18 YEARS OF AGE OR OLDER]

[IF NOT] May I speak with [HIM/HER]?

[IF NOT HOME, CALL BACK TO REACH DESIGNATED PERSON]

[IF RESPONDENT IS SUSPICIOUS OR WARY, YOU MAY WANT TO SAY SOMETHING LIKE:] "We are not selling anything, and I will not ask you for a contribution or donation. This will take about 2 minutes of your time. Your phone number was randomly selected by our computer, and we don't know who you are or where you live."

*\* Percentages may not add to 100% due to rounding. To ensure an ability to discuss results in all regions of the state, quota were set for a certain number of interviews in each MoDOT District (see unweighted sample sizes above). The entire sample is then weighted based on U.S. Census estimates for the districts to accurately reflect Missouri's adult population. In addition, the sample is weighted for gender and age within each district based on census results.*

*The margin of error at the 95% confidence level is about  $\pm 2.2\%$  for a sample of 2050. However, due to the geographic oversampling, a true margin of random error for the entire sample is more like  $\pm 2.9\%$ . The margin of error is larger for subgroups, all depending on subgroup size.*

D1. [CODE WITHOUT ASKING] Gender:

Men..... 48%  
 Women ..... 52%

Q1. In the past year, have you ever been on a motorcycle as either an operator or a passenger?

[IF "NO"] Have you ever, at any time, been on a motorcycle as either an operator or a passenger?

Yes, past year..... 15%  
 Yes, but not past year ..... 29%  
 No, never ..... 56% [SKIP TO Q3]  
 [DON'T KNOW]..... 0% [SKIP TO Q3]

Q2. When on a motorcycle, how often have you worn a helmet? Would you say all of the time, most of the time, some of the time, rarely, or never?

All of the time..... 74%  
 Most of the time..... 6%  
 Some of the time..... 4%  
 Rarely ..... 2%  
 Never ..... 11%  
 [DON'T KNOW]..... 2%

Q3. In Missouri, all riders and passengers on motorcycles are required to wear helmets. Do you support or oppose this law?

[IF CHOICE] Is your opinion strong or not so strong?

[IF UNDECIDED, ASK] How do you lean—toward supporting the law that requires all riders and passengers on motorcycles to wear helmets or do you oppose it?

Strong support ..... 79%  
 Not so strong support ..... 5%  
 Lean support ..... 1%  
 [NOT SURE] ..... 5%  
 Lean oppose..... 1%  
 Not so strong oppose ..... 2%  
 Strong oppose ..... 7%

My last questions are so that we can group your answers with those in similar groups.

D2. What is your age? [CODE ACTUAL AGE. REFUSED=99]

18-29 years old ..... 21%  
 30-39 years old ..... 17%  
 40-49 years old ..... 19%  
 50-64 years old ..... 22%  
 65+ years old ..... 18%  
 [REFUSED]..... 2%

D3. If you added together the yearly income of all the people who were living in your household last year, before taxes, would the total be: Less than \$20,000; \$20,000 to under \$30,000; \$30,000 to under \$40,000; \$40,000 to under \$50,000; \$50,000 to under \$60,000; \$60,000 to under \$70,000; \$70,000 to under \$100,000; \$100,000 to under \$150,000; \$150,000 or over? [PROBE]

Less than \$20,000.....	13%
\$20,000-\$29,999.....	10%
\$30,000-\$39,999.....	8%
\$40,000-\$49,999.....	9%
\$50,000-\$59,999.....	8%
\$60,000-\$69,999.....	6%
\$70,000-\$99,999.....	10%
\$100,000-\$149,999.....	8%
\$150,000 or over.....	5%
[REFUSED/NOT SURE].....	23% [PROBE; DO NOT TAKE REFUSALS EASILY]

Thank you very much.