Citizen Support for Personal Safety Issues: A Focus on Transportation Safety

By

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For Presentation at the Annual Southeastern Conference of Public Administrators, 2002.

October 3, 2002
Policies written by legislators and implemented by public administrators to encourage personal safety have varying levels of success. This paper seeks to learn how citizens perceive personal safety issues, and how public administrators can better market policies that can improve public safety.

The issue is often one of political philosophy. Some citizens view government policies that require citizens to comply with laws that are designed to improve public safety as an intrusion into their lives. As a test of the public perceptions, I am going to use polling data to learn some of the characteristics of individuals who support a mandatory seat belt policy.

**Literature Review**

Personal safety issues often revolve around defining when a problem occurs. In other words the question becomes what risks to citizens exist and should the government manage the risks. The question often arises after attention-getting events occur in public safety. The next step in regulation is getting the issue on the agenda. In following Kingdon’s policy streams the question becomes, what does it take for an issue to gain support in order to pass the legislative body and gain support by the populous? (Kingdon, 1995.)

The essence of this lies within problem definition (Stone, 1997.) Should the government regulate something and how should it regulate? This is when the democracy and administration dichotomy begins to take paramount importance in the debate. Does the government have a responsibility to require people to protect themselves, or should government let citizens decide how to behave?
Houston and Richardson (1997) contend that problem definition is at the heart of the matter. How the public frames the problem is important to the success or failure of the issue. Some see personal safety as a government regulatory issue and others as a social issue to be handled in a similar fashion as preventing crime.

The literature review shows citizens generally do not have salience in opposition to policies that encourage personal safety habits. In reviewing the literature, most of the research looks at race, age, and sex as the independent variables that effect citizen’s beliefs on personal safety policies. No research looks at political ideology or rural versus urban differences on perceptions of personal safety policies. There is some discussion in the literature showing people who are safety conscious are supportive of personal safety policies (Mayer and Zick 1986.)

There is one caveat that goes along with the thought of creating mandatory policies that are designed to improve personal safety. The caveat is that offsetting behavior can nullify the effects of any gains made by practicing the safety habit. An example of this was given by Calkins and Zlatoper (2001). Their study looked at offsetting behavior of drivers that occurred after a mandatory seat belt law was passed. Calkins and Zlatoper found that citizens had a tendency to practice offsetting behavior such as increase driving speeds and reckless driving.

An example of the resistance to regulation is the preference of citizens to laws that require compliance compared to the policies that require manufacturers to alter automobile designs. In 1984 Secretary of Transportation Elizabeth Dole wanted passive restraints installed in all automobiles unless states including two-thirds of the population created laws that required seat belt use (Mayer and Zick 1986.) One could argue this shows a preference
of choice rather than seeking a technological solution to a problem. Or it could be said citizens may believe they can disobey the law if the are given a choice and do not have that option when technology enforces that law. Regardless, there is a real preference of behavior regulation as opposed to technology regulating citizen’s behavior. This has been shown to be true in not only automobile safety but in requiring motorcycle riders to wear helmets (Dardis and Lefkowitz, 1987.) Again, the issue was framed as a personal choice and not as a personal safety issue.

Seat belt laws are intended to require drivers to wear lap and shoulder belts in hopes of decreasing the number of automobile accidents. Most states have enacted a seat belt law.

Support for seat belt usage has not always been strong. In the 1970’s the National Highway Traffic Safety Administration (NHTSA) required new automobiles to be equipped with a system that would not allow you to turn on your engine unless the seat belt was “in use” (Vogel 1990.) Consumers complained about this requirement (Vogel 1990.) In 1974, Congress passed laws preventing NHTSA from requiring the implementation of this requirement on automobiles (Vogel 1990.) Some consumer advocate groups, such as Ralph Nader’s Center for Automobile Safety, believed seat belts were inferior to air bags for “protecting passengers, especially small children” (Vogel 1990.) It has been learned that the value of air bags, especially to small children, has been greatly reduced.

Others believe people who are employed in professions that involve high personal risk, are less likely to wear seat belts (Blomquist 1979.) The factors found to influence the likelihood of a driver wearing a seat belt were age, sex, and the speed limit (Blomquist 1979.) Older drivers were more likely to wear a seat belt than younger drivers (Blomquist 1979.) Blomquist (1979) believed this to be true because older drivers were more likely to
be in an injurious accident than younger drivers. Females were more likely to wear seat belts than males (Blomquist 1979.) Blomquist (1979) believed this to be true because females tend to be more safety conscious than men. Sweetser (1967) found that the way a seat belt usage promotional campaign was conducted influenced males and females differently. Generally the reasoning for this was how the survey questions were worded (Sweetser 1967.) Finally, Blomquist (1979) observed higher speed limits encouraged people to wear seat belts since the higher speed driving made people feel not as safe as driving at slower speeds.

Other factors such as education, marital status and number of children were also factors in determining who wears seat belts (Blomquist 1979.) With respect to education, a 1974 study showed education to be positively related to wearing seat belts (Robertson 1975 and Keeler 1994.) Generally, the relationship between the amount of education and number of children with respect to the likelihood of wearing seat belts was positive (Blomquist 1979 and Keller 1994.) This means the more education a driver or passenger possesses, the more likely the driver is to wear a seat belt.

Hirsch (1997) studied college students’ perceptions of safety policies and found that when controlling for independent variables such as demographics, there were no statistically significant differences between the demographics of student groups. In other words, the demographics of a college student do not predict the degree to which a college student values safety procedures and policies. The sex and race of a student were not determining variables in the value college students place on safety procedures and policies.

Wealth, health, and church attendance were also found to be positively related to seat belt usage (Blomquist 1979 and Keller 1994). In other words, the healthier a driver
was, the more likely that driver was to wear seat belts (Blomquist 1979 and Keller 1994). If a driver practiced habits that are considered to be unhealthy, such as not eating a nutritionally balanced diet, were overweight, or smoked; the driver would be less likely to wear a seat belt (Blomquist 1979 and Keller 1994). If a driver had a high income or an above average net worth, the driver was more likely to wear a seat belt than drivers who were in the lower income brackets (Blomquist 1979 and Keller 1994). If a driver attended church services on a regular basis, the driver was more likely to wear a seat belt than if the driver did not attend church services on a regular basis (Blomquist 1979 and Keller 1994).

Robertson, O’Neill, and Wixon (1972) observed drivers of newer cars to be more likely to wear seat belts than drivers of older cars. This could be explained in the same fashion as people with higher incomes being more likely to wear seat belts as individuals with lower incomes are not likely to purchase a new automobile.

Personal experiences such as suffering an injury in an automobile accident, or knowing someone that was injured but not killed in an automobile accident also encouraged drivers to wear seat belts (Robertson 1975.) Married drivers were more likely to wear seat belts than single drivers (Blomquist 1979.)

Vogel (1980) believes the higher the visibility of the regulation, the more likely consumers are to be opposed to the regulation. Vogel (1990) believes this because the more visible the regulation, the more likely it is to infringe upon a person’s freedoms. Vogel (1990) also believes the cost of obeying the new laws or regulations is not the central issue. It is the amount that the law disrupts the freedom of choice for an individual (Vogel 1990.) The relationship between convenience and safety is at the heart of the issue (Vogel 1990.)
Legge (1989) studied the effects on auto fatalities after mandatory seat belt policies were implemented in the state of California. The reason for studying this was to see if educating drivers about the possible benefits of wearing a seat belt could be seen after the educational campaign (Legge 1989.) This would give some insight as to why people might support mandatory seat belt policies. Legge (1989) found that only a temporary increase in seat belt usage occurred. Legge (1989) believed the reason why seat belt usage did not increase to a higher level for longer period of time was because enforcement did not last past an introductory period. Therefore the experiment did not last long enough to determine if wearing seat belts influenced the drivers’ beliefs about mandatory seat belt policies.

Nelson and Bolen (1998) studied the demographics of who uses seat belts. The study agreed with Vogel (1990), Keller (1994) and Blomquist (1979). Nelson and Bolen looked at demographic information in greater detail than previous studies. Nelson and Bolen (1998) found that Asian/Pacific Islanders and Hispanics displayed the highest percent of seat belt users. African Americans were lowest among the different ethnic groups.

Another possible factor in increasing support for mandatory seat belt policies is increasing awareness of the benefits of wearing seat belts with respect to protection of self in an automobile accident. Winston and Mannering (1984) noticed when the safety benefits of wearing seat belts were promoted via a public service announcement campaign, the usage of seat belts increased. Winston and Mannering (1984) did not go on to say if the increase in usage effected the support for mandatory seat belt policies.

Including a “civil liberties” clause in the legislation supporting mandatory seat belt laws was vital to passage of the bill in California (Legislative History of Recent Primary Seat Belt Laws, 1999, pp. 16 – 20.) This clause took three different forms. In one form,
California legislators also approved the use of a “sunset provision” to ensure evaluation of the bill after three years (Legislative History of Recent Primary Seat Belt Laws 1999, p. 18.) The evaluation would focus on the use of this law to stop motorists as a means of harassment. If the legislatures believed the law was being used primarily to harass motorists, the legislatures would not let the bill be renewed.

Other states sought to make the seat belt offense a secondary offense. By this, legislatures wanted to ensure that police would not use not wearing a seat belt as the sole or primary reason for stopping a motorist (Legislative History of Recent Primary Seat Belt Laws, 1999, pp. 18 - 19).

Some states wrote language into the bill that specifically discouraged undue harassment of drivers. Although the wording of the bill took on an anti-harassment nature, the words did not have meaning in legal terms. In other states, the legislators had mixed reactions to these types of provisions (Legislative History of Recent Primary Seat Belt Laws, 1999, pp. 16 – 20).

Most of the legislation supporting mandatory seat belt laws has been enacted in the 1990’s (Legislative History of Recent Primary Seat Belt Laws, 1999.) Studying the effects of these laws with respect to how they have influenced policy decisions on wearing seat belts has not been studied.

Durant and Legge (1993) also suggest implementation styles and enforcement are important in ensuring support of any social policy. A final note on determining the outcome of the success of the policy, targeting the enforcement towards particular groups who are likely to not comply with the policy is essential to the success of the policy (Durant and Legge, Jr. 1993.)
Methodology

I am going to use polling data to test certain hypotheses regarding the support of personal safety policies. The data are from the Mississippi Poll, which was collected by the SSRC (Social Science Research Center) at Mississippi State University. I will use the polls that were conducted in 1994 and 1996. The data from this poll can be accessed from http://www2.msstate.edu/~kauai/classes/methods/pollmethods.html. I am using these two years because they are the only two years that include a question about personal safety issues. The questions look at support for mandatory seat belt policies.

Coding the Data

In order to distinguish between rural and urban, I plan to use question 108 from the survey, which asks the respondent, “Which of the following best describes the place where you live? 1) A farm or ranch, 2) Non-farm rural area, 3) A town or village with less than 2,500 people, 4) A town of 2,500 to 10,000 people, 5) A city of 10,000 to 50,000, 6) A large city with more than 50,000 people.”

I will use question 94 in the survey to determine the ideology of the respondent. The question used the same wording in 1994 and 1996. Since the wording of the question did not change between years, I believe this will assist in the validity of the study. A five-point scale was used to determine the ideology of the respondent. The exact wording of the question was, “What about your political beliefs do you consider yourself very liberal, somewhat liberal, moderate of middle of the road, somewhat conservative, or very conservative?”

Question 198 asked the respondent, “How often do you use seat belts when driving? Always, most of the time, seldom, or never?” The question uses a four-point scale to
determine the frequency of seat belt usage. This question used the exact same wording in 1994 and 1996.

Question 167 asked respondents, “Do you think there should be a fine for not using a seat belt?” The question used the same words in 1994 and 1996. A “yes” or “no” response was coded.

The information about the methods of the 1994 and the 1996 surveys also come from the web site. To select households in the 1994 and 1996 poll, a two stage random sample was used to choose the households that were to be contacted. To select the individuals within the household that were to be chosen for the random sample, random sampling was used. The survey did not make substitutions and there was no limit on the number of callbacks that were allowed. The survey had a response rate of sixty-nine percent. The interviewers used a CATI to assist in collecting data. There are 620 members of the sample in the 1994 poll and 601 units in the 1996 poll. There is a sample error of four percent in each direction. The sample was weighted.

There is one concern I have of the study’s validity. If there is a respondent who lives in a rural area yet drives to an urban area for work or spends a significant amount of driving time in an urban area, will this affect the respondent’s answer and therefore the validity of the study?

I recoded some of the variables to increase the sample size. I grouped the population variable into three groups. The new population codes place respondents who live on a farm, in a rural area or in a city smaller than 2,500 together. I refer to these people as living in a “rural” area. Respondents who live in a city between the size of 2,501 and 10,000, I grouped together. I refer to these respondents as living in a “small town.”
Respondents who live in a city larger than 10,000 are classified together. I refer to them as living in a medium city.

Ideology was recoded. Respondents who responded as strong liberal or liberal were grouped as liberal. Respondents who responded as strong conservative or conservative were labeled as conservative. Respondents who identified themselves as moderates or middle of the road, were labeled as moderates.

The seatbelt usage variable was also recoded. Respondents who said they used seatbelts seldom or never were grouped together as non-users. Respondents who said they always or most of the time, used seat belts were classified as users.

Findings

The study found no difference in the support of a mandatory seatbelt policy between any of the three groups: rural, small city, or urban. Each group had a similar level of support for a mandatory seat belt policy. The only groups who did not support the use of seat belt fines were people who did not wear seat belts.

When I controlled for drivers who do not wear seatbelts, I did notice a decrease from 72.4 to 55.7 percent in the size of opposition for fines for non-seat belt usage. When I controlled for ideology, I did not notice a difference in support for seat belt non-usage fines among the population groups.

One of the other relationships I considered was, the more likely a person is to wear a seat belt, the more likely the person is to support a policy requiring the use of seat belts. This relationship was found to be statistically significant at the .01 level. People who do not wear a seat belt tend to not support fines for not wearing a seat belt. The support for this is
slightly more than a 2 to 1 margin. People who wear a seat belt tend to support fines for not wearing a seat belt (See Table 1). The support for this is almost a 2 to 1 margin.

**TABLE 1**

<table>
<thead>
<tr>
<th>Support for seat belt fines</th>
<th>People who use seat belts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use</td>
</tr>
<tr>
<td>Yes</td>
<td>69.9%</td>
</tr>
<tr>
<td>No</td>
<td>30.1%</td>
</tr>
<tr>
<td>N Size</td>
<td>911</td>
</tr>
</tbody>
</table>

Chi-square is .000, statistically significant at the .01 level.
Source: 1994 and 1996 Mississippi Poll, conducted by Mississippi State University
Note: Percentages total 100% down each column.

When I controlled for seat belt usage, there was no difference within the population groups. When I controlled for people who do not use seat belts, I began to see a slight increase in support for fines for non-seat belt usage (See Table 2). This analysis has statistical significance at the .1 level. Although there was still a majority of respondents who did not support fines for non-seat belt usage, the opposition began to drop as the size of the city increased. In other words, the size of the city is a statistically significant dependent variable, at the .1 level, in determining who supports fines for non-seat belt usage among non-seat belt users.
TABLE 2

Support for mandatory seat belt policies among people who do not use seat belts, sorted by population density.

<table>
<thead>
<tr>
<th>Support seat belt fines</th>
<th>Rural</th>
<th>Small City</th>
<th>Medium City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>27.6%</td>
<td>36.6%</td>
<td>44.3%</td>
</tr>
<tr>
<td>No</td>
<td>72.4%</td>
<td>63.4%</td>
<td>55.7%</td>
</tr>
<tr>
<td>N Size</td>
<td>71</td>
<td>52</td>
<td>34</td>
</tr>
</tbody>
</table>

Chi-square = .091, statistically significant at the .1 level.  
Note: Percentages total 100% down each column.  
Source: 1994 and 1996 Mississippi Poll, conducted by Mississippi State University.

The confirmation of this hypothesis leads me to believe support of mandatory seat belt policies is not so much a political issue as it is an issue about safety and people’s desire to drive in a safe manner. In other words, the issue is not defined in political language.

With respect to gender, I found support for the hypothesis that females are more likely to support mandatory seat belt policies than males. When I controlled for seat belt usage, there was still higher support among women who used seat belts as compared to men. When looking at gender comparisons among non-seat belt users, the N size was too small to reach any statistically significant conclusion (See Table 3.)
TABLE 3

<table>
<thead>
<tr>
<th>Support for Fine</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>57.2%</td>
<td>70.1%</td>
<td>64%</td>
</tr>
<tr>
<td>No</td>
<td>42.8%</td>
<td>29.9%</td>
<td>36%</td>
</tr>
<tr>
<td>N</td>
<td>590</td>
<td>615</td>
<td>1205</td>
</tr>
</tbody>
</table>

Chi Square = 41.36
Statistically significant at the .01 level.
Note: Percentages total 100% down each column.
Source: 1994 and 1996 Mississippi Poll, conducted by Mississippi State University.

There was no difference between residents of urban or rural areas in the likelihood of wearing seat belts. Residents by about a 2 to 1 margin identified themselves as people who wear seat belts. I found no relationship between ideology and support for a mandatory seat belt policy. When I looked at the ideology of a driver while controlling for rurality, I still could not find a difference in the support for a mandatory seat belt policy. There was also no difference of support between White’s and African-American’s.

After considering the bivariate relationships of the variables, I decided to create a model that would predict support for mandatory seatbelt usage policies. Since the data were binary, I chose to use binary logistic regression. The model used the following variables: seat belt usage, gender, education level, race, and age. Seatbelt usage and gender were the two independent variables that were found to be significant.
TABLE 4

<table>
<thead>
<tr>
<th></th>
<th>Significance</th>
<th>Wald</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.676</td>
<td>.005</td>
</tr>
<tr>
<td>Gender*</td>
<td>.099</td>
<td>2.727</td>
</tr>
<tr>
<td>Income</td>
<td>.379</td>
<td>.775</td>
</tr>
<tr>
<td>Rurality</td>
<td>.478</td>
<td>.503</td>
</tr>
<tr>
<td>Uses Seat Belts***</td>
<td>.000</td>
<td>101.444</td>
</tr>
<tr>
<td>Education</td>
<td>.776</td>
<td>.081</td>
</tr>
</tbody>
</table>

N = 985
Nagelkerke’s R square = .176
Cox and Snell’s R square = .129
*** Statistically significant at the .01 level
** Statistically significant at the .05 level
* Statistically significant at the .1 level
Source: 1994 and 1996 Mississippi Poll, conducted by Mississippi State University.

Clearly the most significant variable is seat belt usage. This leads me to believe that the behaviors of an individual rather than a person’s demographics are most important in determining the support of personal safety issues. This is inconsistent with Mayer and Zick’s (1984) work. The fact that the Mayer and Zirk’s article is ten to twelve years older than the polling data gives me a possible explanation why there is such a discrepancy between with the independent variables.
Conclusions.

Supporting personal safety issues is a matter of education. Once individuals practice the behavior, the individual is likely to support the practice as a matter of public policy. Other individual characteristic that was found to be statistically significant was gender.

The study I chose to illustrate these hypotheses focused on finding the determining variables that will indicate support for fines for non-seat belt use. The study found safety habits and gender are the most important variables in predicting the support for seat belt usage policies. Women are more likely to support policies that require citizens to practice safety habits. This finding concurs with the literature review. The study also showed support for the safety policies that individuals practice as a part of their regular routine. This issue was not addressed in the literature.

Another variable that the literature did not consider was the population of the city in which the citizen lived. When I controlled for non-seat belt users, I did see some weakening in the opposition of supporting seat belt non-usage fines as the population of the respondent’s community increased. However, I did not find any group of non-users that was willing to support fines for non-seat belt use. Due to the small sample size of respondents who reside in Mississippi cities larger than 50,000, I was not able to get a large enough of a sample size to find statistical significance to support this hypothesis. An area for further study would be to see if non-seat belt users in larger cities would be supportive of for fines for non-seat belt use.

The good news for public administrators, which is derived from this paper, is that support for personal safety issues is something that can be managed. In other words, citizens, in general, are not predisposition to prefer a particular side of the policy issue. As
an administrator we can encourage citizens to practice a particular kind of behavior, then creating and implementing policies in support of that behavior will be much easier.
Bibliography


