Increased Motor Vehicle Crash Protection: Public Preferences and Willingness to Pay

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The data for this study were obtained from a survey conducted by Chilton Research Services, Radnor, Pennsylvania. The study was supported by the Insurance Institute for Highway Safety.
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Summary

In a nationwide, scientifically selected sample, 1017 people who intend to buy a new car within the next 3 years were interviewed by a professional polling organization in July, 1976. For improved protection in crashes, 77 percent of these new car buyers expressed a preference for protection that they would not have to do anything to activate—39 percent exclusively and 38 percent in combination with protection that has to be activated by driver or passengers. Only 15 percent exclusively preferred increased protection that they would have to activate each time they travel and 7 percent expressed no opinion.

The new car buyers expressed a willingness to add substantially to their monthly car payments for crash protection that would save lives: an average of $12 per month to save 6,000 lives per year. $17 per month to save 12,000 lives per year and $20 per month to save 18,000 lives per year.

The amount that car buyers are willing to spend to save 6,000 lives is far above estimated costs for equipment that would meet a proposed federal standard that would save an additional 8,800 lives per year. For example, the U.S. Department of Transportation indicates that front seat air bags that inflate automatically in severe frontal crashes and lap belts would cost less than $4.00 per month more than present front seat belt systems spread across 36 monthly car payments including interest.

When asked if they favored or opposed their states requiring belt use by law, 47 percent of the respondents favored such laws, 50 percent
opposed them and 3 percent had no opinion. No significant differences were found among men and women, people from regions of the country, or among members and nonmembers of the American Automobile Association as well as other auto clubs in crash protection preferences, willingness to pay for increased crash protection, and opinions of belt use laws.
Increased Motor Vehicle Crash Protection: Public Preferences and Willingness to Pay

With the enactment of the National Traffic and Motor Vehicle Safety Act in 1966, the Congress authorized the federal government to require minimum standards for performance of motor vehicles to reduce crashes and the severity of injuries that occur in crashes. Some of the standards, effective in 1968 and subsequently, resulted in reduction of injury severity without the driver or passengers having to do anything. An example is the requirement that steering assemblies absorb, up to certain levels, the force of drivers hurled forward in frontal crashes rather than spearing them in the chest.

Sometimes of necessity, other standards require minimum performance for equipment that must be put in use or adjusted by drivers or passengers to be effective. An example is the outside rearview mirror. In some cases the manufacturer has an option to provide equipment that must be activated or adjusted or to provide equipment that performs without activation or adjustment. For example, some manufacturers provide head restraints that must be adjusted to different heights to be in position to reduce so-called whiplash injury in rear crashes while others provide high seat backs or head restraints that reduce such injury without adjustment.

Since people operate and ride in motor vehicles while preoccupied with the full variety of human thoughts and emotions, many do not adjust or activate systems that are not automatic. For example, about three-fourths of persons riding in cars with adjustable head restraints do not have them positioned properly to reduce injury in the event of a crash. And, more than 70 percent of drivers recently observed in major
U.S. metropolitan areas were not using available seat belts and more than 90 percent of children observed were not adequately restrained.

Technology to automatically reduce death and injury in frontal and front angle crashes by substantial amounts has been available for a number of years. A federal standard requiring automatic (i.e., "passive") protection in frontal crashes up to 30 miles per hour into a concrete barrier was first proposed for 1972 model cars. Subsequently the standard was made optional to the manufacturers in lieu of continuous buzzer-light systems and by the ignition interlock system that Ford Motor Company had developed and petitioned the Department of Transportation to adopt intended to force seat belt use by front seat occupants. With the exception of about 11,000 luxury cars that had air bags produced by General Motors, manufacturers chose forced belt use.

The net effect on belt use of the buzzer-light systems was nil and the ignition interlock's effect was temporary. A minority of the public objected strongly to these systems and a federal law was enacted banning the U.S. Department of Transportation from requiring them.

Opponents of the standard to increase automatic protection in severe frontal crashes claim that the public is adequately protected by available seat belts and that available technology to meet the minimum standard for automatic protection, such as air bags that inflate automatically in severe frontal crashes, would be too costly. This paper reports a study of public opinion regarding preferences for increased crash protection and amounts the public is willing to pay for that protection.

Method

A professional polling organization interviewed individuals who expressed the intention of buying a new car within the next three years.
by telephone in July, 1976. A national random sample of households was chosen by computer-generated random telephone numbers. This all telephone numbers were eligible for the sample and there was no bias because of unlisted numbers.

Interviewers were trained to question an adult in each household to determine whether or not the family intended to buy a new car within 3 years. The person was asked if the family planned to purchase a car and, if so, whether it would be new or used. If the family planned to buy a new car, the person most likely to buy the car was interviewed.

In total, 5382 households were contacted. Of these 164 (3 percent) refused the interview and 100 (2 percent) could not be interviewed because of language problems. Of the 5118 remaining households, 3776 (74 percent) did not plan a new car purchase in the next three years and 325 (6 percent) could not be interviewed because the person most likely to buy the new car was not available in two callbacks. Interviews were completed with the 1017 persons who intended new car purchases.

Results
Preferences with respect to increased crash protection in new cars are illustrated in Figure 1. For increased protection in crashes in their new cars, only 13 percent of the respondents chose "protection that you and your passengers must activate every time you travel" exclusively compared to 39 percent who chose "protection so that you and your passengers do not have to do anything," exclusively and 38 percent who chose "both types of protection".

Willingness to pay for increased crash protection was assessed by asking the respondents how much they would be willing to increase
their monthly car payments to save 6000, 12,000, and 18,000 lives respectively. The amounts to save 6000 lives a year averaged $12.09 per month. To save 12,000 and 18,000 lives a year respectively, the amounts averaged $16.69 per month and $19.92 per month respectively.

When asked whether they favor or oppose a state law requiring people to use seat belts in motor vehicles every time they travel, 47 percent of respondents favored the law; 50 percent opposed it; and 3 percent had no opinion. (Figure 2).

No statistically significant differences were found in preferences for types of crash protection, amount they were willing to spend for increased protection, or opinions of belt use laws when comparisons were made among men and women, regions of the country, or members and nonmembers in the American Automobile Association or other automobile clubs.

Discussion

The results of the survey clearly indicate that new car buyers prefer crash protection that reduces injuries without the driver or passengers having to do anything to crash protection that must be activated every time the vehicle is used. For improved protection in crashes, 77 percent of new car buyers expressed a preference for protection that they would not have to do anything to activate—39 percent exclusively and 38 percent in combination with protection that has to be activated by driver or passenger.

These results are very similar to those of a 1974 Louis Harris poll regarding product safety that found automobiles among the top four products that concerned the public. More than three-quarters of the respondents in that poll said the government should do more in developing standards for those products.
Furthermore, new car buyers are willing to pay substantially more to save lives than available technology would cost. For example, the U.S. Department of Transportation estimates that an additional 8800 lives per year would be saved by air bags that inflate in severe frontal crashes and that the additional cost of air bags would be $103.00 per car which is less than 54 per month across 36 monthly car payments. The new car buyers in this survey expressed willingness to pay an average additional $12 per month on their new car payments to save 6000 lives per year and $17 per month to save 12,000 lives per year.

It is doubtful that new car buyers are aware of the effectiveness of air bags in saving lives or their costs. Thus, public opinion of air bags cannot be taken as evidence that the public does not want increased automatic crash protection. Nonetheless, some automobile clubs have claimed that their members oppose the mandatory installation of air bags. That position, however, is not supported by the results of the national survey which finds that the members of auto clubs prefer crash protection that they do not have to activate every time they travel and are willing to pay substantially more for increased crash protection, like nonmembers of such clubs.

Laws requiring belt use have been proposed as alternatives to increased automatic protection in severe frontal crashes. Since belts reduce injuries in other than frontal crashes and thus would provide protection in addition to the proposed automatic frontal crash protection, it is not accurate to characterize belts as an alternative. Also the proportion of people who oppose belt laws (50 percent) is slightly higher than that of people who favor such laws (47 percent). The prospects for enactment and enforcement of such laws is not encouraging.
The results of this study indicate that increased automatic protection is the public's preference. The public's willingness to pay substantially more for increased crash protection than the cost of that currently proposed should spur not only the adoption of standards currently feasible but also the development of more advanced technology.
Footnotes

3. The legislative history clearly indicates that the Government was not to dictate design, but was to establish minimum performance criteria for new vehicles. See Conference Report (to accompany S. 3005) 89th Congress, 2nd Session, House of Representatives Report, No. 1919, August 30, 1966, p. 15.


17. 41 Federal Register 24070, 1976.


FIGURE 1
PERCENT OF RESPONSES TO THE QUESTION:
"FOR INCREASED PROTECTION IN CRASHES IN YOUR NEW CAR, WOULD YOU PREFER?"

"PROTECTION THAT YOU AND YOUR PASSENGERS MUST ACTIVATE EVERY TIME YOU TRAVEL" (15 PERCENT)

"BOTH TYPES OF PROTECTION" (38 PERCENT)

"PROTECTION SO THAT YOU AND YOUR PASSENGERS DO NOT HAVE TO DO ANYTHING" (39 PERCENT)

NO OPINION OR NO RESPONSE (7 PERCENT)
FIGURE 2
PERCENT OF RESPONSES TO THE QUESTION:
"WOULD YOU FAVOR OR OPPOSE A LAW IN YOUR STATE REQUIRING PEOPLE TO WEAR
SEAT BELTS EVERY TIME THEY DRIVE OR RIDE IN A MOTOR VEHICLE?"
Study Shows Public Is Willing To Pay For Motor Vehicle Crash Protection

By LEON S. ROBERTSON

With the enactment of the National Traffic and Motor Vehicle Safety Act in 1966, Congress authorized the Federal government to require minimum standards for performance of motor vehicles to reduce crashes and the severity of injuries that occur in crashes. Some of the standards, effective in 1968 and subsequently, resulted in reduction of injury severity without the driver or passengers having to do anything. An example is the requirement that steering assemblies absorb, up to certain levels, the force of drivers hurled forward in frontal crashes rather than squashing them in the chest.

Example

Sometimes of necessity, other standards require minimal performance for equipment that must be put in use or adjusted by drivers or passengers to be effective. An example is the outside rearview mirror. In some cases the manufacturer has an option to provide equipment that must be activated or adjusted to provide equipment that performs without activation or adjustment. For example, some manufacturers provide head restraints that must be adjusted to different heights to be installed. If the manufacturer provides an option to provide equipment that must be activated or adjusted to provide equipment that performs without activation or adjustment. For example, some manufacturers provide head restraints that must be adjusted to different heights to be installed.

Dr. Robertson is with the Insurance Institute for Highway Safety, which supported this study. The data for the study were obtained from a survey conducted by the Chilton Research Services, Radnor, Pa.

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Interviewed because the person most likely to buy a new car was not available in two call backs. Interviews were completed with the 1,917 persons who indicated new car purchase.

Results

For increased protection in crashes in their new cars, only 15% of the respondents chose "protection that you and your passengers do not have to do any thing," exclusively; and 38% who chose "both types of protection."

Willingness to pay for increased crash protection was assessed by asking the respondents how much they would be willing to increase their monthly car payments to save 6,000, 12,000, and 18,000 lives respectively. The amounts averaged $12.69 per month and $19.92 per month respectively.

When asked whether they favor or oppose a state law requiring people to use seat belts in motor vehicles every time they travel, 47% of respondents favored the law; 50% opposed it; and 3% had no opinion.

As to the preference of respondents, 50% of male respondents and 46% of female respondents preferred the law; 43% of male respondents and 54% of female respondents opposed the law; and 7% of male respondents and 1% of female respondents had no opinion.

The results of the survey clearly indicate that new car buyers prefer crash protection that reduces injuries and fatalities without reducing speed and comfort.

Laws requiring seat belt use have been provided as alternatives to increased automatic protection in severe frontal crashes. Since seat belts reduce injuries in other than frontal crashes and thus would provide protection in addition to the proposed automatic frontal crash protection, it is not necessary to characterize belts as an alternative. Also the proportion of people who oppose seat belt laws (50%) is slightly higher than that of people favor such laws (46%). The prospects for enactment and enforcement of such laws are not encouraging.

The results of this study indicate that increased automatic protection is the public's preference. The public's willingness to pay substantially more for increased crash protection than the cost of that currently proposed should spur not only the adoption of standards currently feasible but also the development of more advanced technology.