

## Knowledge of Automobile Warnings

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**Abstract:** Automobiles are responsible for hundreds of deaths and many more injuries every year. A significant number of the accidents producing these ill effects are related to poor driving by some individuals, but the injuries and deaths resulting from careless or reckless driving is related to failure to heed warnings for occupants and drivers of vehicles involved in accidents. This study examines the knowledge and practices of drivers (and passengers) in their understanding of warnings and their practices of safe behavior. Some difference in the use of the driver's manual was found between males and females. This was probably a function of the greater concern of males about mechanical aspects such as tire pressure and type of motor oil.

It is also the case that some warnings are phrased in such a fashion that their meaning is misinterpreted. The result of questions regarding specific times (or ages) indicated that this was true of at least one warning.

Most respondents were unaware of one or more warnings. When asked how likely they were to read a hang tag of warnings, more men than women indicated high or moderate likelihood of doing so.

### 1. Introduction

Automobile warnings have been the subject of many studies, because of their importance for safety. Many articles have addressed several topics for interest in how well people have known about warnings of various sorts, e.g. Laughery (2002), while others have addressed some significant needs for understanding a specific topic (Leonard 2006). One approach has examined the general background of driving experiences and sources of general information (Laughery 2002). Although these articles have indicated some lacunae in the knowledge of many drivers, we considered it necessary to re-examine what people know in light of possible effects of the previous studies. In addition, participants were asked to consider another possible technique for providing warnings.

### 2. Methods

#### 2.1 Participants

A total of 99 individuals, 33 men and 66 women completed the survey as a means of satisfying one type of credit for their psychology course. They ranged in age from 18 to 23 with a median of 21.

#### 2.2 Materials

A survey containing questions about the training, vehicles, access to manuals, types of vehicles and frequency of use obtained the background information for the participants was presented. In addition the form asked the participants to indicate their knowledge about various warnings and other safety information. A list of these items is found in Table 1. In addition to specific warnings, a question was asked about how likely the participants would be to read a hangtag of warnings placed in their vehicle.

Table 1. Background Information on Participants.

<b>Topics Read:</b>	<b>Men (33)</b>	<b>Women (66)</b>
Mean Years Driving	3.5	4.0
Driver Training Class	27	48
Received Manual	28	56
<b>Manual Read:</b>		
Oil Change	16	14
Tire Pressure	14	17
Radio, DVD, etc..	15	22

### 3. Results

As seen in Table 1 the mean years of driving were similar for men and women. The average age was also about the same. Driver's training was common for both. Most respondents had received an owner's manual with their vehicle. The use of the manuals was heavily oriented to items such as radios and other personal use devices.

Questions about warnings were asked to be answered in terms of whether or not the respondents had encountered them and in what medium, which is, on the vehicle or in the manual or from other sources. The sources from specific warnings are presented in Table 2. The table presents information about the sources that would be associated with the vehicle and its accompaniments.

In addition to the knowledge that certain warnings exist it is also relevant to know the specifics of the warning. For example, the age at which a child is presumed to be unsafe in the front seat is presented as 12 and under. Many individuals interpret this as children of age 12 are to be allowed in the front seats. More respondents stated that age twelve was the appropriate value indicated by the warning. In fact, more respondents answered 12 or lower than 13 to be that age.

### 4. Discussion

The data indicate that relatively little change in the general knowledge of warnings for users of automobiles from that of previous. The question of whether or not individuals would pay attention to a hang tag of warnings received some positive responses. It is possible that there was some demand characteristic involved, however future research might provide more definitive information about such items.

Recent developments in automobiles may assist drivers to perform safe behavior. For example, the auditory warning that the seat belt is not fastened may help forgetful drivers. On the other hand, the use of cell phones has multiplied in the population with a concomitant increase in lost attention to the road. In fact, this development has exacerbated a problem found by (Strayer and Drew 2004) who found conversation between drivers and passengers to increase problems of attention. Perhaps the manufacturers of cell phones can be persuaded to incorporate warning signals into their products.

Table 2. Sources of Information Regarding Warnings.

Warning:	In Manual		On Vehicle	
	Male	Female	Male	Female
Wear Properly	8	11	11	19
Booster Seat	2	3	3	3
Recline Seat	5	6	2	0
Tire Pressure	7	5	1	2
Lights On	8	5	2	8
Belt under arm	2	3	4	7
Foot Placement	2	4	1	3
Seating 10 in. Close	4	1	0	0
Child Seat Forward	3	11	4	17
Adjust Wheel	8	8	1	0
Engine Running	3	6	0	2
Reach in Fan	4	3	2	0
Charge Battery	2	3	3	0
Jack up wheel	5	3	1	0
Child Age Front	1	2	4	17
Tires Replaced	2	3	0	0

Unfortunately, even though manufactures have warned against some behaviors, there are advertisements which tout the automobile's features that can be used for the pleasure of the passengers, cf. Leonard and Karnes (2006)

It is also the case that warnings maybe understood, but drivers may fail to heed to them. For example, AAA (2015) has found that although drivers recognize the risk for using cells phones, they do it anyway. Strayer and Drews (2004) have also found such behaviors effecting performance in simulated driving situations. Thus, it is a difficult task which manufactures must confront. One possibility is for manufactures to incorporate the technology to limit the speed of the vehicles when the cell phone is in use.

## 5. References

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