The following is only an abstract of one of our earlier reports. An email request for a printed or PDF copy of the complete report can be generated by clicking on the **Report Number** of this report in the table of reports on the Research Studies and Reports page. The PDF copy of the complete report was created by scanning an original, printed copy, and thus is only *partially* searchable and *is not* accessible, but is fully printable.

A printed or PDF copy of our studies and reports may also be requested by mail or phone at:

Department of Motor Vehicles
Research and Development Branch
2570 24th Street, MS H-126
Sacramento, CA 95818-2606

(916) 657-5805

For a request by mail, please include the report number and your name, address, and phone number. Also, please state whether you are requesting a printed copy, a PDF copy, or both. For a PDF copy, please include your email address.

TITLE: The California Motorcycle Study - Driver and Accident Characteristics

AUTHOR(S): Richard M. Harano & Raymond C. Peck

DATE: July 1968

REPORT NUMBER: 28

FUNDING SOURCE: Departmental Budget

PROTECT OBTECTIVE:

To evaluate the extent of the motorcycle problem and pinpoint possible problem areas which could be explored by future research.

SUMMARY:

Motorcycle registration in California has increased approximately 200 percent during the past 5 years. Along with the increasing number of registered motorcycles, the California Highway Patrol has also noted an increasing number of motorcycle accidents, with the fatal and injury rates on motorcycles twice that of passenger cars. At the present time, California leads the nation in motorcycle registration accounting for approximately 18 percent of the nation's total.

The increasing number of motorcycle accidents is causing considerable concern among traffic safety experts, legislators, and licensing administrators. At the present time, California has no special licensing procedures for motorcycle drivers. Any person possessing a valid license can legally operate a motorcycle without demonstrating actual driving proficiency on a motorcycle.

The samples included in this study consisted of (1) a motorcycle sample randomly selected from registration files, and (2) a motorcycle and passenger car accident sample randomly selected from the accident files of the California Highway Patrol.

The data from this study was derived from accident reports, driver records, and questionnaires. The results were presented in three sections: (1) the characteristics of motorcycle and passenger car accidents, (2) the characteristics of the motorcycle registration sample, and (3) factors associated with good and bad driving records.

The overall results showed motorcycle accidents to differ significantly from passenger car accidents on various physical characteristics. Motorcycle accidents occurred more often during daylight conditions, on straight, level roads, and during clear weather. Various driver related variables also differed for the two accident samples.

The results revealed the average age of the motorcycle sample was 33 years with 95 percent of the drivers male and 60 percent of the drivers married. This can be compared to the average passenger car drivers who have an average age of 40 years, with 59 percent of the drivers male and 75 percent of the drivers married.

Motorcycle drivers had approximately twice as many accidents and convictions as passenger car drivers. The data also revealed motorcycle drivers have a higher accident and conviction rate (per unit of exposure) while driving a motorcycle than a passenger car.

When passenger car accidents were predicted, conviction variables were the most important factors associated with passenger car accidents. Motorcycle accident prediction, on the other hand, was more closely associated with factors relating to age and motorcycle driving experience. Factors associated with attitude, personal stability, and personal responsibility were more influential in predicting convictions than accidents.

IMPLEMENTATION STATUS OF FINDINGS AND RECOMMENDATIONS:

The most important findings concern the role of age and experience in motorcycle accidents. The overall results suggest that lack of skill and inexperience in the operation of a motorcycle are important factors associated with motorcycle accidents. Since level of skill is a partial function of vehicle familiarity, training, and licensing, more effort in these areas is indicated. Any person who possesses a valid California driver's license can legally operate a motorcycle, even though licensed on the basis of performance only in a passenger car. The data indicates that a person who can drive a car safely may not always be able to hive a motorcycle safely. This seems quite logical if one just looks at the apparent physical differences between the two types of vehicles. Consequently, serious consideration should be given toward insuring that motorcycle drivers possess the required skills essential for safe motorcycle operation. This pilot study has pinpointed a problem area relating to motorcycle accidents which has possible implications for motorcycle accident reduction. The time has come for serious consideration to be given to controlled experimental research evaluating the relative effectiveness and costs of various motorcycle training and licensing programs.

SUPPLEMENTARY INFORMATION:

None.