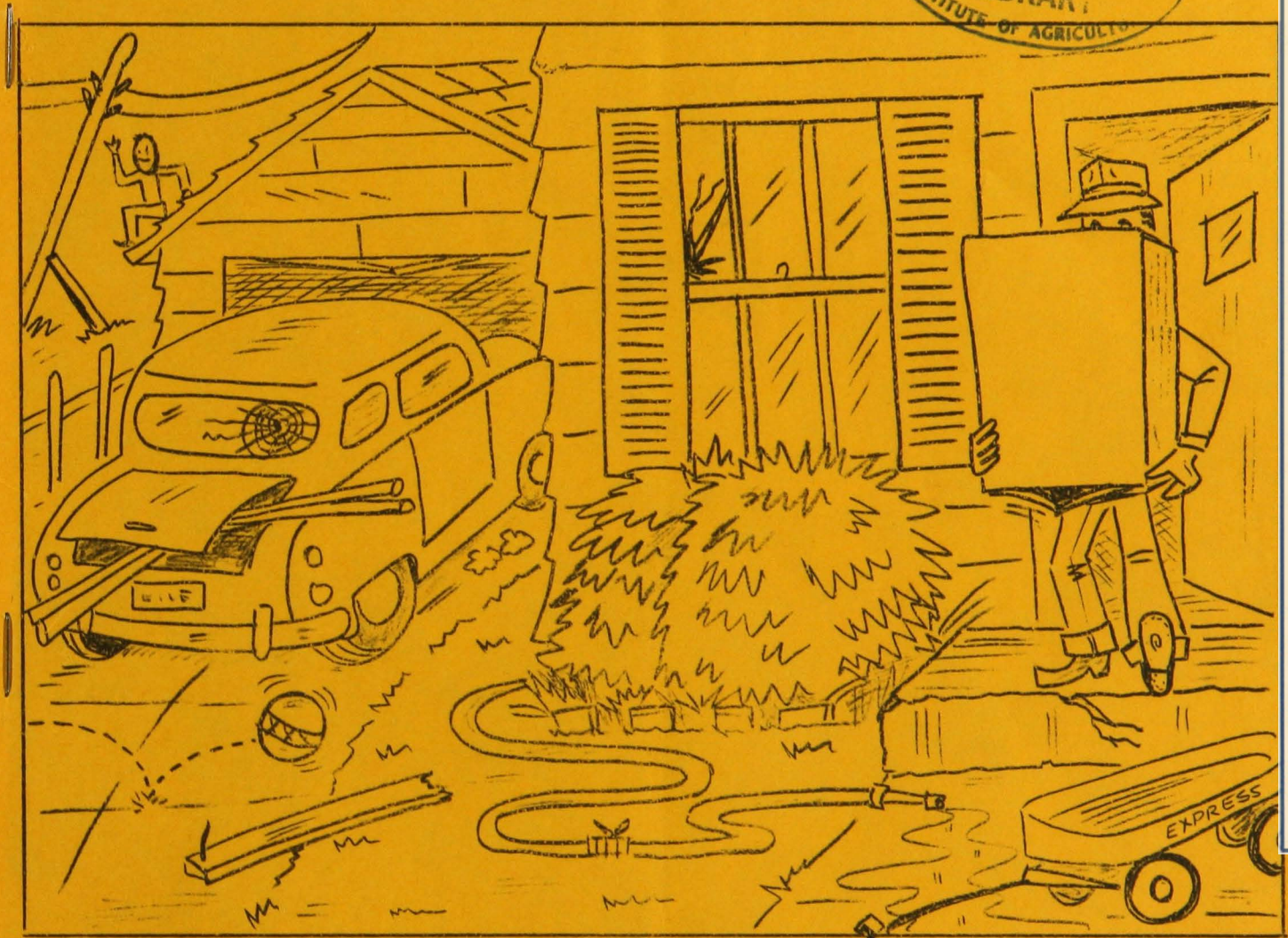


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Jackson County Farm and Home Accident Study
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INTRODUCTION

This is a report of the results of an accident survey in Jackson County, Minnesota, undertaken as a project by the Jackson County Home Council with the cooperation and direction of Audrey Vulcan, County Home Agent, Ray Palmby, County Agricultural Agent, and Glenn Prickett, Extension Safety Specialist.

The purposes of the study were to determine: 1) the frequency of accidents in Jackson County; 2) the type or nature of accidents; 3) the difference between farm and town families and 4) factors associated with accidents.

Another purpose of primary importance was the educational benefit to be derived by families in Jackson County participating in the survey. Distribution of the results of the survey among the population should contribute to greater awareness and more care with respect to accident hazards in and about the home and farm.

METHOD OF STUDY

The survey was conducted in such a manner as to insure a random sample² of farm respondents and of urban respondents in the four communities of Jackson, Lakefield, Okabena, and Heron Lake. The original design of the survey called for a total of 200 farm respondents and 200 urban respondents. The final total of completed interviews was 327 consisting of 196 farm families and 131 town families.

The interviewing was done by the Jackson Home Council in accordance with the designated sampling areas and a schedule of questions. Processing and

1. Rural Sociologists, University of Minnesota Extension Service.

2. The sample was drawn by means of an areal sampling technique employing square mile segments for the rural areas and blocks in the communities. This method insures the same probability for single cases as would an individual unit sampling procedure.

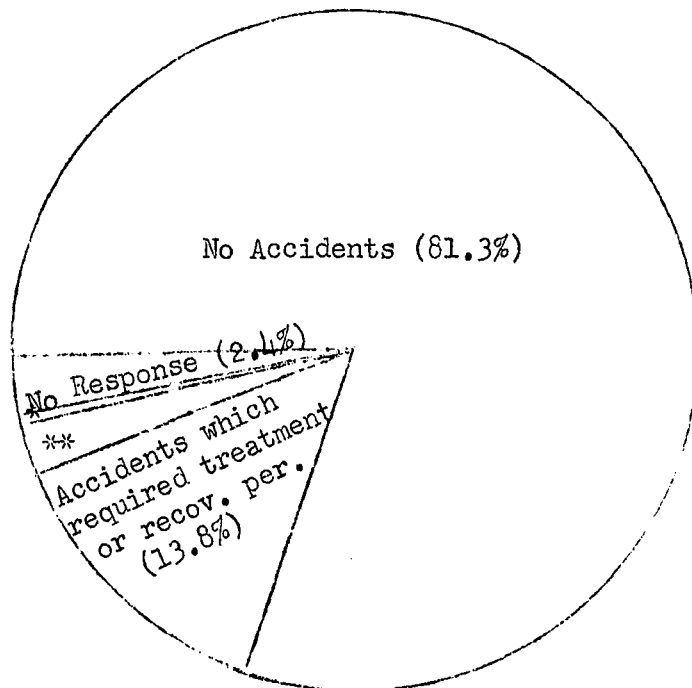
analysis of the data from these interviews was carried out at the University of Minnesota.

FINDINGS

Number of Accidents

Accidents occurred in about a sixth of the families during the 12 months previous to the interview. An accident, for purposes of this survey, was defined as any injury requiring treatment by a physician and/or requiring a recovery period of one or more days. Over four-fifths of the families surveyed reported no accidents had occurred during the year. A total of 67 accidents were reported by 54 families. During this period 42 families indicated a single accident had occurred, 11 families had two accidents and one family had had three accidents. No family reported four or more accidents for the 12 month period. Only one family reported a fatal accident had occurred during the previous 12 months.

Accidents and Treatment by Physician
or Recovery Period



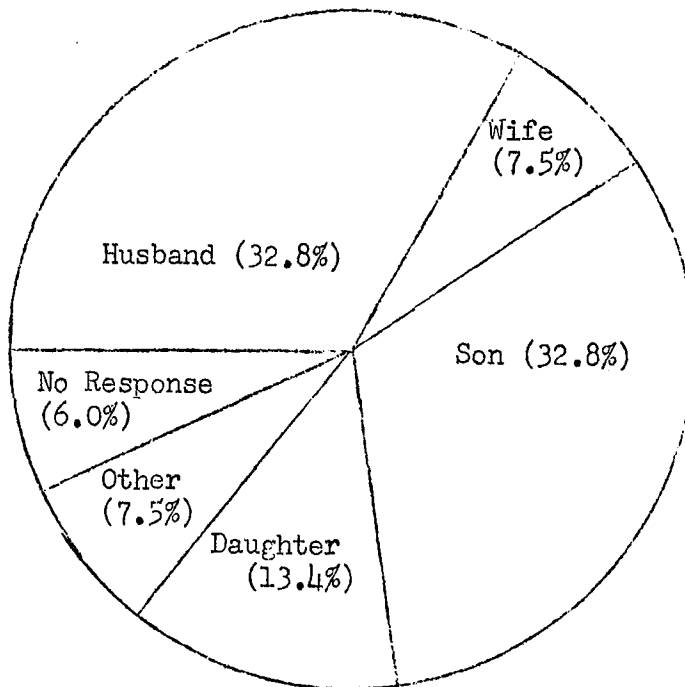
* Fatal accidents (0.3%)
** Accidents which did not require treatment or recovery period (2.0%)

The accident figures indicate that a family's chances of having a member injured were about one out of six, which are rather poor odds against an accident occurring in a family unit and calls forth the need for more concerted effort to develop and practice safety measures which will decrease the chances of accidents occurring.

Member of Family Injured

The survey results clearly indicate that the male members of the family stand the greatest chance of having an accident. Just about a third of the accidents occurring in families involved the husband and another third involved a son. In slightly less than one-eighth of the families the daughter was reported as the injured member while wives were reported in only about one fourteenth of the cases. Thus, the husband's and sons' chances of being injured were about one in three compared to about one in seven for the daughters and only one in fourteen for the wives.

Family Member Injured



Further evidence of the fact that the accident hazard is greater for the males is indicated in the results showing that almost three-fourths of the accidents occurred to male members of the family and only slightly more than a fifth involved female members. The fact that males have more accidents than females does not indicate that they practice safety measures to a lesser degree but are more involved in activities where the accident hazard is greater. On the other hand it should be remembered that behavior which contributes to safety involves more than a single individual since most of the work activity of the male involves other people. An individual's state of mind depending upon his family situation as well as his work situation may well contribute to the probability of an accident happening. In light of this, safety becomes a job for the family as well as the individual.

Age of Injured

Family members between the ages of 15 and 20 were reported in about one-sixth of the cases as being injured. The five to ten year age group was next with slightly less than one-sixth of the accidents reported in this age group. Those persons between the ages of 20 and 30 were reported in slightly more than one-tenth of the cases as were the individuals in the 40 to 50 year old group. Persons in the under five years of age group were the least frequently reported as having been injured. The bulk of the accidents occurred to persons in the 15 to 30 year bracket. However, age does not provide complete protection from accidents since they occurred in all age groups and in no case were the chances less than one in twenty of having an accident.

When the Accident Occurred

Almost a third of the accidents reported were in November. October and July each with about a ninth of the accidents reported appeared to be the second most hazardous months for the families surveyed. Saturday, with slightly

more than one-sixth of the accidents reported on that day, appeared to be the most hazardous day of the week. Tuesday was reported in slightly less than one-sixth of the cases, Monday in about one-eighth of the cases, Wednesday and Thursday in about one-tenth of the cases, and Sunday and Friday in about one-fourteenth of the cases. While caution should be exercised every day of the week it appears that particular attention should be paid accident hazards at the beginning and end of the work week.

The information on the time of day the accidents occurred indicates a high probability of accidents occurring during the afternoon hours compared to the morning hours. Families reporting accidents in this study indicated that over three-fourths of them occurred during the afternoon and evening hours while less than one-fifth of them occurred during the morning hours. Undoubtedly many factors contribute to this, such as the onset of fatigue late in the day and the rush to complete activities before the day is over. A recognition of the fact that the probability of accidents occurring in the afternoon is much greater than in the morning should stimulate individuals to plan the day's activities in such a manner as to avoid unnecessary risks during the afternoon hours whenever possible.

Where Accidents Occur

Highway accidents were reported by slightly more than one-fifth of the families and yard accidents by slightly less than one-fifth. About one-seventh of the accidents occurred in the house proper itself.

Weather Conditions

While weather conditions are often considered a major factor in accidents the results of this study show that in almost two-thirds of the cases the weather was clear when accidents occurred. Cloudy, raining, snowing or other conditions prevailed in slightly more than one-fifth of the cases. While poor weather conditions may be a major factor in some accidents these data

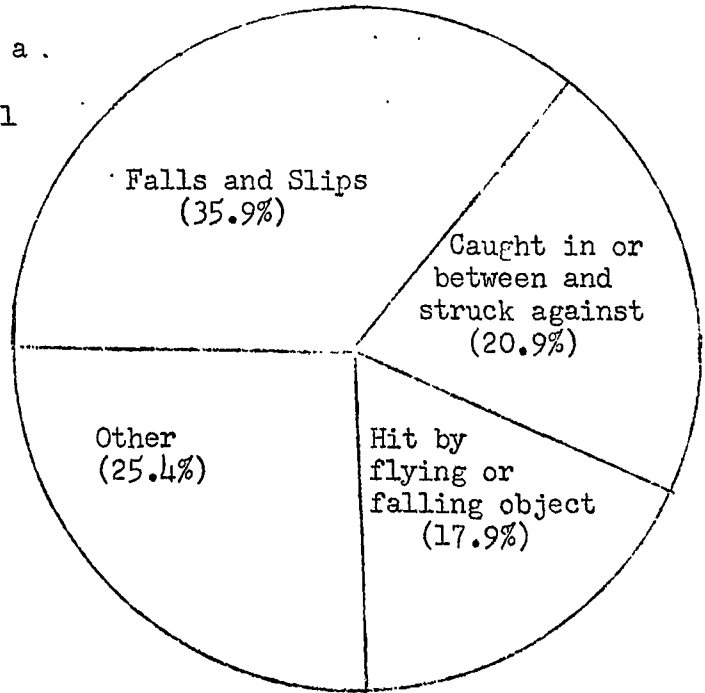
indicate that most of the accidents did occur when weather conditions were good. It should be remembered that some of the more hazardous work and play activities that young folks engage in as well as adults can only be done in good weather but still remain a potential source for accidents.

Activity at Time of Accident

Driving and playing were both reported in slightly more than one-fifth of the cases as the activity engaged in at the time of accident. Chores, housework and yardwork were reported as the activity in less than one-tenth of the accidents. Fieldwork accounted for about one-seventh of the accidents. These figures indicate that for the families surveyed recreational activity was as hazardous as any activity.

Type of Accident

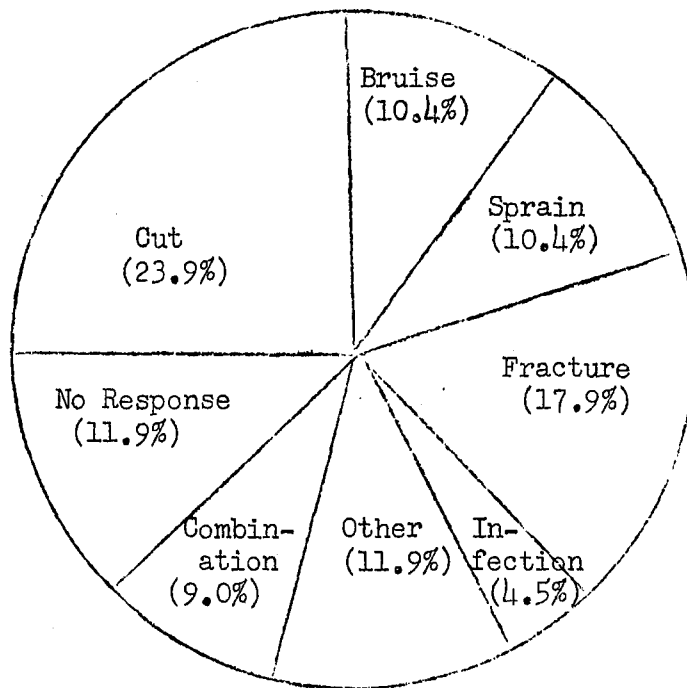
Falling or slipping accounted for over a third of the accidents reported. Falls from one level to another, such as down a stairway or off a porch were reported in almost a quarter of the cases. Being caught in or between or being struck against an object accounted for slightly more than one-fifth of the accidents. Another large category accounting for slightly less than one-fifth of the accidents was being hit by a flying or falling object. An additional fifth of the accidents were classified as other or miscellaneous in that most of them involved unique situations and were difficult to classify in any common category.



Type of Injury

Cuts accounted for almost a fourth of the injuries, bruises and sprains each for about a tenth of the injuries, fractures for slightly less than a fifth of the injuries and infections for less than a twentieth of the injuries. About a tenth of the injuries were combinations of cuts, bruises, sprains, fractures and infections. It should be remembered that lesser injuries not requiring treatment by a physician or time off are not included here as accidents. Since cuts account for such a large percentage of the injuries it would seem advisable to have at least a minimum of first aid knowledge and materials available in all homes to prevent unnecessary risk of infection and more serious harm.

Type of Injury

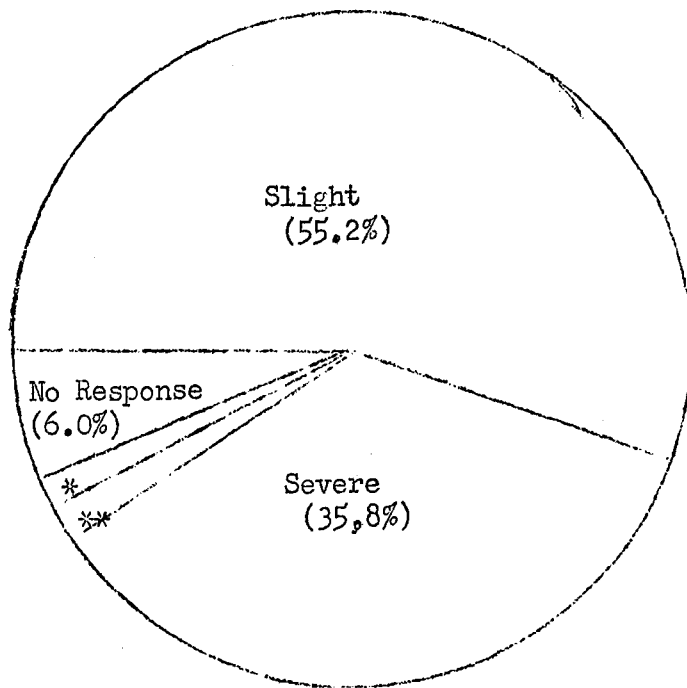


Extent of Injury

Accidents of various degrees of seriousness occur and in order to get some estimate of the extent of the injury the respondents were asked to classify them as slight, severe, permanent or fatal. The results of this indicate that

over half of the injuries could be classified as slight, about a third as severe and only 3% as permanent or fatal. On the basis of this one might say that the chances of serious injury from an accident were about two in five, which are not the best odds.

Extent of Injury

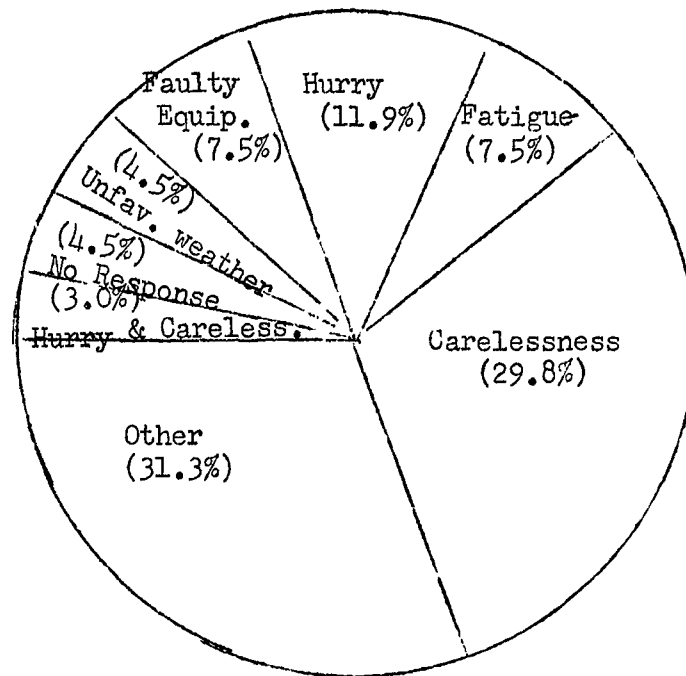


* Fatal (1.5%)
** Permanent (1.5%)

Causes of Accidents

Each respondent was asked what they felt was the cause of the accident. In over two-fifths of the cases the respondent indicated that either hurry, carelessness or a combination of the two was the primary cause of the accident. Faulty equipment and fatigue were each mentioned in less than a tenth of the cases. Unfavorable weather, which is often thought to be a major cause of accidents, was cited in less than a twentieth of the cases by the respondents. Other causes were given in about a third of the cases.

Cause of Accident



Costs of Accidents

To get an estimate of the costs of accidents the respondents were asked to indicate time lost, days spent in hospital and dollar costs for doctors' fees, hospital costs and property loss as a result of the accident. Their responses indicated that slightly less than a fifth did not lose any time from their routine activity as a result of the accident. Approximately another fifth had lost one to two days of time, about a quarter had lost from two to ten days and a twentieth from two months to a year's time.

Almost three-fourths of the respondents indicated they spent no time in the hospital as a result of their accident. About a tenth spent from one to three days in the hospital, another tenth from three to seven days and about a twentieth from eight to ten days.

The doctors' costs varied considerably. About a third of the respondents reported that they had no doctors costs while those who did report a cost ranged from about two to two hundred and fifty dollars. The most frequent cost, reported by a tenth of the respondents, was about ten dollars.

Hospital costs varied as did doctors' costs. Over three-fourths reported no hospital cost associated with the accident while others reported costs ranging from ten dollars to about three hundred and fifty dollars.

About nine-tenths of the respondents had no property loss. Losses reported ranged from eight dollars to as high as \$7,000. It should be remembered that most families do not keep a very good record of the actual cost associated with an accident and that the figures given in this report should merely act as guides to give some indication of some of the costs associated with accidents.

One additional cost which is a difficult one to measure is the cost in terms of inconvenience and anxiety of the family members about the injured person. While they cannot be measured in dollars these costs are often the most severe costs as can be attested to by any mother or father who has had an injured child in their family.

Safety Practices

The respondents were asked to respond to a series of questions regarding equipment or practices in their home which could be considered minimal in terms of safety and accident prevention. The results of these questions indicate that almost half of the families reported a lack of rails on stairs and steps in and about their homes. The fact that falls accounted for such a large percentage of accidents would appear to indicate that making provisions for railings in such instances is of paramount importance. Slightly more than a fifth of the families reported the practice of starting fires with liquid fuels, a dangerous practice at best. Only a half of the families reported that a household first aid kit was available in case of accident, and more than half the families had fire extinguishers on hand in case of fire.

On the other hand over four-fifths of the families reported that they did store poisonous or toxic substances out of the reach of children and over

four-fifths also indicated that they had stools and ladders available for climbing. About three fifths of the families reported that they had protective racks for such sharp items as knives and other implements.

Most of these items show that there is considerable room for improvement in even minimal safety provisions among the families surveyed.

Farm and Nonfarm Differences

The information from this survey clearly indicates that the probability of a farm family having an accident is significantly greater than that of a nonfarm family. The analysis shows that almost a quarter of the farm families reported accidents compared to about an eighth of the nonfarm families, thus accidents were twice as frequent for farm families as nonfarm families.

While there was a striking difference in the number of accidents between farm and nonfarm families a statistical test showed that there were no significant differences between farm and nonfarm families in the member who was injured, the time lost due to accident, the costs of the accident, causes of accidents, places of accidents and type of accident. While there may be other differences in farm and nonfarm accidents the results of these tests show that with respect to the above characteristics they are quite alike.

Whether a person owned his farm or did not own his farm had no effect upon the probability of accidents occurring, nor did the size of farm have any effect. In the case of town families the husband's occupation did not bear any significant relation to whether or not the family had had an accident during the previous 12 months.

A more detailed study of farm family activities verses nonfarm family activities is necessary before a clear explanation of the difference in number of accidents is possible. However, this information does indicate that farm families should pay heed to this difference and study their own situation in order to avoid insofar as possible this differential hazard.

Factors Associated with Accidents

In an attempt to find out if family characteristics such as the number of children, the level of living, employment of wife, and education level of family were important in whether or not a family had an accident an analysis of these items was carried out. This analysis showed that none of the background factors were significant in the overall sample or within the subgroups of farm and nonfarm families. Whether a family lives on a large farm or a small farm, or the father is a banker or a laborer in town, whether the wife works or doesn't work, whether there are many children in the family or few children in the family, as well as a number of other such factors did not appear to be related to the probability of an accident occurring in a family on the basis of information gathered in this study.

Education and Safety

Achieving the primary purpose of the survey, that is, contributing to a greater awareness and more care with respect to accident hazards in and about the home, is only possible if the families in Jackson County who have so cooperatively participated in this survey become more conscious of the need for safety in all of their activities.

The results of this study show definitely that farm homes have a much greater accident rate than do nonfarm homes and that continued education to increase safety and prevent accidents is necessary.

