LIFE INSURANCE COVERAGE OF KANSAS FARM-OPERATOR FAMILIES, 1955

by

JUNE LUCILE KREBS

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TABLE OF CONTENTS

INTRODUCTION

Families planning for financial security need to make provisions for income maintenance and large future expenditures. Loss of income may result from unemployment, illness, death or retirement of the breadwinner. Large expenditures of money are needed in the purchase of such goods and services as a home, automobile, or college education, and to meet costs involved in such unexpected events as accidents and major medical expenses. Additional sources of financial disturbance for which the family may not be able to make adequate provisions are inflation, unfavorable market prices and other economic forces which shall not be considered in this thesis. To meet some of the situations which are a source of insecurity, families may purchase insurance, save money from current income in anticipation of making a large expenditure, or go into debt at the time of need and pay later.[1]

Insurance is a well-established method of risk sharing based on the principle that the event insured against is predictable for the group, but not the individual, and that the individuals at stated intervals are willing to contribute a sum of money that will be sufficient in total to meet the insured losses of the individuals and the cost of administering the program. Kyrk suggested the following four general rules that families should follow when planning their insurance program:

> (1) Each family should determine which risks in its special circumstances present the most serious hazard; (2) if insurance against these risks is

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[1] Hazel Kyrk, The Family in the American Economy, pp. 174-177.

> possible, give insurance first place in its program of provision for the future, a high priority over any extensive program of saving; (3) give insurance against the risk or risks that would be financially most disastrous first place in the insurance program; and (4) compare types of policies with a view to securing the maximum protection for a given outlay.[1]

If families adhered to these suggestions, they would usually insure the husband in preference to the wife and children. And, the amount of insurance on the husband would vary with the number dependent on him for support.

This study is concerned with life insurance coverage of families and family members. A review of the results of surveys that have been made on life insurance ownership and on the patterns of insurance coverage by family socio-economic characteristics is first presented. Attention is then focused on estimates of these patterns as revealed in a recent state-wide survey of Kansas farm-operator families.

Review of Previous Studies

The methods used to obtain data for analyses of life insurance purchases depend on the ultimate uses of the analyses. Mueller described two methods: company records of policies, and interviews with policy holders. If the purpose of the research is to obtain information concerning the characteristics of life insurance policies, company records of policies are studied. If the purpose is to assess socio-economic characteristics of owners, attitudes toward life insurance, family insurance coverage, and

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[1] Ibid., p. 190.

other aspects of consumer behavior, then interviews and questionnaires obtained from a sample survey of the population are appropriate.[1] The second method was employed in the Kansas study which provided the data for this thesis.

There has been a limited number of surveys made specifically to determine the personal, financial, and family characteristics of life insurance holders. Surveys to be reviewed here are those of farm-operator families in Ohio,[2] Oklahoma,[3] and Vermont,[4] and of urban families in Ohio[5] and Connecticut.[6] A probability random sample of the United States was made in 1955 for the Institute of Life Insurance.[7] In addition to these specific studies of insurance, questions about insurance have been included in other surveys made in connection with financial security, social security or related financial matters. In the early 1950's prior to the introduction of the Social Security Act Amendment to include farm

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[1] Eve Mueller, "Sample Surveys as a Tool for Life Insurance Research," _Proceedings of the Business and Economic Statistics Section_, American Statistical Association, 1957, p. 422.

[2] Simon Dinitz, _Insurance Consumption Patterns_, Part II, pp. 1-14.

[3] D. B. Jeffrey and C. D. Maynard, _Life Insurance for Farmers_, Oklahoma State University Extension Service, Circular E-679, pp. 14-19.

[4] Robert Sinclair, _Insurance Purchases of Vermont Families_, Vermont Agricultural Experiment Station, Bulletin 615.

[5] Dinitz, _op. cit._, Part I, pp. 1-24.

[6] _Loc. cit._

[7] Institute of Life Insurance, _The Life Insurance Public_.

families, various state agricultural experiment stations co-operated with the United States Department of Agriculture in surveys of the provisions rural families had made for economic security in old age, their retirement plans and their attitudes toward extension of Old-Age and Survivors Insurance program. The cooperating states were Wisconsin,[1] Connecticut,[2] Texas,[3] and Kentucky.[4] In anticipation of a large state-wide survey of Kansas farm families, Correll conducted, in 1954, a pilot study similar to those just reported. In it she included questions concerning life insurance coverage of family members.[5]

These studies will be described briefly as to method, and then the major results obtained from them will be reviewed and summarized.

Description of Surveys. The Survey Research Center of the University of Michigan conducted for the Institute of Life Insurance a national survey of life insurance ownership. Over 4,000 families representing 13,000 individuals were interviewed in 1955.

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[1] William Sewell et al., Farmers Conceptions and Plans for Economic Security in Old Age, Wisconsin Agricultural Experiment Station, Research Bulletin 182.

[2] Walter McKain et al., Old Age Retirement in Rural Connecticut, Storrs Agricultural Experiment Station, Bulletin 299.

[3] William Adkins and Joe Motheral, The Farmer Looks at His Economic Security, Texas Agricultural Experiment Station, Bulletin 774.

[4] Robert Galloway, Farmers' Plans for Economic Security in Old Age, Kentucky Agricultural Experiment Station, Bulletin 626.

[5] Myrtle Correll, Provisions for Retirement and Financial Security by 60 Kansas Farm Families 1954, Report of Progress 22, Agriculture Experiment Station, Kansas State College.

The methods employed in this survey conformed to standard survey practices employed by the Survey Research Center.[1] The objectives of the national survey were to determine the number of individuals in the United States who had life insurance, the number of policyholders insured with legal reserve life companies, and the number insured in other companies; to study relationships between life insurance and certain demographic and economic factors; and, to discover people's attitudes toward life insurance.[2]

A survey of new policyholders was made by Northwestern Mutual Life Insurance Company in 1957. The objectives were to determine the socio-economic and insurance characteristics of the buyer, and to obtain other information that would be of value in promoting the life insurance business.[3]

The Research Department of Nationwide Insurance Companies of Columbus, Ohio sponsored four studies of insurance consumption patterns. These four studies were combined in a report by Dinitz, under whose general direction the studies were conducted. Two of the studies focused on the Nationwide policyholders who lived in the urban areas of New Haven, Connecticut and Columbus, Ohio. Data were obtained by means of personal interviews and by examining the insurance policies held by most of the individuals. Analyses were made of the amount and kinds of insurance protection in relation to income, age, education and occupation of the

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[1] Institute of Life Insurance, _op. cit._, p. 58.

[2] _Ibid._, p. 4.

[3] The Northwestern Mutual Life Insurance Company, _The People Who Buy Our Policies_.

breadwinner.[1] The Nationwide Insurance Companies also sponsored studies of life insurance ownership in rural areas of Vermont and Ohio. In the Vermont study, directed by Robert O. Sinclair, families were divided into five strata based on the number of animal units in the farming operation. A random sample within each stratum was used to select the 220 farmers interviewed. The results of this survey are included in the report by Dinitz, and also are reported in greater detail by Sinclair as a Vermont Agricultural Experiment Station publication[2] and as a doctoral thesis.[3] A fourth study reported by Dinitz and sponsored by Nationwide Insurance Companies was a rural Ohio survey which utilized a mail questionnaire technique. Of the 1500 questionnaires mailed to the Advisory Council Leaders of the Ohio Family Forum Groups, 445 usable questionnaires were returned. The respondents were not interviewed and their insurance coverage was not checked.[4] Thus, a variety of methods and techniques were employed by the Nationwide Studies.

Beginning in 1951 there was a series of studies by state agricultural experiment stations in cooperation with the United States Department of Agriculture which focused on economic security. These studies included information on life insurance

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[1] Dinitz, op. cit., Part I, pp. 1-24.

[2] Sinclair, op. cit., p. 4.

[3] Robert O. Sinclair, An Evaluation of Theories Relevant to Insurance Purchases Through an Analysis of the Insurance Programs of Vermont Farmers. Unpublished Ph.D. Thesis, Michigan State University, 1958.

[4] Dinitz, op. cit., Part II, pp. 1-14.

ownership of the farm operators. Sewell, Ramsey, and Ducoff reported on the survey conducted in the summer of 1951, by the Department of Rural Sociology of the Wisconsin Agricultural Experiment Station. Interviewed were 204 farm operators from six counties in the central sandy area in central Wisconsin, and 495 farm operators from the seven counties that make up the intensive dairying area in east central Wisconsin. These two areas represented a low and a high income farm group within the state.[1]

A parallel study was conducted that summer by the Storrs Agricultural Experiment Station in Connecticut. Samples of two non-metropolitan economic areas including 126 farm operators from a dairying area, and 257 farm operators from a diversified farming area were included.[2]

During the summer of 1952 a similar study was made in Wharton County by the Texas Agricultural Experiment Station. Interviews were conducted with 257 farm operators and 60 farm laborers and share croppers, representing two economic classes of farm families.[3] In 1954 a sample of 204 farm operators was interviewed in Harrison County, Kentucky. These farmers represented both intensive and extensive farming operations in the Bluegrass area.[4]

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[1] Sewell et al., op. cit., p. 3.

[2] McKain et al., op. cit., p. 7.

[3] Adkins and Motheral, op. cit., p. 5.

[4] Galloway, op. cit., pp. 6, 7.

Jeffrey and Maynard reported on a study of life insurance practices of 52 farm families in Payne County, Oklahoma. This is the county in which Oklahoma State University is located.[1]

A study of 60 selected Kansas farm families was made by Correll in 1954. The objectives were to determine financial status of these families, and to observe provisions they had made for financial security and retirement. The survey was limited to those families with husbands 50 years and older who had cooperated in the Farm and Home Management Association Program and had made financial records available for research studies at least one year during the period 1934-51.[2]

The 1954 Kansas survey was a pilot study for the statewide survey under Kansas Agricultural Experiment Station Project number 427, "Economic Status and Plans for Future Security of Rural Families," which provided the data for this thesis. The Kansas project was one of several contributing to the North Central Region Project NC-32, "Financial Security of Rural Families." Although several of the cooperating projects included questions concerning life insurance coverage, the results of these studies are not reported in this review of literature.

The objectives of the surveys varied as well as the methods of collecting and analyzing the data. The series of surveys made at the state experiment stations in cooperation with the United

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[1] Jeffrey and Maynard, <u>op. cit.</u>, p. 14.

[2] Correll, <u>op. cit.</u>, pp. 1, 2.

States Department of Agriculture reported on the number of farm operators insured and the face value of their insurance as related to age of operators. Life insurance coverage of family members was obtained in the Oklahoma and Kansas surveys. The Nationwide Insurance sponsored surveys provided detailed analyses of family and individual life insurance ownership as related to socio-economic variables. Because of the variation in types of analyses it is possible to present only a partial and incomplete summary of factors related to ownership of life insurance.

Results of Surveys. The surveys will be summarized by family members insured and the face value of policies as related to age and education of husband, size of family, and other socio-economic characteristics.

A majority of Americans were insured in 1955. Seventy-four percent of the adult males, 60 percent of the adult females and 53 percent of the children were insured with life companies.[1] The following reports on life insurance coverage are concerned mainly with the individual as a member of a family rather than as a part of the population.

Families Insured. The majority of families in the United States insured the life of at least one of its members. The 1955 national survey revealed that 86 percent of all families owned some form of life insurance, and that families with husband and wife present were insured more frequently (91%) than broken

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[1] Institute of Life Insurance, 1956 Fact Book, p. 14.

families.[1] Fewer spending units (79%) reported life insurance in the 1957 survey made for the Federal Reserve Board of Governors.[2] Perhaps the difference in percentage insured was due, in part, to the difference between the units surveyed, the family and the spending unit. The results of the four rural surveys indicated a lower proportion of families insured. At least 80 percent of the farm families were insured in Ohio,[3] Kansas,[4] and Vermont,[5] but only 40 percent of the Oklahoma families.[6]

Family Members Insured. Most of the surveys were concerned with the insurance coverage of the main wage earner in the family. Not all reports distinguished clearly between "breadwinner," "husband," "farm operator" or "head of family." Except in Kansas and Ohio the wage earner was referred to as the farm operator in rural surveys. Correll referred to the wage earner as the husband in the Kansas survey, and Dinitz used the title breadwinner in his reports of the surveys made in rural Ohio and Vermont as well as the two urban surveys. Sinclair referred to the Vermont farmers as farm operators. Less than 0.4 percent of the

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[1] Ibid., p. 16.

[2] Board of Governors of the Federal Reserve System, "Financial Position of the Consumer," Federal Reserve Bulletin, Aug. 1957, 43:888.

[3] Dinitz, op. cit., Part II, p. 11.

[4] Correll, op. cit., p. 9.

[5] Dinitz, loc. cit.

[6] Jeffrey and Maynard, op. cit., p. 14.

breadwinners in the New Haven survey were single women.[1] The percent of women breadwinners was not given in other surveys reported by Dinitz. So, in general, the breadwinner is the husband or male head of the family.

The husbands were more frequently insured than their wives or children in all surveys that reported the family members insured. The 1955 national survey estimated that 88 percent of the husbands and 66 percent of the wives in the husband-wife families were insured, and one-half of the families had insurance on another family member. Among insured husband-wife families, the proportion insuring the husband was even higher (97%) as was the proportion insuring the wives (73%) and other members of the family (55%).[2]

Correll reported that among the Kansas insured families, 98 percent of the husbands and 57 percent of the wives were insured. Almost 40 percent of the families with children insured at least one child.[3]

The families in the urban surveys insured their family members more frequently than rural families. Husbands were insured in 94 percent of the families in New Haven and Columbus surveys.[4] The percent of husbands insured in the rural surveys ranged from

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[1] Dinitz, _op. cit._, Part I, p. 1.

[2] Institute of Life Insurance, _The Life Insurance Public_, p. 33.

[3] Correll, _op. cit._, p. 10.

[4] Dinitz, _op. cit._, Part I, p. 3.

38 percent of the Oklahoma farm operators[1] to 86 percent of the breadwinners in rural Ohio.[2] The percent of insured husbands in the two areas surveyed in Wisconsin varied from about one half of the farm operators in the low-income area to two thirds in the higher-income area.[3] A summary has been prepared to assist the reader, and is presented in Table 1.

Table 1. Husbands and wives insured by area surveyed.[a]

Survey area	Farm operator, breadwinner or husband	Wife
	Percent insured[b]	
Rural		
Oklahoma	38	30
Wisconsin, Economic area 5	49	NA
Kentucky	63	NA
Wisconsin, Economic area 7	66	NA
Connecticut	70	NA
Vermont	75	43
Texas	82	NA
Kansas	83	48
Ohio	86	51
Urban		
Columbus, Ohio	94	74
New Haven, Connecticut	94	81
National		
Institute of Life Insurance Survey	88	66

[a] See the text for specific references and limitations of data.
[b] NA means not available.

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[1] Jeffrey and Maynard, op. cit., p. 15, Table III.

[2] Dinitz, op. cit., Part II, p. 4.

[3] Sewell et al., op. cit., p. 7.

Wives in the urban families were also insured more frequently than the wives in rural surveys. Three fourths of the wives in Columbus and four fifths of the wives in the New Haven surveys were insured.[1] The proportion of wives insured in the rural areas ranged from one third of the wives in Oklahoma[2] to over half of the wives in Ohio.[3] Less variation was observed in the percentage of wives insured than of insured husbands in the rural areas (Table 1).

The national survey indicated that most of the families with children insure their children. About 60 percent of the families with children insured all of their children, and 35 percent insure none of their children. Thus, the families tended to insure all of their children or none.[4]

New Haven families with children insured children in their families more frequently (90%) than did the families in the rural surveys.[5] The percent of eligible rural families insuring children ranged from 43 percent in Vermont to 62 percent in rural Ohio.[6]

Face Value. The aggregate family insurance coverage varied

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[1] Dinitz, _op_. _cit_., Part I, p. 13.

[2] Jeffrey and Maynard, _op_. _cit_., p. 15, Table III.

[3] Dinitz, _op_. _cit_., Part II, p. 4.

[4] Institute of Life Insurance, 1956 _Life Insurance Fact Book_, p. 16.

[5] Dinitz, _op_. _cit_., Part I, p. 14.

[6] _Ibid_., Part II, p. 9.

from an average of $4,225 among the Vermont families[1] to $7,545 for the urban families in New Haven.[2] The average amount of insurance held by the insured rural families was lowest in Vermont, $5,350[3] and highest in Oklahoma, $9,283.[4] Only four of the surveys reported the average amount of family insurance coverage for all or insured families. Average face values used in the comparisons of insurance coverage are the arithmetic means rather than the medians.

The average amount of insurance on the husband tended to be directly related to family coverage. The coverage on the husband in Vermont whose families had the lowest family coverage was $4,220[5] while the coverage on the husband in Oklahoma whose families had the highest coverage was $6,908.[6] Kansas was the only rural survey reporting over one third of the husbands or farm operators with an average insurance coverage of $5,000 or higher.[7] The insured New Haven breadwinners had an average insurance coverage less than the husbands in some of the rural surveys, while the breadwinners in Columbus averaged more coverage than

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1 Ibid., Part II, p. 11.

2 Ibid., Part I, p. 15.

3 Ibid., Part II, p. 11.

4 Jeffrey and Maynard, op. cit., p. 16, Table IV.

5 Dinitz, op. cit., Part II, p. 5.

6 Jeffrey and Maynard, loc. cit.

7 Correll, op. cit., p. 9, Table 16.

the farm operators in the rural surveys.[1]

Wives were insured for significantly lesser amounts than husbands according to the findings in three surveys. Average face values of the insured wives' policies were under $2000. Children had policies averaging over $2000 per family in surveys reporting average amounts of insurance coverage on children.

Number of Policies. Breadwinners in urban surveys had more policies than farm operators, and husbands had more policies than wives. Rural husbands averaged over 1.5 policies per insured husband, and wives less than 1.5 per insured wife in Vermont and Ohio.[2] Families insuring children averaged over two policies on children per family.[3]

Most of the surveys analyzed the amount and frequency of insurance on the husband according to the age of husband. However, few studies other than those sponsored by the Nationwide Insurance Companies and Institute of Life Insurance reported insurance ownership by age and occupation of husband, family size, residence, income, net worth and for rural surveys, size of farm.

Age of Husband and Life Insurance. In general, the younger farmers were more frequently insured and were covered with more insurance than older farmers. Sinclair reported Vermont farmers under 40 to be the most frequently insured group, but that operators age 40-59 had the greatest amount of insurance coverage.[4]

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[1] Dinitz, op. cit., Part I, p. 4, Table 2.

[2] Ibid., Part II, pp. 4, 7.

[3] Ibid., p. 9.

[4] Sinclair, op. cit., p. 28.

In the urban surveys, breadwinners under 30 were more frequently insured for amounts over $5000 than those in older age groups.[1] Since husbands were the family member most frequently and most highly insured in all surveys, the frequency and amount of insurance held by insured families in relation to age of husband would tend to be the same as for husbands.

Insurance coverage of the family and individual family members was analyzed by age of husband in the Oklahoma survey. The average amount of insurance on each insured family member as well as the aggregate family coverage was inversely related to the age of husband.[2]

Education of Husband and Life Insurance. Families whose husbands had some college education were insured more frequently, and the adults were insured for greater amounts than if the husband had only a grade or high school education. The 1955 national survey found the least frequently insured families to be those whose husbands had only a grade-school education. Adults from college-educated families had more coverage on an individual family member. Families tended to concentrate the family's insurance coverage on the head of the family if the husband had attended college, while families whose husbands had less education tended to insure all family members.[3]

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[1] Dinitz, op. cit., Part I, p. 6 Chart A, p. 8 Chart B.

[2] Jeffrey and Maynard, op. cit., p. 16, Table IV.

[3] Institute of Life Insurance, The Life Insurance Public, p. 37.

Vermont farm operators with some college education were the most frequently insured group and more frequently had insurance coverage of $5000 or over. Operators with a grade-school education were insured as frequently as those with a high school education, but 98 percent had coverage of less than $5000.[1] Dinitz reported that breadwinners in New Haven and Columbus more frequently had insurance coverage over $5000 if the husband had some education beyond high school.[2]

Size of Family and Life Insurance. Families consisting of adult members did not have life insurance as frequently as families with children under 18 years. Husbands in families with dependent children were more frequently and highly insured than those with no dependent children. The Institute of Life Insurance reported: "Generally speaking frequency of coverage varies directly with the degree of family responsibility."[3] They found 83 percent of the families with children under 18 had insurance on the husband, and 77 percent of the families with no children insured husbands.[4]

Only 60 percent of the Vermont families of size one or two had insurance on the farm operator, and no operator was insured for over $5000. Families with six or more members averaged less insurance on the operator and he was less frequently insured

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[1] Sinclair, op. cit., p. 29, Table 9.

[2] Dinitz, op. cit., Part I, p. 6, Chart A; p. 8, Chart B.

[3] Institute of Life Insurance, op. cit., p. 22.

[4] Loc. cit.

than in families of size three to five. Sinclair reasoned that farmers with larger families spread the amount of money available for insurance premiums over more family members. Thus, the husband had less coverage than those in smaller families.[1]

Size of Farm, Tenure and Life Insurance. Sinclair observed a relationship between the size of farm operated and the amount of insurance on the farm operator. He stated that the correlation between size of farm operated and life insurance indicated that life insurance "... is in part a function of income or income-earning ability." Farm operators were more frequently and more highly insured in the larger size farm classes.[2] It should be pointed out, however, that the size of farm was based on the number of animal units, thus, size of farm might also reflect the net worth of the farm operator.

The effect of tenure was not revealed in the Vermont study since 97 percent of the farmers owned their farms. Tenure showed little relationship to amount of insurance coverage of the Texas farmers. However, within each tenure group, operators of larger farms had a greater amount of coverage.[3]

Net Worth and Life Insurance. The proportion of farm operators with life insurance did not show a consistent pattern in relation to net worth in the Texas and Wisconsin surveys. No relationship was observed between amount of insurance coverage and

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[1] Sinclair, op. cit., pp. 29, 30.

[2] Ibid., pp. 26, 27.

[3] Adkins and Motheral, op. cit., p. 12.

net worth among the Wisconsin operators,[1] whereas a positive relationship was found among the Texas farm operators.[2]

Occupation and Life Insurance. It has been observed that urban breadwinners were more frequently insured than the farm operators. Farmers were the least frequently insured major occupational group. Slightly over half (52%) of the farmers were insured in life companies. They were covered by burial, fraternal, and other types of private insurance more often than other occupational groups. Farmers had insurance with lower face value than managerial, self-employed and professional people.[3] Dinitz reported that white-collared workers held insurance valued at over $5000 more frequently than blue-collared workers.[4]

Residence and Life Insurance. The highest percent of adults insured in life companies lived in cities of 50,000 and over, and the residents in the open country were the least frequently insured according to results in the national survey. However, the adult rural insured resident had about as much insurance coverage as urban policyholders.[5]

Income and Life Insurance. The family's income has been considered a factor closely associated with life insurance coverage.

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[1] Sewell et al., op. cit., p. 7.

[2] Adkins and Motheral, loc. cit.

[3] Institute of Life Insurance, The Life Insurance Public, pp. 20, 21.

[4] Dinitz, op. cit., Part I, p. 5.

[5] Institute of Life Insurance, op. cit., pp. 26, 27.

Dinitz found little relationship between family income and insurance in his summary of two rural and two urban studies.[1] Hermalin summarized from the national survey data that the frequency of coverage did not vary as directly with the family income as the amount of insurance coverage. Families with lower incomes indicated a tendency to spread the insurance on all family members, and those in higher income groups were more likely to concentrate their insurance.[2]

"Style of Life" and Life Insurance. Dinitz suggested social standing or "style of life" as a variable affecting life insurance purchases.

> This interpretation stresses that life insurance consumption patterns reflect the value orientations and 'styles of life' of persons and that these value orientations are in turn largely a function of their socio-economic statuses or positions. This suggests that a person's outlook and his values determine his insurance behavior and that he holds these values primarily by virtue of his status position in society.[3]

"Style of life" as described by Dinitz involves the system of values and attitudes that make up a family's standard of living.[4] The "style of life" theory was tested by using data from the New Haven survey. Dinitz reported the method used to classify families into upper, middle and lower strata.

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[1] Dinitz, _op_. _cit_., Part II, p. 12.

[2] Albert Hermalin, "The 1955 Survey of Life Insurance Ownership," _Proceedings of the Business and Economic Statistics Section_, American Statistical Association, 1957, p. 426.

[3] Dinitz, _op_. _cit_., Part I, p. 16.

[4] Kyrk, _op_. _cit_., Chapter XIX.

> The respondents were categorized in terms of their educational attainments into three groups. The factors of occupation, income, and aspiration as well as attitude responses were successively added until two pure and a somewhat heterogeneous group emerged.[1]

The two pure groups represented the lower upper and the lower strata of society. The less homogeneous group was typical of the middle stratum.

A comparison of the insurance coverages of these groups indicated that the upper group had more insurance coverage, and their individual policies were of a higher face value than lower groups.[2]

About one fifth of the Vermont farmers were revisited to obtain additional information on their socio-economic status as well as their knowledge of insurance and insurance principles. From the data received in this survey the social standing of the farm families was determined and related to insurance consumption. Sinclair found that income and net worth as well as consumption of insurance increased with social participation scores.[3]

Summary. A review of surveys made of life insurance ownership indicates that the majority of families in the United States had insurance. Urban families and family members were more frequently insured than rural residents. Rural surveys indicated that from 40-89 percent of the farm families had at least one family member insured.

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[1] Dinitz, _op_. _cit_., Part I, p. 19.

[2] _Ibid_., pp. 19-22.

[3] Sinclair, _op_. _cit_., p. 31.

The husband was the family member most frequently insured, and the face value of his insurance was higher than other family members. He had more policies and his policies were of a higher average face value. The wife was less frequently insured than the husband. The wife had fewer policies, and the policies were of a lower average face value. The majority of families insured their children, and those who carried any insurance on children tended to insure all of their children.

Younger husbands were insured more frequently and for greater amounts than older husbands. Families whose husbands had some college education were insured more frequently and for greater amounts than families with husbands who had only a grade or high school education. Husbands were more frequently insured if they had dependent children. Families which tended to spread their insurance coverage over all family members and concentrate less on the husband were the larger families, families whose husband had no more than a high school education and the lower-income families.

Neither net worth nor income showed a consistent relationship with insurance coverage in all surveys. Size of farm was directly related to insurance coverage, but tenure showed little relationship. Farmers were insured less frequently than members of other occupational groups.

An assessment of the relative importance of the socio-economic variables related to life insurance is more difficult to summarize: The urban surveys reported by Dinitz indicated that age, education, occupation of the breadwinner and possibly income were related to life insurance coverage. No relationships were observed between family size, owner-renter status, job security and face value of life insurance. Families with younger, better-educated husbands with higher job status, and to some extent higher incomes, had more insurance coverage.[1] Analyses of insurance coverage of urban families made between two socio-economic factors and insurance coverage indicated that education was the most significant factor affecting the amount of insurance coverage, and income the least.[2]

Dinitz stated that in rural Ohio, as in Vermont, "The amount of formal education again proved to be the most significant single variable."[3] He continued: "In Ohio, in contrast with Vermont, family size, age, and income were significantly related to many insurance variables."[4] These generalizations of the Vermont survey differed from Sinclair's report of the Vermont farmers. In summarizing the results of the survey Sinclair stated:

> It would appear that the life insurance purchases of Vermont farm operators are a function of several socio-economic variables. The more important of these variables, at least of those measured, are income, age, and social status. Having no significant effect are education of the operator and number of dependents.[5]

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[1] Dinitz, op. cit., Part I, p. 15.

[2] Ibid., Part I, p. 9.

[3] Ibid., Part II, p. 12.

[4] Ibid., Part II, p. 13.

[5] Sinclair, op. cit., p. 31.

Thus, age and education of husband, family size, income and social status have been found to be significantly related to life insurance ownership of rural families. However, the relative importance of these factors varied by the area surveyed and the study.

Objectives

The specific objectives of this study were:

1. To determine the frequency and amount of life insurance coverage among Kansas farm-operator families and family members by type of family.
2. To observe relationships between insurance variables and the selected socio-economic factors: age and education of husband, size of family, family net worth, income, indebtedness, tenure and the degree of planning indicated for financial support in the event of disability or death of husband or wife.

METHOD OF PROCEDURE

Source of Data

The data were collected in a state-wide survey of Kansas farm-operator families in 1956, and were applicable to the year 1955. The survey was a part of the Kansas Agricultural Experiment Station Project, Organized Research Project No. 427, "Economic Status and Plans for Future Security of Rural Families," a contributing project to North Central Regional Research Project NC-32, "Financial Security of Rural Families."

The sample was obtained by selecting at random three rural counties in each of the ten economic areas of Kansas, as delineated in the 1950 census. Within these 30 counties, three rural townships were chosen at random. From the names listed in the county assessor's record in each of the 90 selected townships, ten names were selected by taking every nth family, beginning with a random start. Families interviewed were farm-operator, husband-wife families. Excluded were families broken by death or divorce and families not engaged in farming operations.

In advance of the interview a personal letter giving the purpose of the study was sent to each family. The name of the interviewer, and the approximate dates they might expect her to call were given, and their cooperation was requested. Completed schedules were obtained from 527 families.

The interview was structured by an 11-page schedule in which the data were recorded. Information on the family's composition, its income, assets, liabilities and farm operation was obtained. One section of the schedule included questions concerning the provisions families had made for financial security. In this section, families were asked who in the family was insured, the amount of insurance on the family member, the type of policies held, and description of the policies held by year purchased, face value and annual premium. The families were also asked the amount of planning they had done in the event of death or disability of husband or wife.[1]

Method of Analysis

The data were edited, coded, and punched on nine IBM cards per schedule. In addition an IBM card was made for each policy recorded during the interview. Data on insurance, socio-economic factors of the family, and the extent of planning the family had done for the event of the death or disability of husband or wife were punched on each card. Tabulations were made from IBM counts on the frequency and face value of insurance held by the families and family members in relation to the family characteristics.

The frequency families were insured was determined by the percent of families in a group who had a life insurance policy on at least one family member. Percentage of husbands and wives insured was computed by the number of families in the group insuring these family members. Since data were not available on the number of children in the family insured, frequency of insurance was made on the basis of the number of families insuring one or more children. Children included in the family were those who received one half or more of their support from their parents.

All averages referred to in the following analyses are the arithmetic mean. Average face value of insurance was determined

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[1] A more detailed report on the selection and evaluation of the sample, method of interview, and a copy of the schedule are included in an unpublished report by Richard L. D. Morse, The Economic Status and Provisions for Financial Security of Kansas Farm Operator Families, Department of Family Economics, Kansas State University.

for all and for insured families in the survey. Concentration of insurance on the husband is actually the percent that the husband's insurance was of the family's total insurance.

Statistical analyses were made by using the usual contingency chi square tests and t tests.[1] If the probability of rejecting a null hypothesis was less than .05, this was indicated with one asterisk; if less than .01, by two asterisks; and if less than .001, by three asterisks.

Analyses were made of insurance coverage in relation to age and education of husband, size of family, family net worth, farm income and total income, indebtedness, tenure, and degree of planning. Methods used to classify the families by these factors are presented in the discussion of the results of the analyses.

RESULTS

The frequency with which families and family members were insured, the number of life insurance policies held, the face value of the policies, and the percent of the family's insurance that was concentrated on the husband are presented.

Factors considered related to life insurance ownership were: age of husband, amount of formal education of husband, size of family; amount and sources of the family's income, its net worth, debts and tenure; and, the amount of planning done by the family for its economic security in the event of death or disability of the husband or wife. These factors were employed as independent

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[1] George W. Snedecor, Statistical Methods.

variables in analyses made of the family life insurance coverage. Additional analyses were made of the families insured and the concentration of the family's insurance on the husband by: age and education of husband, age of husband and net worth, and education of the husband and net worth.

Family Life Insurance Coverage

Seventy-one percent of the 527 families interviewed insured one or more members of the family. All were husband-wife families and about two thirds had dependent children. Husband-wife families without dependent children less frequently (55%) had life insurance than families with dependent children (80%). The number of families in each group, and the percent having life insurance are indicated in Table 2.

Table 2. Families insured by child dependency.

Family type	All families		Families with life insurance***	
	Number	Percent	Number	Percent
Without dependent children	184	35	102	55
With dependent children	343	65	274	80
All families	527	100	376	71

*** Chi-square = 34.30; 1 d.f.; $P < .001$.

Family Members Insured. Among all 527 families, over two thirds insured husbands, one third insured wives, and one fourth had insurance on children as shown in Table 3. Nearly all of the

Table 3. Family members insured by all and insured families, and by child dependency.

Family member	All families: Number	All families: Percent (N=527)	Families with life insurance: All: Percent (N=376)	Families with life insurance: Dependent children: Number	Families with life insurance: Dependent children: Percent (N=274)
Husband	362	69	96	264	96
Wife	197	37	52	136	50
Children	145	28	38	145	53

insured families had insurance on the husbands, one half insured wives, and more than one third had insurance on children. Since families without dependent children would be unlikely to carry insurance on children, the 274 families with dependent children were analyzed separately. The percent insuring husband and wife remained essentially unchanged, but the percent insuring the children increased. The presence of dependent children altered only the proportion of families insuring children, and not the disposition to insure either the husband or the wife. Supporting data are presented in Table 3.

Insurance coverage of family members and combination of family members among families with and without dependent children is shown in Table 4. The husband was the only member insured in 126 families, the wife in 9 families, while the children were the only members insured in 3 families.

Families with dependent children were less likely (31%) to insure only the husband than families without dependents (41%). Nearly two thirds of the insured families had insured at least two family members.

Table 4. Insured families by family members and child dependency.

Family member upon whom insurance is carried	Insured families: With dependent children (N=274)		Insured families: No dependent children (N=102)		Insured families: All (N=376)	
	Number	Percent	Number	Percent	Number	Percent
Husband only	84	31	42	41	126	34
Both husband and wife	39	14	57	56	96	26
Husband, wife, and one or more children	90	33	--	--	90	24
Husband and one or more children	50	18	--	--	50	13
Wife only	6	2	3	3	9	2
Wife and one or more children	2	1	--	--	2	--
One or more children only	3	1	--	--	3	1

Face Value. The total face value of all life insurance policies was $2,833,000. Over $2,000,000 of the insurance was on the lives of the husbands, and the remaining $787,000 was on wives and children. The face value of the children's policies was $470,000 compared to $317,000 for the wives. (Table 6.)

Over one half of the families (57%) carried from $2,500 to $10,500 of life insurance with the mode estimated to be $5,500 and the median $4,770. Over one half of the total value of insurance was carried by the 15 percent of the families with policies totaling $10,500 or more. The mean value of insurance per family was $7,700. Supporting data are presented in Table 5.

Table 5. Face value of family's life insurance.

Amount of insurance	Families	
	Number	Percent
No information	1	--
Less than $1,000	7	2
$1,000 - $1,499	38	10
$1,500 - $2,500	61	16
$2,501 - $5,499	107	29
$5,500 -$10,499	106	28
$10,500 and over	56	15
All	376	100

Husbands were the most frequently insured member of the family, and the face value of their insurance averaged $5,800 among insured families and $4,100 among all families. These values were higher than the average policy held ($3,800) because husbands averaged more than one policy per family. The average face value of the children's policies was $900 among all families and $1,200 among insured families. These values were 50 percent higher than the average face value of the wives' policies of $600 and $800, respectively. The face value of the life insurance policies held by family members is presented in Table 6.

<u>Number of Policies</u>. A total of 1,095 life insurance policies were reported by the 376 insured families. Over one half of the policies were on the husbands, an average of 1.6 policies per insured husband. Insured wives had an average of 1.1 policies, and the families who insured children had an average of 2.1 policies

Table 6. Face value of life insurance policies held by family members.

Family or family member	Face value of life insurance policies: All policies	Average: Per policy	Average: Per insured family (N=376)	Average: All families (N=527)
Husband	$2,182,000	$3,800	$5,800	$4,100
Wife	317,000	1,500	800	600
Children	470,000	1,500	1,200	900
Family	2,883,000	--	7,700	5,400

on children per family. The average number of policies per insured family was 2.9. These data are presented in Table 7.

Table 7. Policies held by insured family members.

Insured	Number of insured	Number of policies	Policies per insured member
Husband	362	574	1.6
Wife	197	217	1.1
Children	145	304	2.1[a]
All individuals	704	1095	1.6
All families	376	1095	2.9

[a] Average number of policies per family insuring children.

<u>Size of Policies</u>. Nearly 14 percent of all policies had a face value of less than $1,000, and over one half had values less than $1,500. Only 21 of the 1,095 policies had face values of $10,500 or more.

The distribution of policies by face value on the insured family member indicates that the husbands were not only more frequently insured and covered by more policies, but their policies were also of a higher face value, as shown in Table 8. Only 5 percent of the husbands held policies with face values under $1,000, but over one fifth of the wives and children had policies valued under $1,000.

Table 8. Life insurance policies by face value and family member insured.

Family member	Face value: Not given	Less than $1,000	$1,000-1,499	$1,500-2,499	$2,500-5,499	$5,500-10,499	$10,500 & over	All policies
	Percent							
Husband	--	5	33	27	24	8	3	100
Wife	--	25	54	14	6	0.5	0.5	100
Children	1	21	49	20	8	1	--	100

Concentration on the Husband. The concentration of the family's insurance coverage on the life of the husband was greater than the data heretofore presented might indicate. For each family the face value of coverage on the husband was figured as a percent of the total coverage for the family. The distribution is presented in Table 9. Over one third of the families insured only the husband, and 85 percent placed one half or more of their insurance on the husband.

Summary. Seventy-one percent of the families carried insurance on one or more members. Among the insured families the husband was almost always insured, and the wife and children, if present, were insured by one half of the families.

Table 9. Percent of family's insurance on husband.

Percent of insurance on husband	Families with insurance on husband (N=362)	
	Number	Percent
100	126	35
90	15	4
80	27	7
70	33	9
60	47	13
50	57	16
40	18	5
30	18	5
20	12	3
10	9	2
All	362	100

The families concentrated their life insurance on the husband. He was the family member most frequently insured. More policies were on his life, and the face value of his policies was more than double that for other members of the family.

Age of Husband

The families were divided into four groups according to the age of the husband: under 40, 40-49, 50-59, 60 and over. Each group contained from 21 to 29 percent of the 527 families. The percent of families in each group having insurance, and the average face value of the family's insurance among the insured and all families are shown in Table 10.

Families Insured and Face Value. Families with younger husbands were more frequently insured in larger amounts than families with older husbands. Over one half of the families in this survey

Table 10. Families insured by age of husband.

Age of husband	All families: Number	All families: Percent	Insured families***: Number	Insured families***: Percent	Face value of family's insurance: All families (N=527)	Face value of family's insurance: Insured families (N=376)
Under 40	137	26	111	81	$7,300	$9,000
40 - 49	151	29	127	84	7,200	8,500
50 - 59	111	21	77	69	5,100	7,300
60 and over	128	24	61	48	1,800	3,900
All	527	100	376	71	$5,400	$7,700

*** Chi-square = 52.19; 4 d.f.; $P < .001$.

had husbands under 50 years of age. Of these younger families, 83 percent reported having life insurance with an average face value of $8,700. By contrast only 58 percent of men 50 years of age or older held life insurance policies with an average value of $5,800 per insured family.

Family Members Insured. The tendency for husbands to be more frequently insured prevailed for all age groups. The percentage of families insuring the husbands decreased from 99 percent in the families with husbands under 40 to 90 percent in the families with husbands 60 years of age and over. A reverse pattern was indicated but not statistically significant for insurance coverage of the wives. The lowest proportion of children insured (among families with children) was among families with husbands under 40 years of age. These data are presented in Table 11.

At least 96 percent of the husbands were insured in all age groups regardless of the presence or absence of dependent children except the fifteen husbands 60 years and over who had dependent

Table 11. Family members insured by age of husband among insured families.

Age of husband	All insured families (N=376): Insured husbands: Number	Percent	Insured wives[a]: Number	Percent	Insured families with dependent children (N=274): All: Number	Insured children: Number	Percent
Under 40	110	99	52	47	101	40	40
40 - 49	123	97	64	50	111	69	62
50 - 59	75	97	44	57	47	28	60
60 and over	54	90	37	59	15	8	53
All	362	96	197	52	274	145	53

[a] Chi-square = 4.06; 3 d.f.; n.s.

children. As indicated in Table 12, only two thirds of this group of older husbands were insured. Factors other than age of husband or child dependency may have influenced their carrying life insurance on the wives since no relationship is indicated. The wives in the younger families and with no dependent children were the least frequently insured. A hypothesis that insured families with dependents would more frequently carry insurance on the husbands or wives must be rejected.

Face Value. The average (mean) face values of the life insurance policies of the family members were computed on a "per policy" and "per family" basis. The number of policies held per member accounts for the difference in these two amounts. Husbands held policies with a higher face value and had more insurance per family in each age group than wives or children, as shown in Table 13. The average face value of the husband's insurance policies, and

Table 12. Husbands and wives insured by child dependency and age of husband, among insured families.

Age of husband	Insured families (N=376)			
	Percent of husbands insured		Percent of wives insured	
	With dependent children (N=274)	No dependent children (N=102)	With dependent children (N=274)	No dependent children (N=102)
Under 40	99	100	48	30
40 - 49	96	100	48	69
50 - 59	98	97	57	57
60 and over	67	96	47	63
All	96	97	50	59

Table 13. Face value per policy and per insured family member by age of husband.

Age of husband	Husbands		Wives		Children	
	Per policy	Per insured husband	Per policy	Per insured wife	Per policy	Per family insuring children
Under 40	$4,400	$7,300	$1,600	$1,600	$1,600	$3,400
40 - 49	4,000	6,600	1,400	1,500	1,400	3,000
50 - 59	3,200	5,300	1,500	1,800	1,900	3,800
60 and over	2,600	3,200	1,400	1,600	1,700	2,300
All	$3,800	$6,000	$1,500	$1,600	$1,600	$3,200

the amount of the husband's life insurance per family decreased as the age of the husband increased. No such definite pattern prevailed in regard to the value of insurance on the wives and children. If the wife or children were insured, the values of the policies did not vary appreciably by age of head.

Concentration on Husband. The hypothesis that in younger families a larger proportion of the insurance would be concentrated on the life of the husband on whose life the economic support of the family depends failed to gain support. Overall, 71 percent of the family's insurance was on the life of the husband. The percent varied only slightly for husbands under 50 (70.7%) to 71.6 percent for families with husbands 50 years or older. The variation was greater among the four age groups: 78 percent for husbands under 40; 64 percent for husbands 40-49; 69 percent for those 50-59; and 75 percent for those 60 and over. The greatest concentration, it will be noted, was in the youngest and oldest age groups.

Summary. There was a very significant relationship between insurance coverage and the age of the husband. Families with younger husbands were insured more frequently than those with older husbands. Although the husband was the family member most frequently insured, the percent of families insuring husbands decreased with age of husband. Percent of wives insured increased with increasing age of husband. No definite pattern was shown for children's insurance. The face value of the family's insurance decreased with increased age of husband. However, this change in value was concentrated largely in the value of insurance carried on the life of the husband rather than on the amount of insurance on other members of the family. There seemed to be no tendency to carry a larger proportion of the family's insurance on the husband among either the younger or older families. The presence of dependents did not affect significantly the disposition of families to carry life insurance.

Education of Husband

An analysis was made of the life insurance holdings of the families according to the amount of formal education of the husband to determine if families whose husbands had more education purchased insurance in frequency and amount different from those who had less education. The distribution of these families classified by the school years completed by the husband is shown in Table 14. Three families failed to give the educational attainment of the husband. Of those who did report, 47 percent had not attended school beyond the 8th grade.

The education of the husband and age of the husband are not independent. The number of years of formal education of the husband has tended to increase in recent years, so is directly related to the age of the husband. The average age of the husband by educational groupings is given in Table 14.

Families Insured and Face Value. The percent of families having life insurance increased directly with the amount of education of the husband. In general, the face value of the family's insurance followed the same pattern. Among insured families no relationship was indicated if the husband had completed less than 12 grades. The average face value of the family's insurance for families of high school graduates was above the average for all families. Supporting data are presented in Table 14.

Table 14. Families insured by education of husband.

Education of husband Years	Age of husband (average age)	All families Number	All families Percent	Insured families** Number	Insured families** Percent	Face value of family's insurance All families (N=527)	Face value of family's insurance Insured families (N=376)
No information	--	3	--	2	--	--	--
Less than 8	55	48	9	27	56	$3,400	$6,100
8	51	203	38	136	67	3,100	4,600
9 - 11	48	68	13	48	70	4,100	5,800
12	40	165	31	129	78	6,700	8,500
13 or more	45	40	8	34	85	11,700	20,000
All	49	527	100	376	71	5,400	7,700

** Chi-square = 14.86; 4 d.f.; $P < .01$.

Family Members Insured. The number of families insuring each of the family members was analyzed by the amount of formal education of the husband. The variations in the percentage of families insuring husbands, wives, or children indicated no particular pattern related to the education of the husband as shown in Table 15. Over 90 percent of the husbands were insured in all groups, and they were the family member most frequently insured.

Approximately one half of the wives, and one half of the insured families with children carried insurance regardless of the education of the husband. However, a higher proportion of wives and children were insured in those families whose husbands had less than an eighth grade education.

It was hypothesized that husbands and wives with dependent children would be more likely to be insured, and that the frequency of insurance would be related to the education of the

Table 15. Family members insured by education of husband.

Education of husband	All insured families				Insured families with children	
	Husbands		Wives[a]		Children	
Years	Number	Percent	Number	Percent	Number	Percent
No information	2	--	2	--	--	--
Less than 8	25	92	18	67	12	63
8	129	96	72	52	47	57
9 - 11	45	94	23	48	15	47
12	128	99	65	50	55	50
13 or more	33	97	17	57	16	53
All	362	96	197	52	145	53

[a] Chi-square = 3.02; 4 d.f.; n.s.

husband. Data in Table 16 indicate no such relationship between these factors.

Table 16. Husbands and wives insured by child dependency and education of husband, among insured families.

Education of husband	Insured families (N=376)			
	Percent of husbands insured		Percent of wives insured	
Years	With dependent children (N=274)	Without dependent children (N=102)	With dependent children (N=274)	Without dependent children (N=102)
Less than 8	89	100	68	62
8	95	96	50	56
9 - 11	94	94	41	62
12	99	100	49	61
13 or more	97	100	50	50
All	96	97	50	59

Concentration on Husband. As the amount of formal education of the husband increased, the percent of the family's insurance placed on the husband increased. Families whose husbands had completed the eighth grade or higher had at least 15 percent more of their life insurance on the husband than did those families whose husbands had less education. Specifically, the percentages were as follows: 55 percent of the family's insurance was on the life of the husband in those families where the husband had less than an eighth grade education; 70 percent for families whose families had completed their education with the eighth grade; 73 percent among families whose husbands had terminated their education between the ninth and twelfth grades, and 76 percent on those who had continued their education beyond high school.

Summary. Both the proportion of families carrying insurance and the face value of insurance coverage per family varied directly with the education level of the husband, with the exception of the face value of insurance policies of families whose husbands had less than an eighth grade education. The education of the husband did not appear to bear directly on the inclination to carry insurance on wives or children or the disposition of the families with dependent children to insure husbands and wives. A direct relationship was shown between the amount of education had by the husband and the concentration of the family's insurance on him.

Size of Family

The families were grouped according to the number in the family who were dependent on the family for one half or more of their support. The distribution of families so grouped is shown in Table 17. Husband-wife families with no dependents constituted over one third of all the families.

Table 17. Families insured by size of family.

Size of family	Age of husband (average)	All families (N=527)		Insured families*** (N=376)		Face value of family's insurance	
Number	age	Number	Percent	Number	Percent	All families (N=527)	Insured families (N=376)
2	56	184	35	102	55	$2,400	$4,400
3	49	113	21	89	79	4,700	6,000
4	40	99	19	77	78	5,200	6,700
5	39	70	13	59	84	11,600	13,800
6 or more	43	61	12	49	80	9,200	11,500
All	49	527	100	376	71	$5,400	$7,700

*** Chi-square = 35.38; 4 d.f.; $P < .001$.

Families Insured and Face Value. Fifty-five percent of the two-member families had life insurance as compared with 80 percent of the families of size three or more (Table 17). Families of size two were largely husband-wife families in the recovery stage of the family life cycle, and the husbands were the oldest of any group. In a previous analysis it was noted that families whose husbands were older had life insurance less frequently than families with younger husbands. The average age of the husband was under 50 in families with dependent children and these families were more frequently insured. The face value of the family's life insurance increased directly with the size of the family to size five and then diminished. The average face value of the family's life insurance is shown in Table 17.

Family Members Insured. The family member insured did not vary appreciably with the size of the economic family, according to data shown in Table 18. At least 91 percent of the families in each group had insurance on the husband of the family. Husband-wife families insured the wives more frequently (59%) than the families with children (50%). Yet the percent of the wives insured and the percent of families insuring children were unrelated to the number of children in the family. Evidently, decisions to insure the wife or children are independent of the size of the family.

Table 18. Family members insured by size of family.

Size of family	All insured families				Insured families with children	
	Husbands*		Wives[a]		Children	
Number	Number	Percent	Number	Percent	Number	Percent
2	100	98	60	59	--	--
3	81	91	52	58	49	55
4	76	99	34	44	42	54
5	57	97	26	44	28	47
6 or more	48	98	25	51	26	53
All	362	96	197	52	145	53

* Chi-square 11.57; 4 d.f.; $P < .05$.

[a] Chi-square 6.71; 4 d.f.; n.s.

Concentration of Insurance on the Husband. Families without dependent children concentrated a higher percent of the face value of the family's insurance on the husband than families with dependent children. However, the number of dependents was unrelated to the concentration on the husband as given in Table 19.

Table 19. Concentration of insurance on husband by size of family.

Size of family	Insured families Concentration on husband
Number	Percent
2	75
3	67
4	71
5	72
6 or more	61
All	71

Summary. A significant relationship was indicated between size of family and the frequency of life insurance coverage. Families of size three or larger were insured more frequently than families of size two. (This is the same relationship as found in frequency of insurance by child dependency.) Face value of the family's insurance was directly related to family size, but not proportionately. The amount of protection per person decreased with increased family size. Families with children were spreading their insurance coverage on the family members and concentrating less insurance on the husband than two-member families.

Net Worth

An overall estimate of the economic status of a family, which is determined by its net worth, includes the value of all the family's assets, less their indebtedness. In this study the families were arranged by size of net worth and divided into groups somewhat equal in size. The quintile classes were: $10,000 or less, $10,001 to $20,000, $20,001 to $35,000, $35,001 to $62,000, and $62,001 to $657,000, as given in Table 20.

Table 20. Families insured by net worth.

Net worth	Age of husband (average)	All families: Number	All families: Percent	Insured families*: Number	Insured families*: Percent	Face value of family's insurance: Insured families (N=376)	Face value of family's insurance: All families (N=257)
Deficit- $10,000	41	104	20	66	63	$4,700	$2,900
$10,001- 20,000	43	103	19	78	76	4,700	3,600
20,001- 35,000	52	106	20	70	66	4,900	3,200
35,001- 62,000	52	109	21	78	72	8,300	6,000
62,001- 675,000	53	105	20	84	80	14,400	11,500
All	49	527	100	376	71	$7,700	$5,400

* Chi-square = 9.63; 4 d.f.; $P < .05$.

In general, age of husband and net worth were related. The average age of the two lower groups was about ten years younger than the three upper net worth groups.

Families Insured and Face Value. The possession of life insurance was analyzed in relation to the family's net worth. Supporting data are presented in Table 20. The families in the higher net worth groups owned life insurance more often than those in the lower net worth groups. Not only was the frequency of ownership greater in the higher net worth groups, but also was the face value of their life insurance policies higher, especially in the two upper groups where the net worth was considerable higher.

Family Members Insured. Among families who carried insurance there seemed to be no tendency to insure the life of the husband, wife, or children with increased net worth. The supporting data are presented in Table 21.

Table 21. Family members insured by net worth.

Net worth	All insured families: Husbands Number	Husbands Percent	Wives Number	Wives Percent	Insured families with children: Children Number	Children Percent
Deficit - $10,000	62	94	28	42	29	48
$10,001 - 20,000	74	95	44	56	36	62
20,001 - 35,000	69	98	34	48	19	43
35,001 - 62,000	74	96	46	59	35	62
62,001 - 675,000	83	99	44	52	26	47
All	362	96	196	52	145	53

A comparison of the percent of families insuring husbands and wives by the presence of dependent children likewise did not reveal any relationship between these data and the family's net worth as shown in Table 22.

Table 22. Husbands and wives insured by child dependency and net worth, among insured families.

Net worth	Insured families (N=376): Percent of husbands insured: With dependent children (N=274)	Percent of husbands insured: Without dependent children (N=102)	Percent of wives insured: With dependent children (N=274)	Percent of wives insured: Without dependent children (N=102)
Deficit - $ 10,000	95	80	43	40
$10,001 - 20,000	95	95	59	50
20,001 - 35,000	98	100	41	62
35,001 - 62,000	95	100	55	68
62,001 - 675,000	100	96	49	59
All	96	97	50	59

Concentration on Husband. There seems, also, to be no disposition on the part of families to concentrate more of their insurance money on the life of the husband in relation to net worth status of families. The husband's life insurance constituted the following percentage of the total family's insurance: 72 percent for the lowest net worth group, 69, 75, 66 and 76 percent for the higher net worth groups, respectively.

Summary. Families with net worth of $35,000 or less were less frequently insured, and the face value of the insurance was less than for families with net worth above this amount. The disposition to insure husbands, wives, or children did not vary with the net worth status of the family, nor was there an inclination to carry a larger proportion of the insurance on the life of the husband. Furthermore it should be noted that the higher net worth groups were more frequently insured in spite of their older years.

Income

Life insurance ownership was analyzed according to the amount of family income and total income from all sources including the farm income for 1955. Many of the farmers in this survey engaged in some off-farm work and had non-farm income from investments. The average farm income was $2,030, and the average total income was $2,200.

Income by Family Types. Income of farm families is dependent on prevailing natural forces, the personal qualities of the individual farm operator and the family's resources. An analysis was made of income in relation to the age and education of the husband and the family's net worth to note any relationships between these factors and income.

Age of Husband. The family's farm income increased directly with the age of the husband. However, the difference was only $70 between the youngest and the oldest age groups. Income from all sources varied $80, but did not show a direct relationship to age of the husband. The relationship of age of husband to farm income and total income is given in Table 23.

Table 23. Average farm and total income by age of husband.

Age of husband	Average: Farm income	Average: All income
Under 40	$1,990	$2,180
40 - 49	2,030	2,240
50 - 59	2,040	2,200
60 and over	2,060	2,160
All	$2,030	$2,200

Education of Husband. The family's income in relation to the amount of formal education of the husband is given in Table 24. In general, the average income from all sources increased with the amount of education of the husband. Families with husbands who had not completed the 8th grade had an average income of $2,150 compared to an income of $2,470 for those families whose husbands had completed 13 or more grades. Families with husbands who had attended college also had the highest farm income, but families whose husbands had some high school education

Table 24. Average farm and total income by education of husband.

Education of husband	Average	
Years	Farm income	All income
Less than 8	$2,040	$2,150
8	2,030	2,160
9 - 11	1,990	2,160
12	2,000	2,200
13 or more	2,220	2,470
All	$2,030	$2,200

had lower farm incomes than those husbands who had completed eight grades or less. In other words, education appeared to be related slightly to the amount of total income, but not to farm income.

Net Worth. The income from all sources was higher in each net worth group than the farm income, and both classifications of income were directly related to net worth according to the data in Table 25. The difference in size of income from the lowest to the highest net worth groups was $350 in the farm income classification and $380 in the other income groups.

Table 25. Average farm and total income by net worth.

Net worth	Average	
	Farm income	All income
Deficit - $ 10,000	$1,870	$2,040
$10,001 - 20,000	1,960	2,130
20,001 - 35,000	2,000	2,140
35,001 - 62,000	2,100	2,240
62,001 - 657,000	2,200	2,420
All	$2,030	$2,200

Families Insured. Families were divided into four groups according to the amount of their farm income, and four groups according to their total income. The percent of families insured differed significantly between groups, as shown in Table 26. The families in the higher-income groups were insured more frequently than in the lower-income groups in both classifications. Families classified by farm income varied from 67 to 75 percent with insurance from low- to high-income groups, and if classified by total income, from 66 to 76 percent, as derived from Table 26.

Table 26. Families insured by farm and total income levels.

Farm income	All families: Number	Insured families*: Number	Insured families*: Percent	All income	All families: Number	Insured families***: Number	Insured families***: Percent
Deficit-$ 500	109	81	74	Deficit-$1500	127	74	58
$ 501 - 1500	140	87	62	$1501 - 2500	107	80	75
1501 - 2500	110	77	70	2501 - 4500	155	113	73
2501 and over	161	127	79	4501 and over	135	108	80
No information	7	4	57	No information	3	1	33
All	527	376	71	All	527	376	71

* Chi-square = 11.45; 3 d.f.; $P < .05$.

*** Chi-square = 18.75; 3 d.f.; $P < .001$.

Face Value. With the exception of the families in the lowest farm income group the average face value of the insurance held by the insured families was somewhat directly related to their income, according to data presented in Table 27.

Table 27. Face value of insurance by farm and total income levels.

Farm income			All income		
	Face value of insurance			Face value of insurance	
Income level	All families (N=527)	Insured families (N=376)	Income level	All families (N=527)	Insured families (N=376)
Deficit- $500	$4,500	$6,100	Deficit-$1500	$2,800	$4,800
$ 501 - 1500	3,000	4,800	$1501 - 2500	3,500	4,700
1501 - 2500	6,400	9,200	2501 - 4500	5,300	7,300
2501 and over	7,700	9,800	4501 and over	9,700	12,100
All	$5,400	$7,700	All	$5,400	$7,700

Summary. Families in the two higher-income groups, regardless of income source, were more frequently and heavily insured. However, income fluctuates greatly from year to year. For this reason special attention was given to the relation of income to family characteristics. Income, both farm and all, varied directly with net worth. The older farmers had higher farm income than younger farm families who had a larger off-farm income. Those with higher education had a higher total income, but farm income was not related to education level. Only one of the class averages differed from the over-all average by more than 10 percent, thus indicating the failure of age, education or net worth to account for variation in income or a family stable-income pattern.

Indebtedness

One factor that might and perhaps should influence the family to have life insurance on the husband is the amount of the family's indebtedness. If the purpose of life insurance was to provide financial aid for dependents, the insurance program would be planned in consideration of the amount of current indebtedness, expenses likely to be incurred during the last illness and burial, and replacement income needed for support.

The ratio of the family's liabilities to their assets may influence the family's decision to insure and the amount of insurance to put on the husband. Morse reported that the families in this survey who were in the higher net worth groups averaged more indebtedness, but their indebtedness was not as large a percent of the assets as among families in the lower net worth groups. Debts constituted a larger proportion of assets in the younger and larger families.[1]

Families Insured. One half of the families reported some indebtedness. Of these families 74 percent had husbands with life insurance compared to only 69 percent of the husbands insured in the no debt group, as shown in Table 28. The difference was not significant.

Husbands Insured. Family indebtedness apparently did not affect the insured family's decision to carry insurance on the

[1] Richard L. D. Morse, Indebtedness and Financial Status of Kansas Farm-Operator Families, 1955. Unpublished report. Department of Family Economics, Kansas State University, p. 3.

husband as indicated in Table 28. Since nearly all insured families had insurance on the husband the percent of husbands insured in all families with and without debts was about the same as the percent of families insured in each group.

Table 28. Frequency of insurance by indebtedness.

Indebtedness status	All families		Insured families[a]		Insured husbands
	Number	Average indebtedness	Number	Percent	Percent
No debts	260	--	179	69	66
Debts	267	$5,900	197	74	72
All	527	$3,000	376	71	69

[a] Chi-square = 1.82; 1 d.f.; n.s.

Face Value. The families with debts who had insurance were divided into three groups according to the amount of the family's indebtedness. The average face value of the husband's and family's life insurance was directly related to the amount of indebtedness of the insured families, and the face value of the husband's insurance would cover the average debt in the two groups with total debts under $5,000 according to data in Table 29. However, the average face value of the family's insurance exceeded in all groups the average family indebtedness.

A comparison made of the face value of life insurance held by husbands and families in the no debt group and all with debts revealed that families with some debts had insurance with a higher face value.

Table 29. Face value of insurance by indebtedness status, among insured families.

Indebtedness	Families insuring husbands: Average family indebtedness	Average face value of insurance: Husband	Average face value of insurance: Family
No debts	--	$5,040	$7,100
Debts	$5,990	6,700	8,600
$1 - 1,999	920	3,600	5,300
2,000 - 4,999	3,270	4,300	6,000
5,000 and over	13,310	11,800	14,200

<u>Concentration on Husband</u>. The indebtedness of the family did not appear to influence the percent of the family's insurance held by the husband. The face value of the husband's insurance was 71 percent of the family's insurance in families with no debts and 72 percent in the families with debts.

<u>Summary</u>. Family indebtedness did not appear to influence decisions to purchase insurance. The face value of the husband's insurance among families with debts was directly related to the amount of the family's indebtedness. Families with debts of $5,000 and over had an average debt $1,500 greater than the average amount of insurance on the life of the husband. These families may have been in the higher net worth groups and had other resources to cover this indebtedness. Also the average face value of insurance for the family was $900 greater than the average indebtedness for this group.

Tenure

The families were classified according to tenure by placing farm operators who rented all the acres they operated in the "rent all" group; and operators who owned all the acres operated, in the "own all" group. The remaining farm operators, those who rented in and owned part of the acres operated, were divided into three groups: "rent most," "own most," and "rent and own the same." There were 171 families who owned all and 132 families who rented all of the acres operated. Approximately the same number of families rented most (106) as owned most (103). Only 15 families owned and rented in the same number of acres. The number of families in each group is presented in Table 30 and their distribution by percent, in Table 31.

Table 30. Families insured by tenure.

Tenure	All families	Insured families***	
	Number	Number	Percent
Rent all	132	101	76
Rent most	106	86	81
Own most	103	79	77
Own all	171	98	57
Own and rent same	15	12	80
All	527	376	71

*** Chi-square = 24.97; 4 d.f.; $P < .001$.

Types of Families by Tenure. Family characteristics in combination with tenure may be related to life insurance ownership. Analyses were made of tenure in relation to age and education of the husband.

Table 31. Tenure by age of husband.

Age of husband	Tenure (Percent of families) Rent all	Rent most	Own most	Own all	Own-rent: same	All
Under 40	55	22	11	8	4	100
40 - 49	25	25	24	22	4	100
50 - 59	10	18	31	39	2	100
60 and over	6	12	15	65	2	100
All	25	20	20	32	3	100

Age of Husband. Tenure was related to age of husband as indicated in Table 31. Families with older husbands owned most or all of the acres operated, and conversely the younger families rented all or most of the acres operated.

Education of Husband. Tenure was also related to the amount of education had by the husband. Over 40 percent of the families whose husbands had not attended high school owned all of the acres operated. Conversely, over 40 percent of the families whose husbands were high school graduates and had not attended college rented all of the acres operated (Table 32).

Families Insured. Families who owned all of the acres operated were not as frequently insured as the families in the other tenure groups. Only 57 percent of the families who were in the "own all" group had insurance, compared to over 75 percent of the families in the groups who rented all or part of the acres operated. The difference is highly significant. The percent of families with insurance in each tenure group is presented in Table 32.

Table 32. Tenure by education of the husband.

Education of husband	Tenure (Percent of families)					
Years	Rent all	Rent most	Own most	Own all	Own-rent: same	All
Less than 8	15	14	23	44	4	100
8	18	18	21	41	2	100
9 - 11	27	21	19	32	1	100
12	41	21	16	18	4	100
13 or more	8	35	25	30	2	100
All	25	20	20	32	3	100

Summary. Families who owned all of the acres operated were not insured as frequently as those families who rented some or all of the acres operated. These families also had older husbands who have fewer years of education. Thus, the younger family which lacks the security of tenure or the net worth associated with farm ownership is more frequently insured and has more years of formal education.

Planning

The interviewer asked questions concerning the amount of planning the family had done for financial support in the event of death or disability of the husband or wife. Of the 527 families 28 percent said they had done little or no planning with respect to all four events, 23 percent had made fairly definite plans, and the remaining 49 percent had either considered making plans or had planned for some events, but not for others. The latter group is reported as those making partial plans (Table 36).

Types of Families Planning. Specific socio-economic groups of families may be conscious that provisions need to be made in anticipation of loss of income due to disability or death. The assumption was made that the degree of planning reported might be related to the age or education of the husband and the family net worth. These factors were related to life insurance ownership in this study.

Age of Husband. Age did not appear to be an important factor in degree of planning since over one third of the families indicated partial planning in all age groups (Table 33). However, the percent of families included in the partial planning group was inversely related to the age of the husband, and the percent of families indicating definite planning was directly related to the age of the husband. A larger proportion of those over 50 than under 50 was in the no planning group.

Table 33. Degree of planning by age of husband.

	Degree of planning**				
	All		None	Partial	Definite
Age of husband	Number	Percent	Percent	Percent	Percent
Under 40	137	100	28	58	14
40 - 49	151	100	21	54	25
50 - 59	111	100	31	41	28
60 and over	128	100	34	38	28
All	527	100	28	49	23

** Chi-square = 19.22; 6 d.f.; $P < .01$.

Education of Husband. No clear relationship could be observed between the degree of planning and education of the husband, as indicated in Table 34. If the families are combined into "less than 12 grades" and "12th grade or higher," no relationship is indicated between education and definite planning, and only a slight shift among the higher educated families from the no planning to the partial planning group.

Table 34. Degree of planning by education of husband.

Education of husband	Degree of planning**				
	All		None	Partial	Definite
Years	Number	Percent	Percent	Percent	Percent
Less than 8	48	100	33	46	21
8	203	100	31	45	24
9 - 11	68	100	26	52	22
12	165	100	24	57	19
13 or more	40	100	28	30	42
All	524[a]	100	28	49	23

** Chi-square = 20.64; 8 d.f.; $P < .01$.

[a] Three families did not indicate years of education by husband.

Net Worth. A definite relationship existed between net worth and the degree of planning done by the families. The percent of families in the no planning and partial planning groups was inversely related to the family's net worth, and a direct relationship was shown between definite planning and net worth as shown in Table 35.

Families Insured. The percent of families having insurance was directly related to the degree of planning as shown in Table 36. The percent of families insured increased from 65 percent of the families who had made no plans, to 71 percent of those in the

Table 35. Degree of planning by net worth.

Net worth	Degree of planning*** All: Number	All: Percent	None: Percent	Partial: Percent	Definite: Percent
Deficit - $10,000	104	100	33	60	7
$10,000 - 20,000	103	100	28	54	18
20,001 - 35,000	106	100	30	52	18
35,001 - 62,000	109	100	25	46	29
62,001 - 657,000	105	100	24	32	44
All	527	100	28	49	23

*** Chi-square = 45.59; 8 d.f.; P less than .001.

Table 36. Families insured by degree of planning.

Degree of planning	All families: Number	All families: Percent	Insured families*: Number	Insured families*: Percent	Face value of family's insurance: All (N=527)	Face value of family's insurance: Insured (N=376)
None	148	28	96	65	$3,200	$4,900
Partial	256	49	181	71	5,000	7,000
Definite	123	23	99	80	9,200	11,000
All	527	100	376	71	$5,400	$7,700

* Chi-square = 9.06; 2 d.f.; P less than .05.

partial planning group, to 80 percent of the families who had made fairly definite plans. Since the families were not asked what type of planning or provisions they had made in the event of death or disability of the husband or wife, they may have considered ownership of life insurance to constitute their plans.

Face Value. The face value of the family's insurance was also directly related to the degree of planning as indicated in

Table 36. Insured families who had made no plans had insurance with an average face value of $4,900 per family. Those who had made partial plans averaged $7,000, and those with definite plans averaged $11,000.

Summary. Families who indicated definite plans were more frequently and more highly insured than other groups. These families had older husbands and were in the upper net worth groups. There was an apparent relationship between education and planning.

Age and Education of Husband

Introduction. In planning the analyses, it was hypothesized that each of the variables representing family characteristics or family economic factors was substantially or possibly related to the insurance variables. The presentation to this point has provided evidence bearing on these relationships, taking one variable at a time. It was also hypothesized that many of the variables were related to one another as well as to the insurance variables, so a three-way classification system was employed. Each of three sets of variables was related to the insurance variables and to income. The three sets were: age and education of husband, family net worth and age of husband, and family net worth and education of husband.

Data were grouped according to the same criteria and definitions as previously. However, to reduce the number of cross classifications and to increase the number of families represented in each class, the number of such groups was reduced to two. The groupings were: age, 50 and over or under 50; education, 12th grade or higher and under 12th grade; net worth, $35,000 or less and over $35,000.

Families Insured. Life insurance ownership was, in general, directly and significantly related to education of the husband, and also inversely and significantly related to age of husband. There was a significant difference between educational levels among the older, but not the younger families. And there was a significant difference between age groups among the less educated, but not the high school graduates. Also the difference between the older, less educated and the younger better educated was highly significant. The family group least likely to be insured was the family with the older and less well educated husband, and the family group most likely to be insured was the younger family (Tables 37a and 37b).

Face Value. Face value of insurance was inversely related to the age of the husband, and directly related to the education of the husband. These are to be observed in the border totals of Table 38a. However, no consistent relationship could be observed among the individual or age-education classes, as indicated by Table 38a.

If the data are regrouped, as in Table 38b, there is an indication that face value tends to vary by education, but not age, with the younger high school graduates having the highest insurance coverage.

Table 37a. Distribution of families by age and education of husband, and their insurance status.

Age of husband	Education of husband (years): Less than 8	8	9-11	12	13 or more	All
	Distribution of families					
Under 40	--	27	11	86	13	137
40 - 49	12	49	22	55	13	151
50 - 59	13	54	21	16	7	111
60 and over	23	73	14	8	7	125
All	48	203	68	165	40	524[a]
	Percent of families insured					
Under 40	--	89	73	79	85	81
40 - 49	92	84	82	80	100	84
50 - 59	38	67	81	75	100	69
60 and over	48	48	36	62	43	47
All	56	67	70	78	85	71

[a] Education of husband was not given in three families.

Table 37b. Insurance status of families by age and education of husband.

Age of husband	Education of husband: Less than 12 years	12 years or more	All
	Percent of families insured[a]		
Under 50	84	81	83
50 and over	55	71	58
All	66	80	71

[a] t values were used to determine whether the differences between the percent of families insured in age-education groupings were statistically significant.

* P .05. *** P .001.

Table 38a. Face value of insurance held by insured families by age and education of husband.

	Education of husband (years)					
	Less than 8	8	9-11	12	13 or more	All
Age of husband	Face value of life insurance					
Under 40	--	$5,000	$3,500	$9,000	$21,700	$9,000
40 - 49	$4,000	5,200	6,700	8,000	27,000	8,500
50 - 59	19,900	4,700	5,800	9,000	12,400	7,300
60 and over	2,000	3,600	6,400	5,200	7,000	3,900
All	6,100	4,600	5,800	8,500	20,000	7,700

Table 38b. Face value of insurance held by insured families by age and education of husband.

	Education of husband		
	Less than 12 years	12 years or more	All
Age of husband	Face value of life insurance		
Under 50	$5,100	$11,400	$8,700
50 and over	5,100	9,000	5,800
All	5,100	11,000	7,700

Concentration on the Husband. The age of husband did not appear in any of the analyses to be related to the concentration of the family's life insurance on the husband, but there was a slight increase in concentration with the higher education level of the husband, as shown in Table 39a. Families with husbands under 40 who had attended high school placed more of the family's insurance on the husband than any of the other age-education groups. This age group may have included a large

Table 39a. Concentration of insurance on the husband by age and education of husband.

Age of husband	Education of husband (years): Less than 8	8	9-11	12	13 or more	All
	Percent of family's insurance on husband					
Under 40	--	70	81	78	82	78
40 - 49	37	65	72	66	75	64
50 - 59	60	68	70	72	74	69
60 and over	73	77	78	76	63	75
All	55	70	73	73	76	71

proportion of war veterans who had kept their national service life insurance.

Likewise, no striking relationship existed among education, age and concentration of insurance on the husband in the broad groupings of the data given in Table 39b. The greatest difference was between education levels for the younger families.

Table 39b. Concentration of insurance on the husband by age and education of husband.

Age of husband	Education of husband: Less than 12 years	12 years or more	All
	Percent of family's insurance on husband		
Under 50	66	74	71
50 and over	72	73	72
All	69	74	71

Income. Total family income was directly related to education at each age level, and directly related to age at each education level, so the highest income group was the older, higher educated. Farm income showed the same relationship (Table 40b).

However, no such clear relationship is indicated by the data not so closely grouped (Table 40a).

Table 40a. Income by age and education of husband, insured families.

Age of husband	Education of husband (years)					
	Less than 8	8	9-11	12	13 or more	All
			Average farm income			
Under 40	--	$2,060	$1,920	$1,980	$2,130	$2,010
40 - 49	$1,960	2,040	1,960	2,050	2,330	2,050
50 - 59	2,160	2,020	2,080	2,030	2,260	2,070
60 and over	2,030	2,080	1,940	2,040	2,130	2,080
All	2,030	2,050	1,990	2,010	2,230	2,050
			Average income from all sources			
Under 40	--	$2,270	$2,140	$2,170	$2,220	$2,200
40 - 49	$2,160	2,170	2,140	2,280	2,710	2,250
50 - 59	2,220	2,180	2,240	2,330	2,410	2,240
60 and over	2,140	2,180	2,180	2,140	2,570	2,210
All	2,170	2,190	2,180	2,220	2,480	2,220

Table 40b. Income by age and education of husband, insured families.

Age of husband	Education of husband: Less than 12 years	Education of husband: 12 years or more	Education of husband: All
	Average farm income		
Under 50	$2,010	$2,050	$2,030
50 and over	2,050	2,100	2,070
All	2,030	2,060	2,050
	Average income from all sources		
Under 50	$2,180	$2,260	$2,220
50 and over	2,190	2,380	2,220
All	2,180	2,280	2,220

Summary. The younger, better educated families were more frequently insured, held insurance of higher face value, and concentrated more insurance on the husband. Their position with respect to income is not clear. Conversely, the older, less well educated families were least frequently insured. They had the same average value of insurance as the younger families of the same educational status, about as high a concentration of insurance on husband as those with higher education. The relative income position is not clear.

Age of Husband and Net Worth

Families Insured. The families in each of the four age groups were cross classified by five net worth groups, and the insurance status of each sub-group determined. Presented in Table 41a is the percent of families insured at each net worth level. The percent was inversely related to the age of the husband with one exception, the youngest families in the lowest net worth group. Likewise, the percent of families at each age level tended to increase with increased net worth classification. Thus, younger families with higher net worth were the most frequently insured.

Table 41a. Distribution of families by age of husband and net worth, and their insurance status.

Age of husband	Net worth: $10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
	Distribution of families					
Under 40	48	37	23	16	13	137
40 - 49	32	35	25	32	27	151
50 - 59	10	13	23	30	35	111
60 and over	12	18	35	31	30	128
All	104	103	106	109	105	527
	Percent of families insured					
Under 40	65	89	83	94	100	81
40 - 49	81	80	80	88	93	84
50 - 59	70	62	61	63	83	69
60 and over	14	50	49	52	57	48
All	63	76	66	72	80	71

The trends are even more striking in the concentrated Table 41b. Age of husband was highly significant at both net worth levels and net worth is significant at both age levels. The overall age group differences are highly significant, but the net worth difference was not significant at the 5 percent level.

Table 41b. Insurance status of families by age of husband and family net worth.

Age of husband	Net worth: $35,000 or less	Net worth: $35,001 and over	All
	Percent of families insured[a]		
Under 50	78	92	83
50 and over	50	64	58
All	68	75	71

[a] t values were used to determine whether the differences between the percent of families insured in age-net worth groupings were statistically significant.

* P .05.

** P .01.

*** P .001.

Face Values. In general, the same relationships were observed between face value of insurance, age, and net worth as noted in the percent of families insured. The younger families had insurance of a higher face value. Likewise, within each net worth group the trend was toward high face value of insurance coverage with decrease in age. These data are presented in Table 42a.

Table 42a. Face value of insurance held by insured families by age of husband and net worth.

	Net worth					
	$10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
Age of husband	Face value of life insurance					
Under 40	$5,000	$6,600	$6,600	$16,400	$19,200	$9,000
40 - 49	5,000	3,700	6,100	8,200	19,800	8,500
50 - 59	3,200	4,300	3,500	4,800	12,600	7,300
60 and over	500	1,600	2,600	5,100	5,600	3,900
All	4,700	4,700	4,900	8,300	14,400	7,700

This is even more evident in the four age-net worth groupings as presented in Table 42b. The families with the younger husbands with net worth over $35,000 had insurance with the highest face value. Conversely, families with husbands over 50 and in the lower net worth group had the least amount of insurance coverage.

Table 42b. Face value of insurance held by insured families by age of husband and net worth.

	Net worth		
	$35,000 or less	$35,001 and over	All
Age of husband	Face value of life insurance		
Under 50	$5,400	$15,100	$8,700
50 and over	2,900	7,800	5,800
All	4,800	11,500	7,700

Concentration on the Husband. The variations in concentration of the family's insurance on the husband, by age and family net worth, as appear in the data summarized in Table 43a indicate no particular pattern of relationship between the variables. And when the data are regrouped as in Table 43b, there is almost no variation in the degree of concentration.

Table 43a. Concentration of insurance on the husband by age of husband and net worth.

	Net worth					
	$10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
Age of husband	Percent of family's insurance on husband					
Under 40	84	75	69	75	85	78
40 - 49	56	59	80	58	72	64
50 - 59	67	61	67	62	76	69
60 and over	--	79	73	73	75	75
All	72	69	73	66	76	71

Table 43b. Concentration of insurance on the husband by age of husband and net worth.

	Net worth		
	$35,000 or less	$35,001 or more	All
Age of husband	Percent of family's insurance on husband		
Under 50	71	70	71
50 and over	70	72	72
All	71	71	71

Such variations as appear in Table 43a cannot be explained in terms of age and net worth.

Income. The average farm income and total income for insured families was directly related to the family's net worth. Age of husband inicated a slight relationship to farm income. No consistent relationships were observed between income and the individual age or net worth groupings, as shown in Table 44a.

Table 44a. Income by age of husband and net worth, insured families.

Age of husband	Net worth: $10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
	Average farm income					
Under 40	$1,890	$2,050	$2,010	$2,030	$2,180	$2,010
40 - 49	1,900	1,890	1,990	2,160	2,300	3,050
50 - 59	1,870	1,890	2,040	2,130	2,140	2,070
60 and over	1,800	1,930	1,960	2,080	2,290	2,080
All	1,890	1,960	2,000	2,110	2,220	2,050
	Average income from all sources					
Under 40	$2,140	$2,210	$2,190	$2,190	$2,310	$2,200
40 - 49	2,090	2,120	2,230	2,300	2,520	2,250
50 - 59	1,960	2,050	2,140	2,270	2,380	2,240
60 and over	1,850	2,000	2,090	2,210	2,490	2,210
All	2,040	2,140	2,170	2,260	2,430	2,220

In the broad groupings, as given in Table 44b, both farm and total income were higher in the higher net worth group, but unaffected by age.

Table 44b. Income by age of husband and net worth, insured families.

Age of husband	Net worth: $35,000 or less	Net worth: $35,001 and over	All
	Average farm income		
Under 50	$1,950	$2,180	$2,030
50 and over	1,950	2,160	2,070
All	1,950	2,170	2,050
	Average income from all sources		
Under 50	$2,160	$2,350	$2,220
50 and over	2,060	2,340	2,220
All	2,130	2,350	2,220

Summary. The families with husbands under 50 and net worth over $35,000 were more frequently insured and held insurance with the higher face value. The least frequently insured group and those with the lowest coverage were the older families with lower net worth. Neither age nor net worth showed any relationship to concentration of insurance on the husband. The income of insured families was relatively constant, increasing with net worth, but not varying appreciably with age.

Education of Husband and Net Worth

Families Insured. In general, the percent of families insured varied directly with the net worth and the education of the husband. No consistent relationships between these factors and families insured could be observed in the education-net worth groupings as indicated in Table 45a.

Table 45a. Distribution of families by education of husband and net worth, and their insurance status.

Education of husband Years	Net worth $10,000 or less	 $10,001 to 20,000	 $20,001 to 35,000	 $35,001 to 62,000	 $62,001 and over	 All
			Distribution of families			
No information	--	--	1	--	2	3
Less than 8	13	4	13	9	9	48
8	34	46	45	48	30	203
9 - 11	14	13	16	14	11	68
12	42	36	26	29	32	165
13 or more	1	4	5	9	21	40
All	104	103	106	109	105	527
			Percent of families insured			
No information	--	--	--	--	--	--
Less than 8	62	50	54	44	67	56
8	59	72	67	64	73	67
9 - 11	71	69	69	57	91	70
12	64	86	73	90	81	78
13 or more	100	75	60	100	86	85
All	63	76	66	72	80	71

An analysis of the frequency families were insured in the broad education net worth groupings, as shown in Table 45b, indicated that education was a highly significant factor, and that net worth was a significant factor only among families with husbands who were high school graduates. Families with a net worth of over $35,000 and whose husbands were high school graduates were

Table 45b. Insurance status of families by education of husband and net worth.

	Net worth		
	$35,000 or less	$35,001 and over	All
Education of husband	Percent of families insured[a]		
Less than 12 years	66	67	66
12 years or more	74	87	80
All	68	75	71

[a] t values were used to determine whether the difference between the percent of families insured in education-net worth groupings were statistically significant.

* P .05.

*** P .001.

more frequently insured than families with less education and lower net worth. This percent was significantly higher than that for families of lower net worth at both educational levels, and families of lower educational level in the same net worth level. Over-all education was significant, although not between families of the lower net worth group.

<u>Face</u> <u>Value</u>. The face value of the family's insurance showed nearly the same relationship to education of the husband and net worth as the percent of families insured. Greater increases in average face values of policies were noted in the upper levels of education and net worth. No consistent patterns in the amount of insurance coverage were observed in the education-net worth groups in the data presented in Table 46a.

Table 46a. Face value of insurance held by insured families by education of husband and net worth.

Education of husband	Net worth					
	$10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
Years	Face value of life insurance					
Less than 8	$2,900	$1,200	$3,700	$2,500	$17,100	$6,100
8	4,400	3,400	3,200	6,000	6,700	4,600
9 - 11	6,700	3,500	4,200	5,000	9,500	5,800
12	4,400	7,000	8,600	11,000	12,000	8,500
13 or more	11,000	2,700	4,300	14,100	29,900	20,000
All	4,700	4,700	4,900	8,300	14,400	7,700

The relationships among education, net worth and insurance coverage are readily evident by observation of the data presented in Table 46b. The families in the highest net worth groups whose husbands had a high school education had insurance with the highest face value in the four broader education-net worth groupings.

Table 46b. Face value of insurance held by insured families by education of husband and net worth.

	Net worth		
	$35,000 or less	$35,001 or more	All
Education of husband	Face value of life insurance		
Less than 12 years	$3,800	$7,200	$5,100
12 years or more	6,300	16,000	11,000
All	4,800	11,500	7,700

<u>Concentration</u> <u>on</u> <u>Husband</u>. No obvious relationships were observed between concentration of insurance on the husband and

the variables in the education-net worth groups. Data are presented in Table 47a.

Table 47a. Concentration of insurance on the husband by education of the husband and net worth.

Education of husband	Net worth					
	$10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
Years	Percent of family's insurance on husband					
Less than 8	43	75	46	62	70	55
8	66	64	79	60	84	70
9 - 11	80	72	77	64	72	73
12	80	71	73	68	75	73
13 or more	100	80	60	79	75	76
All	72	69	73	66	76	71

The division of the families into four education-net worth groups did indicate greater, but not a significantly greater, concentration of insurance on the husband who was better educated. These data are given in Table 47b.

Table 47b. Concentration of insurance on the husband by education of the husband and net worth.

	Net worth		
	$35,000 or less	$35,001 or more	All
Education of husband	Percent of family's insurance on husband		
Less than 12 years	68	69	69
12 years or more	74	73	74
All	71	71	71

Income. The total income was related to the education of the husband, and both farm income and total income were related to net worth. With few exceptions both farm income and total income were directly related to net worth within the educational groups. The families with the highest incomes were those whose husbands had less than eight grades of education, and who were in the highest net worth group. The range of income by these classifications was greater than in previous analyses. Average farm income ranged from $1,600 to $2,400, total income from $1,900 to $2,580. These data are presented in Table 48a.

Little variation in size of income was indicated in the broad education-net worth groupings of income as indicated in Table 48b. Income was directly related to education and net worth, but the difference in income was slight.

Summary. The families whose husbands were high school graduates and who were in the highest net worth groups had insurance more frequently and had insurance with a higher face value. The percent of concentration of the family's insurance on the husband remained nearly constant for the education-net worth groupings. More variation in size of income was indicated within the family groups in this analysis. However, little variation of income was evident in the four education-net worth groupings.

Net Worth, Age and Education of Husband

Further analyses were made by dividing the families into eight possible combinations of the three socio-economic factors.

Table 48a. Income by education of husband and net worth, insured families.

Education of husband Years	Net worth: $10,000 or less	$10,001 to 20,000	$20,001 to 35,000	$35,001 to 62,000	$62,001 and over	All
	Average farm income					
Less than 8	$1,830	$2,100	$1,840	$2,100	$2,400	$2,030
8	1,930	1,970	2,040	2,120	2,180	2,050
9 - 11	1,900	1,910	1,950	2,080	2,130	1,990
12	1,880	1,950	2,020	2,080	2,140	2,010
13 or more	1,600	2,100	1,970	2,210	2,340	2,230
All	1,890	1,960	2,000	2,110	2,220	2,050
	Average income from all sources					
Less than 8	$2,020	$2,100	$2,030	$2,100	$2,580	$2,170
8	2,160	2,100	2,130	2,260	2,360	2,190
9 - 11	2,070	2,090	2,100	2,190	2,330	2,180
12	2,080	2,190	2,300	2,190	2,380	2,220
13 or more	1,900	2,170	2,330	2,530	2,560	2,480
All	2,090	2,140	2,170	2,260	2,430	2,220

Table 48b. Income by education of husband and net worth, insured families.

Education of husband	Net worth: $35,000 or less	Net worth: $35,001 or more	All
	Average farm income		
Less than 12 years	$1,960	$2,150	$2,030
12 years or more	1,950	2,180	2,060
All	1,950	2,170	2,050
	Average income from all sources		
Less than 12 years	$2,100	$2,310	$2,180
12 years or more	2,180	2,380	2,280
All	2,130	2,350	2,220

These combinations were ranked in order of percent of families insured, as indicated in Table 49.

Age presented a clear-cut division. Families with younger husbands, regardless of the amount of education of the husband or family net worth, were more frequently insured. It is also of interest to note that the combination of youth, better education and high net worth placed such families in the highest percent of families insured, the 94 percent level. Whereas, at the lowest level only about one half of the families were insured. This group consisted of families with exactly the opposite characteristics, namely, older, less well educated and lower net worth.

Table 49. Percent of families insured by age and education of husband and net worth.

Socio-economic characteristics			Families in group	Families insured
Age of husband	Education of husband	Net worth	Number	Percent
Under 50	High school	Over $35,000	62	94
Under 50	Less than high school	Over $35,000	26	88
Under 50	Less than high school	$35,000 or less	95	83
Under 50	High school	$35,000 or less	105	74
50 and older	High school	Over $35,000	29	72
50 and older	High school	$35,000 or less	9	67
50 and older	Less than high school	Over $35,000	94	61
50 and older	Less than high school	$35,000 or less	104	50

DISCUSSION

The findings of the 1955 Kansas survey presented in the previous section will be compared to the results of other rural surveys summarized in the Review of Previous Studies. In general, the Kansas farm-operator families followed the same pattern as indicated in other rural surveys.

A majority (71%) of the Kansas families had insurance on one or more family members. However, the families were not insured as frequently as farm families in Ohio and Vermont (over 80%).

The Kansas farm families averaged more insurance coverage than the Vermont families, but less than the Ohio families.

Husbands were insured more frequently and more highly than other family members. From 38 to 86 percent of the families insured husbands in surveys reviewed, and 69 percent of the Kansas farm operators were insured. The amount of insurance coverage of the latter group averaged $5,800, which was more than the average amount of the Vermont farmers, but less than the amount had by rural breadwinners in Ohio and farmers in Oklahoma.

Wives and children were insured less frequently than husbands and for significantly lesser amounts. Insurance coverage on Kansas farm wives and children followed the same pattern as in the other surveys.

Age of husband, education of husband and size of family were related to insurance coverage among Kansas farm families and families in other rural surveys. In general, insurance coverage of families was inversely related to the age of husband, directly related to the education of the husband and directly related to size of family to size five, then diminished. The same relationships were observed between the insurance coverage of husbands and their age and education. Families with children tended to concentrate less insurance on the husband.

Families with higher incomes were more frequently insured and, in general, for greater amounts than families in lower income groups among Kansas farm families. Sinclair reported that income was related to the life insurance purchases of Vermont farmers. Little relationship was observed between insurance coverage and income among the Ohio families.

Kansas farm operators who rented part or all of the acres operated were more frequently insured than those who owned all of the acres operated. Little relationship was observed between tenure status and life insurance coverage among the Texas families.

Direct relationships were observed between the frequency and amount of insurance among the Kansas farm families and net worth. Neither the Wisconsin or Texas surveys reported consistent relationships between frequency of coverage on the husband and net worth, but the amount of coverage was directly related to net worth in the Texas survey.

No analyses were made between insurance coverage and social standing or size of farm in the Kansas survey. Other surveys did not report analyses of insurance coverage and indebtedness or degree of planning.

The relative significance of the socio-economic factors and life insurance coverage varied among the surveys. Education was reported to be the most significant single variable among the Ohio farmers, but education did not appear to have significant effect on the life insurance purchases of Vermont farmers. Education was related to insurance coverage of the Kansas farm families.

Age of husband appeared to be the most significant single variable related to life insurance coverage of the Kansas farm families, and age was a significant variable in the insurance coverage of the families in Vermont and Ohio.

Family size was a significant variable in Ohio, but not in Vermont. Income was significant in both surveys. Both of these characteristics were significantly related to the frequency of insurance among the Kansas farm families.

SUMMARY

A majority (71%) of the 527 Kansas farm-operator families interviewed in 1955 insured one or more of its family members. They reported 1,095 life insurance policies with an aggregate face value of $2,883,000.

Over two thirds of the husbands and one third of the wives were insured. One fourth of the families had insurance on children. Among insured families the husband was almost always insured, and the wife and children, if present, were insured by one half of the families.

The families concentrated their life insurance on the husband. He was not only the family member most frequently insured, but his insurance was of a higher face value. Over one half of the insurance policies and three fourths of the total face value of the insurance were on lives of husbands. In general, the percent of concentration of the family's insurance on the husband did not appear to be related to the socio-economic characteristics of the family.

Families with dependent children were more frequently insured than families without children. However, the presence of dependent children among insured families did not influence appreciably the family's decision to insure either husband or wife.

Relationships were indicated between the frequency and amount of insurance and socio-economic characteristics of the families. Highly significant relationships were found between frequency of insurance and age of husband, size of family, total income and tenure. A significant relationship was indicated between frequency of insurance and education of husband. Of less significance were net worth, farm income and degree of planning done. Family indebtedness was not significantly related to frequency of insurance.

Frequency of insurance was inversely related to the age of husband, and in general, directly related to the education of the husband, family income and net worth, degree of planning and size of family to size five. Families who rented all of the acres they operated were more frequently insured than families who owned all acres operated.

In other words, the more frequently insured were families with younger husbands, with husbands who had a high school education, with dependent children, with higher incomes and higher net worth, who rented some or all of the acres they operated, and who had indicated definite plans made in the event of the death of the husband or wife.

Interrelationships were observed between the socio-economic characteristics of the family. Income, tenure, and degree of planning varied with age and education of husband and the family's net worth. Age, education and net worth were related. Tests of significance between frequency of insurance and paired socio-economic variables indicated that the percent of families insured was related to the age and education of the husband, but was not significantly related to net worth. Age appeared to be more significantly related to insurance ownership than education.

Families with husbands under 50 years who had at least a high school education and a net worth over $35,000 were the most frequently insured group. By contrast, families with husbands 50 years or older who had less than a high school education were the least frequently insured group. In general, the amount of insurance coverage varied directly with the percent of families insured.

The results of this study are in general agreement with those reported from other surveys of rural families.

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LIFE INSURANCE COVERAGE OF KANSAS FARM-OPERATOR FAMILIES, 1955

by

JUNE LUCILE KREBS

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Life insurance is a means of protecting a family against financial losses resulting from death of the breadwinner.

This study is concerned with the life insurance coverage of 527 families representing the Kansas farm-operator families in 1955. The specific objectives were: (1) to determine the frequency and amount of life insurance coverage among Kansas farm-operator families and family members by type of family, and (2) to observe relationships between insurance variables and the selected socio-economic factors: age and education of husband, size of family, family net worth, income, indebtedness, tenure and the degree of planning indicated for financial support in the event of disability or death of husband or wife.

Previous studies of life insurance ownership have indicated that a majority of families in the United States have life insurance. Urban families were more frequently, but not more highly insured than rural families. Husbands were more frequently and more highly insured than the other family members. Life insurance ownership was related to socio-economic variables, but the relative significance varied with the areas surveyed.

The data analyzed in this thesis were part of the data collected under the Kansas Agricultural Experiment Station Organized Research Project No. 427, "Economic Status and Plans for Future Security of Rural Families," a contributing project to North Central Regional Research Project NC-32, "Financial Security of Rural Families."

Family life insurance coverage was analyzed in relation to the following family characteristics: child dependency, age of husband, amount of formal education of husband, size of family; amount and source of the family's income, its net worth, indebtedness and tenure; and, the degree of planning indicated.

Seventy-one percent of the 527 families had life insurance on one or more of its family members. Over two thirds of the husbands and one third of the wives were insured. One fourth of the families had insurance on children. The husband was the most highly insured family member and the families concentrated their insurance coverage on him.

Age of husband was the most significant factor related to frequency of life insurance. Highly significant relationships were also found between frequency of insurance and size of family, total income and tenure. A significant relationship was indicated between frequency of insurance and education of the husband. Of less significance were net worth and farm income. No significant relationship existed between indebtedness and frequency of insurance.

Frequency of insurance was inversely related to age of husband, and directly related to education of husband, net worth, size of family and degree of planning. Families who rented all acres operated were more frequently insured than those who owned all acres operated. Family groups more frequently insured tended to have higher average insurance coverage.

The results of this study are in general agreement with those reported from other surveys of rural families.