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Health in Two Missouri Counties A Comparison and Summary

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CONTENTS

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INTRODUCTION

Parallel surveys of health behavior were made in two Missouri Counties in 1955 and 1956. The counties were selected to represent different social areas of the state with the idea that existing cultural differences would reflect differences in health behavior. In part this bulletin reports a test of that hypothesis. Also, by way of summarizing the series of bulletins resulting from this research, a number of tentative conclusions supported by data from both counties is presented.

Detailed analyses of these data have appeared previously. Consequently, only summary statements and references to details are presented here.

The Social Areas. A major research project in the Department of Rural Sociology has resulted in the delineation of four principal rural social areas for the state which may be divided into eight sub-areas. The effect of the delineation is to differentiate areas that are internally homogeneous on the basis of selected but numerous socio-economic factors. In a state as varied as Missouri, this is a valuable contribution in comprehending the state.

In his interpretation, Gregory has also characterized the social areas as having different value-orientations. The counties in the present study were purposively selected to represent different social areas. Harrison County is in Area AB where, according to Gregory, "The major value-orientation . . . can be described in terms of a universal achievement complex with the social structure designed to provide a rational, efficient, instrumental action developing out of social contacts for specific purposes".[1] Area D, where Laclede County is located, is described as an area in which "the people have retained the folk culture generally characteristic of early American society to a much greater degree than in the northern sections of the state".[2] These counties, then, should represent different positions on a traditional-rational continuum. "The . . . characterization of Social Area D in terms of a folk culture and relative provincialism gives a description in the same dimension as that for Area AB but at an opposite polar position".[3] Therefore, if these differences carry over into health behavior, we would expect to find variations in the two counties and in a predictable direction. We should expect traditionalism to be stronger in Laclede County with greater reliance on home medications, country-doctor type relationships, tradi-

[1]Cecil L. Gregory, *Rural Social Areas in Missouri*. Mo. AES Res. Bul. No. 665, p. 18.
[2]*Ibid.* p. 33.
[3]*loc. cit.*

tional ways of paying hospital expenses, more primary attitudes, etc. The hypothesis then is that *there are direction-predictable differences in health behavior and attitudes in the two counties.*

Comparability of the Procedure. The weight of this discussion hinges in part upon a demonstration that the research procedure in the two counties corresponded closely. On this point, the research seems to meet any reasonable criteria of adequacy. The universes were defined as the open-country households of the two counties. Parallel methods were utilized for identifying households and selecting a sample to interview.[4] With the exception of a few items the interview schedules were identical. The interview procedure was the same. Three interviewers worked in each county—two of the three interviewers worked in both counties. Interviews were taken one year apart, those in Laclede County being earlier—they were, however, taken at the same season of the year.

While the technical procedure was closely parallel in the two surveys, the residential patterns were not precisely comparable. In Laclede County a number of open-country households were occupied by persons that in Harrison County would more likely have lived in the villages or the county seat—for example, retired persons and those with nonfarm employment.

COMPARISON OF SELECTED SOCIO-ECONOMIC FACTORS IN LACLEDE AND HARRISON COUNTIES

The counties in this survey represent different social areas which were themselves delineated on the basis of socio-economic characteristics. Therefore, it is to be expected that the counties differed on this basis. Comparative figures on age, sex, education, and level of living are presented in Table 1. The age structure is quite similar with a somewhat larger dependent population in Laclede County. Adult members of the Harrison County sample had a higher level of education, and the households possessed a higher median level of living score. These factors are consistent in direction with those used by Gregory to delineate the areas.

In Table 2, a comparison of the extent to which open-country household heads engaged in farming is presented. The pattern is quite different in the two counties. Laclede County has a smaller percentage in full-time farming and a larger percentage engaged entirely in nonfarm occupations. Also, Laclede County has a larger proportion of its male heads not working, but Harrison has a larger proportion reporting only minor farm work with no other employment which would indicate near-retirement.

[4]Mo. AES Res. Bull. 647, pp. 6-8; Mo. AES Res. Bull. 720 pp. 6-7 (References to bulletins in this series are made by number. The complete reference is found at the end of this report. When a comparison is made we have followed the rule of placing Laclede County first and Harrison County second.)

TABLE 1-COMPARISON OF SELECTED SOCIO-ECONOMIC CHARACTERISTICS OF OPEN COUNTRY SAMPLES IN LACLEDE AND HARRISON COUNTIES

Age and Sex	Laclede County Percent (N = 532)	Harrison County Percent (N = 491)
All ages	100.0	100.0
Male	51.1	52.5
Female	48.9	47.5
Under 15	29.9	28.6
Male	16.7	15.2
Female	13.2	13.4
15 - 64	58.8	61.5
Male	29.1	31.5
Female	29.7	30.0
65 and over	11.3	9.9
Male	5.3	5.8
Female	6.0	4.1
Median age	34	38
Percent high school graduates (persons 25 or over)	20.5	30.9
Median level of living score	12.7	14.8

TABLE 2-A COMPARISON OF THE OCCUPATION OF HOUSEHOLD HEADS IN LACLEDE AND HARRISON COUNTIES

Occupation	Laclede		Harrison	
	No.	Percent	No.	Percent
Full-time farmer	54	37	92	61
Part-time farmer (farm and nonfarm work about equal)	10	7	6	4
Major farm-minor off farm	5	3	14	9
Minor farm-major off farm	13	9	4	3
Minor farm-no other employment	2	1	18	12
Entirely nonfarm	41	28	9	6
Not working	21	14	8	5
No male head	6	--	1	--

Illness and Use of Services. The rate of illness among open-country families in Laclede County exceeded that in Harrison County. The greatest difference in rate occurred between the youngest households and the least differences between the oldest households.[5] While more ill days were reported in Laclede County, more physician's services both absolute and relative to days of illness were utilized in Harrison County. The same direction did not occur in the utilization of hospital services where both the number of days in the hospital per person and per day of illness was greater in Laclede County.

[5]Mo. AES Res. Bull. 647, Table 3, p. 10; Mo. AES Res. Bull. 720, Table 4, p. 10.

When age of household head and income were controlled, the difference in rate of illness in younger homes remained much higher in Laclede County for both higher and lower income families.[6] In the higher income households, but not in the lower income households, the rate of doctor utilization per person was somewhat higher in Laclede County than in Harrison County. With regard to doctor calls per day of illness, the rate of service was greater in Harrison County among young families of both higher and lower income.

The hypothesis of greater traditionalism in Laclede County and greater rationality in Harrison County did not clearly lead to an expectation concerning the number of days of illness. However, it did lead to the expectation that more services would be utilized in Harrison County relative to the days of illness. This expectation was supported in the case of utilization of physician's services, but not in the case of use of the hospital.

The difference in the patterns of illness and use of services appears to conform more closely to differences in income than to differences in cultural characteristics. Data from the National Health Survey indicate that lower income persons have higher illness rates (Series B-10, Table 10), lower physician utilization rates (Series B-19, Table 11), and larger numbers of hospital days. This last is accounted for by the longer average length of stay in the hospital by members of the lower income families (Series B-7, Table 7).[7]

Dental Services. Dental services are an important part of a family's health program. Dental care may be among the services most sensitive to socio-cultural differences. A comparison between Laclede and Harrison Counties can be made on the basis of whether or not persons visited a dentist during the year preceding the interview. The result of the comparison by age can be seen in Figure 1. At all ages, a larger proportion of the people had visited a dentist at least once during the year in Harrison than in Laclede County.

The question again arises how to interpret the differences in behavior patterns between the two counties. The greater use of dental services in Harrison County is consistent with the hypothetical difference in value orientation between Laclede and Harrison Counties.

Although it is probably not completely fair to the conception of the social areas which were delineated on the basis of economic as well as other factors, the question is present as to how economic factors affect the dental-use pattern. The households were divided on the basis of level of living scores obtained from an enumeration of selected material items. Households with scores of 17 or more were called high; those that scored 16 or less were termed low. In Laclede County 86 persons were in the high level of living households; in Harrison County the number was 158; on the other hand, Laclede County had 436 persons reported in low level of living households compared with 328 persons in Harrison County.

[6]Mo. AES Res. Bull. 647, Table 4, p. 11; Mo. AES Res. Bull. 720, Table 5, p. 11.

[7]U.S. Department of Health, Education and Welfare, *Health Statistics From the U.S. National Health Survey.*

Figure 1. Comparison of Percent of Persons Who Visited Dentists During Survey Year by Age--Laclede and Harrison Counties

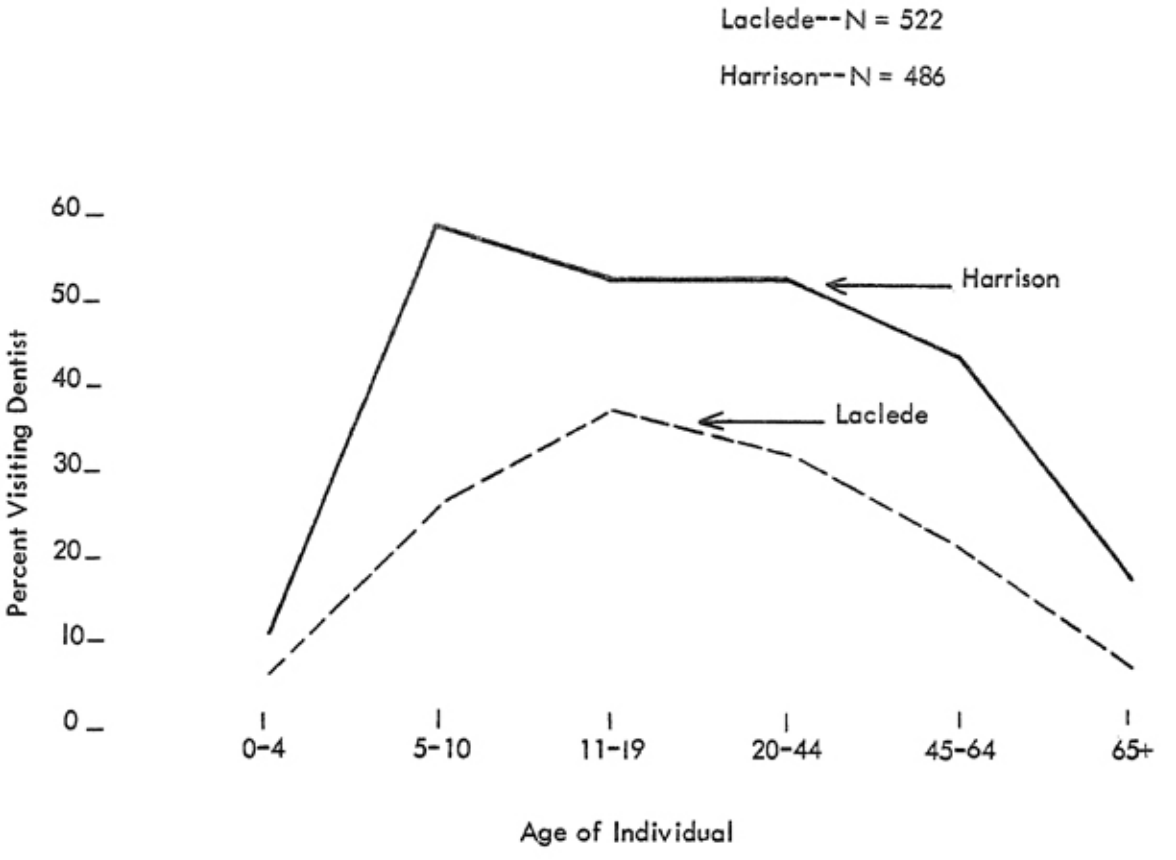


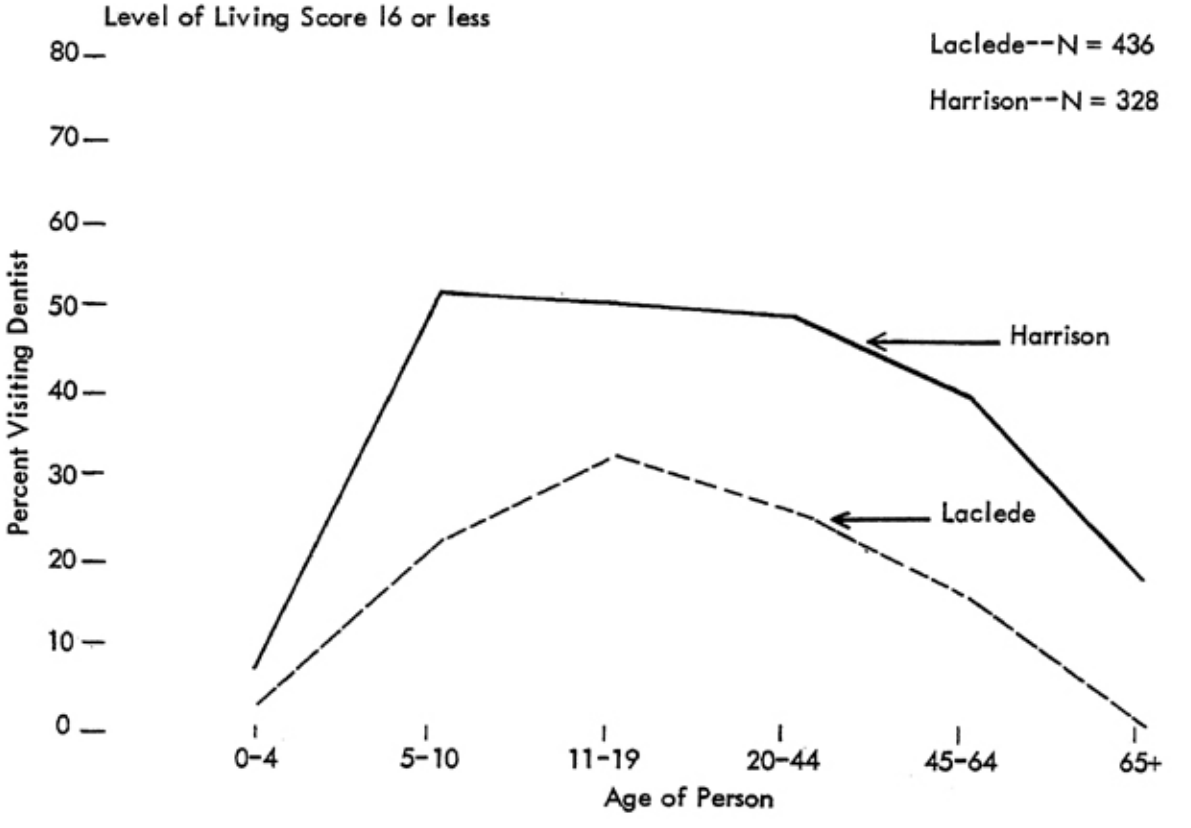
Figure 2 indicates the use-pattern in the two counties when level of living was controlled. In the higher level of living households the difference in use diminished considerably, reversing the direction in the 11-19 year age category. The difference did not diminish greatly in the 5-10 age category in either high or low level of living households. Peak use of service occurred at a later age in Laclede County than Harrison County in both level of living categories. Level of living was associated with the percentage of persons that visited a dentist during the year in both counties.

In assessing the effects of level of living on dental use, it must be pointed out that the control device used is crude. It indicates, however, that the economic factor is operative, and differences are not to be explained entirely by cultural values.

Charges for Health Services. The cost of physician services and hospital use differed somewhat in the two counties, averaging $29.72 per person per year in Laclede and $26.25 in Harrison. The pattern of costs was quite similar in the two counties with a high concentration in a few households.[8]

[8]Mo. AES Res. Bull. 668, Table 1, p. 5; Mo. AES Res. Bull. 721, Table 1, p. 4.

Figure 2. Comparison of Percent of Persons who Visited Dentist During Survey Year by Age and Level of Living--Laclede and Harrison Counties



In Harrison County a larger proportion of the health-cost dollar was spent for physician services than in Laclede County reflecting the greater use of physicians noted earlier. The division of the health-cost dollar between physician and hospital services, however, was quite similar and was also similar to figures from a nationwide survey conducted by the National Opinion Research Center and to those of enrollees in three health insurance plans.[9]

On the whole the pattern of charges in Laclede and Harrison Counties did not show wide divergence. And there is indication that they were similar to the general population. If this is true, it brings into question not only the attempt to distinguish health cost patterns on the basis of cultural areas, but also on the basis of rural-urban differences.

Survey	Percent of Families that had no hospital charges	Percent of Families that had no physician charges
Laclede County	73	22
Harrison County	74	15
NORC - Nationwide	74	25
Birmingham BC/BS Enrollees	73	17
Boston BC/BS Enrollees	72	20
Aetna-Employed Groups	70	24

Health Insurance. The purchase of health insurance must be interpreted as a rational act attuned to a secular world. If Harrison County has a more secular value system, it would be expected to have a higher proportion of its families covered by health insurance. Further, families in Harrison County were economically better able to purchase health insurance. A prediction of greater possession of health insurance in Harrison County on the basis of these considerations however, would have proved to be incorrect. The proportion of open-country households with health insurance was similar for the two counties (38 percent in Laclede and 33 percent in Harrison).

A major difference occurred in the method of acquiring health insurance in the two counties. In Laclede County, over one-third of the households reported that health insurance was obtained through employment; in Harrison County, less than one-tenth reported this method of acquisition. A salesman was reported by 64 percent of the respondents in Harrison County as an influence compared with 17 percent in Laclede County.[10]

As was pointed out in Table 2 there was more nonfarm employment among the open-country population of Laclede County than in Harrison County. The occupational structure rather than a value difference appeared to be a more effective condition in acquiring health insurance.

[9]Mo. AES Res. Bull. 668, Table 3, p. 8 and Table 4, p. 9; Mo. AES Res. Bull. 721, Table 3, p. 8 and Table 4, p. 9.

[10]Mo. AES Res. Bull. 668, Table 15, p. 20; Mo. AES Res. Bull. 721, Table 18, p. 22.

The proportion of the households using health insurance to meet charges incurred during the survey year did not differ greatly in the two counties. Of those households that had physician charges, 13 percent in Laclede and 15 percent in Harrison County used health insurance to meet them fully or in part. Of those households that had hospital charges, 42 percent in Laclede and 31 percent in Harrison County used health insurance.[11]

Discontinuing a health insurance policy was common practice in both counties. In Laclede County, 37 households had dropped health insurance and were without it at the time of the survey; in Harrison County, the number was 34 households. Not only the numbers, but the reasons for discontinuing insurance were similar. Cost and dissatisfaction with the policy were the two major reasons in both counties—cost was mentioned more often in Laclede and dissatisfaction more often in Harrison County.[12]

Physician-Public Relations

Family-Doctor Relationships. In a social milieu characterized by more primary contacts, one would expect this to be reflected in public-physician relationships. One index of intimacy between doctor and public is the extent and nature of the family-doctor relationship. If Laclede County represents a more folk-like situation on a folk-urban continuum, a different type of family-doctor relationship would be expected.

In terms of having a family doctor, 105 households (69 percent) in Laclede County, and 98 households (64 percent) in Harrison County reported this relationship. In households with a family doctor, a somewhat larger proportion of respondents in Laclede County indicated that they "talk over problems other than health problems with the family doctor", (31 percent in Laclede; 20 percent in Harrison).[13] The difference in response patterns, however, was not great enough to be significant at the five percent level by a chi square test ($X^2 = 3.1$; d.f. = 1).

In both counties, younger households and those with higher economic indices were more likely to have a family doctor relationship.[14] Therefore, in total incidence and pattern of relationship the family doctor relationship appeared similar in the two counties.

Satisfaction with Medical Care. A high and similar proportion of respondents in both counties reported being satisfied with medical care they had received (88 percent in Laclede; 84 percent in Harrison). About one-quarter of the households in each county reported that there had been times in the past six months that members of the household needed medical care, but did not get it. Respondents were also asked to indicate how widespread the practice of, "seeing a doctor was when he was not really needed". Seventy-two percent in

[11]Mo. AES Res. Bull. 668, Table 14, p. 18; Mo. AES Res. Bull. 721, Table 16, p. 18.
[12]Mo. AES Res. Bull. 668, Table 16, p. 22; Mo. AES Res. Bull. 721, Table 19, p. 23.
[13]Mo. AES Res. Bull. 653, p. 14; Mo. AES Res. Bull. 754, p. 12.
[14]Mo. AES Res. Bull. 653, p. 18; Mo. AES Res. Bull. 754, p. 18.

Laclede and 69 percent in Harrison County thought the practice was not widespread—a difference that was not statistically significant.

These responses, although difficult to interpret in terms of a primary-secondary direction, indicate a high similarity in verbalization on these matters.

Opinions About Physicians. A common set of statements about physicians was presented to those interviewed in the two counties. Respondents were asked to agree or disagree with them. The percentages agreeing with the statements for Laclede and Harrison Counties are compared in Table 3. A chi square analysis was made for each statement in order to determine whether or not the differences were large enough so that they would have been unlikely to occur by chance. In only two cases was there a difference that was significant at the 5 percent level.

It was judged that the direction of responses could be reasonably assigned on a primary-secondary continuum for items 1 through 7; items 8 and 9 did not

TABLE 3-COMPARISON OF RESPONSES ABOUT PHYSICIANS FOR LACLEDE COUNTY AND HARRISON COUNTY MISSOURI OPEN-COUNTRY SAMPLES

Statement	Percent Agreeing		d.f.	X^2
	Laclede	Harrison		
1. I think that a person should visit with the doctor about other matters than health especially about personal and family problems.	54.3	52.0	1	0.2
2. If I had trouble in my family (not illness) I would be apt to talk it over with my doctor.	30.2	15.8	1	9.0*
3. If I were ill, I would first go to my doctor and expect him to find the best doctor for my ailment.	90.5	91.4	1	.0
4. I don't care so much about a doctor's manner with his patients as long as he is a skillful doctor	29.8	22.4	1	2.2
5. I think a doctor's job is something like a minister's and that it has a spiritual side to it.	74.7	70.8	1	1.0
6. I don't care so much what a doctor's personal life is like as long as he is a skillful doctor	40.4	46.4	1	1.0
7. I wouldn't leave my doctor for another doctor even though the other man might have more scientific knowledge.	29.3	11.2	1	15.3*
8. On the whole, have you been satisfied or dissatisfied with the help you have received from doctors (answering satisfied)[1]	87.7	80.4	2	4.0
9. How widespread is the practice of calling the doctor when he is not really needed (answering fairly widespread or happens often)	27.8	31.3	1	.4

*indicates X^2 (chi square) is significant at the 5 percent level
1 - categories were satisfied, dissatisfied, and uncertain

lend themselves to this kind of interpretation. With the exception of item 4, responses in Laclede County were judged to be in the direction of a more primary social situation. This would be in line with the hypothesis that Laclede County represents an area with more folk-like characteristics.

The impressive thing about the responses, however, is not the differences, but the similarities in them. It appears that respondents in these counties perceived physicians in a similar manner. It would be difficult to make a case for value differences regarding physicians on the basis of this evidence.

Family Health Management

Routine Physicial Examinations. Probably no other practice is as widely supported by health educators as routine physical examinations. At the verbal level, it is a lesson well-learned in both counties in the survey. There was a difference, however, between the counties in the response to the question, "How often do you think people should see a doctor?" In Harrison County almost all the respondents gave the "best" possible answer, that is, "at least every six months". In Laclede the number responding this way was about one-quarter, but an addirional 39 percent indicated that it would be desirable to have a physical examination at least once a year bringing the advocates of regular physical examinations up to about ⅔ of the respondents in Laclede County. About ⅓ in Laclede and less than 1/10 of the respondents in Harrison County said that physical examinations should be had only when needed.

The difference in responses in the two counties was great enough to be significant at the 5 percent level by a chi square test indicating that the difference was not likely to be due to chance. The difference is in the direction that is consistent with the principal hypothesis of this comparison; namely, that Harrison County is representative of a more secular area than the area represented by Laclede County.

When the respondents were questioned whether the family had regular examinations, the proportion was almost equally low in both counties. We have commented before on the discrepancy between stated opinion and actual behavior, but here we call attention to the similarity of behavior in spite of the difference in verbal expression.[15]

The three most numerous reasons given for failure of people to have regular examinations were the same in both counties, but in different order. In Laclede County the order was "don't think it necessary", "cost", and "neglect"; in Harrison County it was "neglect", "cost", and "don't think it necessary".[16]

Routine Dental Examinations. The difference between the two counties in verbal statement of "how often should a person see a dentist" was not as great as it was for physical examinations, but could not reasonably be accounted for by chance on the basis of a chi square test.

[15]Mo. AES Res. Bull. 699, pp. 11-13; Mo. AES Res. Bull. 754, pp. 22-23.
[16]Mo. AES Res. Bull. 699, Table 7, p. 13; Mo. AES Res. Bull. 754, Table 17, p. 24.

HOW OFTEN SHOULD A PERSON SEE A DENTIST?

	Percent of Respondents	
	Laclede County	Harrison County
At least every six months	47	50
At least once a year	33	42
Only when needed	20	7
Other	--	1

$X^2 = 11.3$, d.f. = 2, Significant at the 5 percent level.

Information for Laclede was not available as to whether families actually had dental examinations; although as was pointed out earlier, a smaller proportion of the individuals in Laclede County had visited a dentist during the survey year.

As with physical examinations, the verbal response to dental examinations was in a direction that gave credence to the idea that, compared with Laclede County, Harrison County's culture would support more rational health activities.

Immunization. Immunization is another rational approach to health maintenance. This was highly favored in both counties (Laclede 82 percent; Harrison, 87 percent) with no appreciable difference between them.

However there was a difference in the number of children and youth reported immunized against smallpox and typhoid fever. For smallpox, about equal proportions of those 5-9 years of age were reported immunized, (Laclede, 30 percent; Harrison, 31 percent), but at older ages the difference widened. At age 10-14 in Laclede County ¾ were immunized against smallpox, but only about ⅓ in Harrison; at age 15-19 the percentages were 84 percent and 44 percent for Laclede and Harrison Counties respectively.[17]

The difference in reported immunization against typhoid fever was even greater.[18] The difference in proportion immunized against typhoid fever might be partially explained by the fact that this disease is generally regarded as a greater threat in south Missouri than in north Missouri. No such explanation is tenable in the difference in smallpox immunization. In this case the direction of the difference is opposite to that expected on the basis of the principal hypothesis. A factor that may have influenced this is that Laclede County had a county health department, and Harrison County did not.

Health Maintenance. Respondents were asked to tell how they kept their families in good health. In both counties, reference to food and nutrition led all other reasons reported by a wide margin. This response was followed by rest, cleanliness and sanitation, fresh air and exercise in the same order in both counties. Other responses were not in the same order in both counties, but there was a general similarity. In many cases it appeared that the responses were "stock" answers.[19]

[17]Mo. AES Res. Bull. 699, Table 8, p. 14; Mo. AES Res. Bull. 754, Table 19, p. 25.
[18]*Loc. cit.*
[19]Mo. AES Res. Bull. 699, Table 9, p. 15; Mo. AES Res. Bull. 754, Table 20, p. 26.

In both counties a substantial proportion of the households reported at least one member taking vitamins during the survey year. The percentage was higher in Harrison County, (Laclede, 35 percent; Harrison, 57 percent) a difference which was statistically significant. The largest difference occurred in the oldest households—in Laclede 22 percent of the oldest households had a member using vitamins; in Harrison County it was 64 percent.[20]

In Harrison County at least one person in 41 percent of the households had been on a diet during the year compared with 31 percent in Laclede County. This difference was not large enough to be significant at the 5 percent level by a chi square test ($X^2 = 3.2$, d.f. $= 1$).[21]

Family Practices in Illness. In both counties the family retained major responsibility in decisions concerning illness. In each county a question was asked concerning when a physician was consulted in an illness. In Laclede County the question was asked so that open-end responses were obtained; in Harrison County respondents were asked to check one of four categories of increasing seriousness. Therefore, the results are not comparable. There is an indication, however, that few in either county consulted a physician at the first sign of illness, and older households were more likely to indicate that an ailment had to be serious before a physician was consulted.[22]

There appeared to be a similar pattern for treating a cold in both counties with chest rubs, aspirin, cold tablets, and rest being mentioned frequently in both counties.[23]

The medicine cabinets of homes in the two areas appeared to contain about the same types of remedies—laxatives, aspirin, cold remedies, liniments and rubs, and antiseptics. Even the list of home-made remedies was similar, and respondents in one county reported their use about as frequently as in the other.[24]

Application of the Comparisons to the Hypothesis of Direction-Predictable Differences in Health Behavior. It was a stated hypothesis of this research that the counties studied were culturally different—that Laclede County was more traditionally-oriented and Harrison County was more rationally-oriented. The argument follows that if this is true, discernible and direction-predictable differences in health behavior and attitudes should be characteristic. The preceding comparison has been an assessment of this hypothesis. For many of the comparisons, the results were remarkably similar; for others, there was a difference in the predicted direction and, for some, a difference in the opposite direction.

A summary of the direction of behavior and opinion items is presented in Table 4. A plus indicates behavior or stated opinion in the direction predicted;

[20]Mo. AES Res. Bull. 699, Table 13, p. 18; Mo. AES Res. Bull. 754, Table 22, p. 28.
[21]Mo. AES Res. Bull. 699, Table 14, p. 19; Mo. AES Res. Bull. 754, Table 24, p. 29.
[22]Mo. AES Res. Bull. 699, pp. 8-10; Mo. AES Res. Bull. 754, p. 30.
[23]Mo. AES Res. Bull. 699, Table 10, p. 16; Mo. AES Res. Bull. 754, Table 26, p. 32.
[24]Mo. AES Res. Bull. 699, Table 16, p. 22 and Table 17, p. 23; Mo. AES Res. Bull. 754, Table 27, pp. 33-34 and Table 28, p. 35.

a minus indicates behavior or opinion in the direction not predicted. A sign test was applied to these data and it indicated that the direction was predicted on the basis of the hypothesis to a greater extent than was likely by chance (significant at the 5 percent level). It should be noted that the items themselves were quite different and quite uneven in terms of importance in health maintenance. There might be a question in some cases about which direction was predictable on the basis of the hypothesis. Certain items were not used in the summary because of this; for example, extent of illness, satisfaction with medical care, and chronic illness did not seem to have a clear direction in terms of the hypothesis. However, the analysis was non-selective as to which items to apply the test in cases where direction was apparent.

Independent of the test made above, however, the individual differences in many cases were small, often approaching equality. The results on the whole did not support the hypothesis of direction-predictable differences. The two counties appeared in general to be underpinned by a common set of norms in matters of health.

In reassessing the original hypothesis several qualifications should be mentioned. 1) The instrument used (printed schedule) may not have been sensitive enough to discern differences that really existed. 2) Health behavior may be more generalized than other types of behavior. In this case, the counties may show direction-predictable behavior for other kinds of behavior. 3) Direction-predictable differences in health behavior and attitudes might have existed in the relatively recent past. If this is true, *it would indicate a general "leveling" of health behavior as part of the changes in rural society.* This might represent a significant hypothesis in itself. As an extension of this hypothesis it might be pointed out that apparent differences may in some cases be surface anachronisms. It has been a common assumption that *any* difference indicated massive underlying differences. The iceberg analogy is a favorite statement of this idea. However, it is also possible that some of the differences may be more apparent than important.

GENERALIZATIONS BASED ON BOTH COUNTIES

In the preceding section we were sensitive to differences between the two counties. It was apparent that there were a number of conditions and relationships that were common to both. The finding of common situations is the first step toward generalizations. Therefore, some of these two-county generalizations are presented. They should be treated as hypotheses on this evidence alone; however, some of the patterns have more general support from other studies.

Illness and Use of Services

In both of the counties *illness was concentrated in relatively few households.* In each county fewer than 15 percent of the households accounted for more than three-fourths of the days of disabling illness reported. High risk of illness tend-

TABLE 4-SUMMARY OF THE CORRESPONDENCE OF HEALTH BEHAVIOR AND OPINIONS WITH THE DIRECTION-PREDICTABLE HYPOTHESIS

Health Behavior or Opinion	Correspondence With Hypothesized Direction (+ indicates correspondence) (- indicates non-correspondence)
1. Use of physician's services	+
2. Use of hospital services	-
3. Use of dental services	+
4. Possession of health insurance	-
5. Use of health insurance to meet physician's costs	+
6. Use of health insurance to meet hospital costs	-
7. Family-doctor relationship	+
8. Talk over problems with family doctor	+
9. -15. Opinions about physicians (Table 3)	6+; 1-
16. Opinion about routine physical examinations	+
17. Opinion about routine dental examinations	+
18. Opinion about immunization	+
19. Immunization practice	-
20. Use of vitamins	+
21. Dieting by a member of the family	+
	16+
	5-

Sign test: N = 21, r = 5--significant at 5% level.*

*Dixon, Wilfred J. and Frank J. Massey, Jr. Introduction to Statistical Analysis, (N.Y.: McGraw-Hill) 1951, Table 10, p. 324.

ed to occur in the oldest households (head 65 years and over) where the annual rate of illness was 23,000 and 27,344 days per 1000 persons respectively in Harrison and Laclede County contrasted with 7,405 and 10,985 days per 1000 persons for the total sample of those counties. *The concentration of illness in relatively few households was attended by concentration of physician and hospital services and costs in relatively few households.* Older households consumed more services relative to the number of members than younger households did. *However, in relation to the number of days of illness, older households used fewer hospital and physician services.* Also relative to the days of illness, members of households with higher incomes ($3,000 or more) employed more physician services than members of households with lower incomes.

The oldest households showed a tendency toward either high utilization, or very low or no utilization of health services. At the same time that members of the oldest households reported consuming a disporportionately large share of health services, one-fourth of the oldest households in Harrison County and one-third of the oldest households in Laclede County reported no physician or hospital utilization during the year. These were larger proportions than occurred in other age categories. Respondents in older households tended to report more often than those in younger households that an illness had to be serious before a physician was consulted. At the same time it was among these households that the long-term illnesses associated with old-age occurred.

Disabling illness was heavily concentrated in households and among individuals reporting a chronic illness. In Laclede County, the 21 percent of the individuals reporting a chronic illness accounted for 69 percent of the disabling illness reported for a 3-month period; in Harrison County, the 26 percent of the persons reporting a chronic illness accounted for 67 percent of the disabling illness reported in a 3-month period.[25]

While there was concentration in the total use of physician services among the families interviewed, *a large proportion of the families had at least one professional contact with a physician during the survey year.* Of these, few home calls were made among these open-country families.

As the bed of the seriously ill person shifts from the home to the hospital, that facility becomes increasingly important. *If at one time hospitals were dread places, today they are not regarded with such fear.* A large majority in both counties subscribed to the idea that "hospitals were not to be feared", but rather they "give a feeling of security".[26]

Cost and Method of Payment

The cost of care in illness is borne principally by individual families. Even in these days of widespread health insurance most of the cost of health care is paid directly out of savings or current income. Few reported using installment payment, or borrowing, to meet these obligations. Respondents reported they would meet small obligations out of savings or current income, but would use other methods for larger costs. In the lowest income group a sizeable proportion indicated they could not or did not know how they could meet a bill of as much as $1000.

In the general society, health insurance has become a major mechanism for meeting health costs. Estimates are that 70 percent of the American people have some kind of health insurance. *It is also clear that the rural farm population lags behind other residental categories in obtaining this protection.*[27] A distinction in acquiring health insurance exists on the basis of whether enrollment is through an employee-group or as an individual. Workers in industry are enrolled largely as members of employee-groups; while farmers are much more likely to be enrolled on an individual basis.

It may be hypothesized that *the mechanism for enrolling in health insurance among self-employed farmers is basically different from the mechanism for those enrolled through employee-groups.* This has a corollary that *the process of enrolling and maintaining health insurance is basically different for those enrolling as self-employed farmers*

[25]Mo. AES Res. Bull. 647, Table 11, p. 16; Mo. AES Res. Bull. 720, Table 12, p. 17.
[26]Mo. AES Res. Bull. 699, p. 11; Mo. AES Res. Bull. 754, p. 22.
[27]Odin W. Anderson with Jacob J. Feldman, *Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey,* McGraw-Hill, New York, 1956, p. 16 Health Information Foundation, "Voluntary Health Insurance; 1953 and 1958", *Progress in Health Series,* Vol. VIII, No. 5, May 19, 1959, p. 1.

and as members of employee-groups. Health insurance is often a fringe benefit for employee-groups. Even if the enrollee pays the entire cost, payroll deductions make the process of payment automatic. In contrast, the rural dweller as an individual may not be immediately confronted with an opportunity to enroll. Assuming he is favorably aware of health insurance, he may not act until a salesman canvassing the county knocks on the door and puts the question. One respondent reported, "There was a salesman came through; he sold quite a bit around here—We hadn't thought too much about it". After a person is enrolled (on an individual basis), he is responsible for making the periodic payments, in contrast with those enrolled in employee-group plans.

The high proportion enrolled as individuals in rural-farm areas raises a further question concerning adequacy of coverage. The negotiation of health insurance policies by employees often in conjunction with labor unions assures careful consideration of the policy itself and the reliability of the insuring agency. On the other hand it appears that a substantial number of persons who buy individual policies have faulty knowledge of the provisions of the policy. This may result in dissatisfaction with the insurance when used. Although we do not have comparative data we hypothesize that *there is greater dissatisfaction with health insurance among individual enrollees than among employee-group enrollees.* A corollary to this hypothesis would be that *individual enrollees are more likely to discontinue health insurance policies than are employee-group employees.* Data from Harrison and Laclede Counties indicate that considerable dissatisfaction with health insurance occurs and that discontinuation is common.

Relations With Physicians

It was a starting assumption that the physician is located in a local network of interpersonal relations and that his professional life is highly visible, and of consequence to the people of the area. *Under such circumstances, the physician may be regarded as an opinion target.* This assumption was substantiated by interviews which indicated that there were definite beliefs and sentiments about physicians of the area. Even though home treatment is used extensively, it does not represent an opposing philosophy of health care, but rather it is in the nature of attempting to do what the doctor would do. *The physician is the technical expert to whom most people defer in matters of health.* Even in cases where the physician is not consulted directly, advice given at a former time or to others in the community (friends and relatives) may be used. *Therefore, the physician's advice may be applied to situations about which he is unaware, and used under conditions not sanctioned by him.*

In general, *physicians were highly regarded by those interviewed.* Few would reject the services of physicians as being undesirable although there was considerable variation among families with reference to at what point in an illness a physician would be consulted. *The family-doctor relationship, to a considerable extent, is not based on deep personal ties but upon the ability of families to provide a generally desirable service.* Data from the two counties indicate that the more vigor-

ous and able families (as measured by age, income, and level of living) are more likely to report a family-doctor relationship. The oldest families were least likely to have a family doctor. Further, few indicated that they would discuss problems other than health problems with the physician. Measures of primary-secondary orientation were not clearly related to having a family doctor except among older households in Laclede County. *The family-doctor relationship cannot be equated with the old country doctor relationship, but it is in the direction of a rational, secondary type of relationship.*

A greater proportion of older than younger people are alienated from physicians. Alienation is akin to rejection and may be exhibited as antagonism. In a situation in which physicians were in general highly regarded, dissatisfaction with physicians was concentrated more heavily in older families.

If means of obtaining a culturally desired goal are unavailable a possible reaction is to reject the goal itself. This type of adaptation by the individual has been termed retreatism.[28] Characteristic of older people is a loss of integration with the community, with a narrowing of social contacts resulting from retirement from work, separation from family and friends, a general decline in mobility and loss of income. These may combine to leave the older person in a relatively isolated situation. Among the consequences may be that the older person is deprived of desirable goods and services. The physician represents one such service. Under such circumstances, the individual may reject the physician's services as not being desirable. *The rejection of the physician, then, may be a sign of a more general rejection of cultural values because of inability to achieve them.* If this is true, the locus of the antagonism is in the social situation rather than in the individual.

It is of interest to note in this connection that antagonism toward physicians seemed to be more prevalent in Laclede than in Harrison County. A reasonable hypothesis is that *in recent years, values in Laclede County have changed more rapidly than in Harrison County, thus by-passing individuals who do not keep pace.*

Health Maintenance

The family's discretion in matters of illness was great. A whole series of decisions were made relative to the illness of a member, including the seriousness of the ailment, whether or not to attempt home treatment, at what point to call a doctor, which doctor to consult, and whether and to what extent to follow the doctor's directions. *These decisions were regularized on the basis of past experience, forming patterns of behavior in illness situations.* Hence, an illness had to be of some severity before a physician was consulted. Experience with illness in the home made it possible to "just tell" in many cases when a child was "really sick". Certain danger signals were looked for, the leading one being a fever. By way of

[28]Robert K. Merton, *Social Theory and Social Structure,* The Free Press, Glencoe, Illinois, 1957, pp. 153-155.

knowing what to do in case of illness, wide use was made of home medications for common ailments. About two-thirds of the households had regularized relationships with physicians to the extent of being able to designate a family doctor. Most of the other families indicated where they would go for medical care. The general regularity of behavior in the face of illness was further pointed-up by the indication that unexpected situations were a cause of anxiety. Respondents often reported they consulted a doctor "when they did not know what was wrong".

In both counties, *there was a wide discrepancy between stated opinion and actual practice for certain selected health behavior.* For example, the importance of regular physical examinations was given lip-service by most respondents in both counties, but in neither was there more than a few who actually followed a regular routine of health checks. The same was true of dental examinations. Also, it was a widely held opinion that a person should talk over personal problems with a physician. However, only a few did or would have such conversations. Therefore, *it appears that health information can become part of the verbal equipment of an individual without significantly affecting his health behavior.* The optimist might regard this as a stage in an individual's adopting a particular type of health behavior. To be sure, acceptance of an idea would seem to be a necessary step in voluntary action, but verbal acceptance does not assure performance.

In addition to pointing-up the discrepancy between stated opinion and actual behavior in selected health practices, the data indicate that, *preventive measures were not urgent considerations for many families.* The small number having physical examinations indicated this as well as responses given to the question, "Why do people fail to have regular physical examinations?" Aside from cost, replies such as "don't think it necessary" and "neglect" were most common. *While there appeared to be no question about acceptance of responsibility for care in illness by the family* (although some families meet this obligation more conscientiously and adequately than others) *family responsibility for preventive measures was not so clearly accepted.* There would appear to be no serious opposition, for example, to the school assuming responsibility for immunization.

Home treatment was a common part of the established pattern of dealing with illness. Home-made remedies were still fairly common although their use is declining. *The home-made remedies used, although sometimes questionable, did not appear to be occult.*

Home treatment was concentrated mainly on common illnesses. For example, favorite remedies were available in almost all homes for treating the common cold. Commercial remedies were more common than home-made remedies. However, *many of the commercial remedies were similar to the home-made remedies used formerly, and appeared to be direct substitutes in the kit of home treatment.*

SOCIOLOGICAL RESEARCH IN RURAL HEALTH—A COMMENT

At the completion of a set of reports such as this, it seems appropriate to

say a word about sociological research in rural health. Health has been a major area of rural sociological research. For example, W. A. Anderson's *Bibliography of Researches in Rural Sociology* (1957) lists 228 health studies. Another bibliography reports over 220 researches in rural health between the dates, January 1953—June 1960.[29]

Rural sociological studies in health have had two major deficiencies: 1) Slowness to adopt a sociological frame of reference. This is not so much a distinction between a descriptive and an analytical approach which is not a very useful distinction, but failure to ask sociological-type questions or to make sociological interpretations. 2) Failure to collate the findings of the large number of studies as a basis for generalization and for moving research ahead. Even the present attempt to summarize a set of reports and to compare counties is an exception.

The field of medical sociology is growing rapidly, and many rural sociologists have been active in its development. This movement seems likely to advance the sociology of health both theoretically and substantively. Rural sociologists in the field of health cannot simply repeat what they have been doing. They need to integrate their work with the work of others and to strike out into new areas.

Some research needs that once existed are no longer so urgent. Federal and state agencies are assembling more information on social aspects of health. The National Health Survey has eliminated the need for many of the "counting" studies that have been so valuable in the past and has now freed the sociologist in the area of health for more sociological pursuits.

[29]Preliminary report, Elsie S. Manny, William G. Yanniello, and Helen L. Johnson, Rural Health Selected Annotated References, January 1953—June 1960.

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