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SATISFACTION WITH PUBLIC SERVICES BY RURAL RESIDENTS IN WEST VIRGINIA

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INTRODUCTION

Population has been increasing for at least a decade in rural areas of West Virginia as in many areas of the Nation. This phenomenon is transforming rural areas, with problems of growth replacing those of decline. If local governments, the extension service and others are to cope adequately with this emerging set of problems, more must be learned about the newer residents, their attitudes, needs and how they relate to those of the rest of the population in the area. A number of recent analyses of rural development attest to the serious data gap that exists with respect to knowledge in the area (Beal; Fuguitt, Voss and Doherty; Gilford, Nelson, and Ingram; Powers and Moe in Dillman and Hobbs, p. 14; and Sofranko and Williams). This paper reports on a 1981 survey of rural residents in nine selected West Virginia counties, a survey which was conducted to help solve the data gap problems.

The purpose of the survey was to obtain information about the residents of rural areas and to help determine the potential impacts of the changing levels and mixes of population on rural communities, local governments, and other agencies or groups affected by or interested in rural development. One portion of the survey was used to determine the level of satisfaction with a variety of services. This report focuses on the results of analyses of services satisfaction in relation to location, socioeconomic and migration variables. There has been considerable research on rural services in recent years, including a Northeastern regional project (NE-77) in the 1970's (Kuehn, 1977). Rogers reviewed several other studies about services and indicated research needs for the 1980's. He indicated that "More research is needed on what factors influence feelings of satisfaction with community services" (in Dillman and Hobbs, p. 48).

PROCEDURES

Nine counties were selected for the rural development survey. The counties were selected to obtain representation throughout the State and to assure a wide variety with respect to the importance of agriculture, income levels, and related characteristics as well as location. Thus, the counties were not randomly selected and the results can not be generalized for the State in a statistical sense.

Personal interviews were used for a random sample of rural residents in each county. Within

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each county a rural residence near the starting point of each day's interviewing was selected at random and then each tenth to twentieth house, depending on the density of the rural population, was selected for interviewing. The interviewing routes were selected to assure county wide coverage. Approximately 100 interviews were conducted in each county. Except for one county, where local school teachers were hired, the interviews were conducted by West Virginia University students.

A questionnaire was used to obtain information about the socioeconomic characteristics of the rural residents, the places where they live, data on migration (moving), production activities, problems, needs, and attitudes. A portion of the questionnaire was concerned with measuring satisfaction with 26 services. Respondents rated each service on a scale of one, very satisfied, to five, very dissatisfied. In the analyses these scores were used both as categories to classify responses and as cardinal measures to quantify responses, i.e., to obtain average scores for the sample and subgroups within the sample. With the one to five scale used, higher average scores indicate less satisfaction, with the score over three representing relatively greater dissatisfaction. This paper focuses on the analysis of services satisfaction and the factors that affect the level of satisfaction.

A variety of descriptive and statistical procedures were used to analyze the results. These included means and counts classified in various ways, chi-square analyses, analysis of variance, Duncan's multiple range tests, and regression analyses. The combination of procedures allows determination of significant relationships and the quantitative or directional nature of the relationships.

SURVEY RESULTS

There was a total of 2,752 persons in the 967 households surveyed for an average of 2.85 persons per household. Forty-nine percent were males and 51 percent were females. Ages for the individuals were reported in ranges. The largest category for ages was for those under 18 years of age (27 percent). Seventeen percent were between 18 and 29, 22 percent were between the ages of 30 and 49, 18 percent were between 50 and 64, 16 percent were 65 or older. The most common composition for these households was husband, wife, and children (42 percent) followed by husband and wife (32 percent). Just the mother and children lived in 14 percent of households and 13 percent were single person households. Few other living arrangements were reported. The majority of those who reported place of birth were born in the county in which they lived (1,359 persons). Most of the others were born inside West Virginia with only 339 born outside the State (6 were foreign born). Less than 10 percent of the persons were raised in urban areas. Most people were raised on farms (962). Others were raised in

rural areas or small towns - 719 and 364, respectively.

Most of the persons who had moved did so more than 10 years ago (42 percent) with 25 percent of the households having never moved. Fifteen percent moved between 5 and 10 years ago and about 19 percent moved to their present location less than 5 years ago. The majority of moves were made from within the county in which the respondents were living. Eighteen percent of the moves were made from outside the county and 18 percent were made from outside the State. The type of area most commonly moved from was rural non-farms areas (35 percent) followed closely by small towns (33 percent). Twenty-two percent moved from a farm while less than 10 percent moved to the present location from an urban area. The specific reasons more commonly cited for moving were a dislike for previous place of residence (12.2 percent), to change lifestyles (19.1 percent), and a preference for rural living (12.7 percent). To change employment was a less important reason with only 8.4 percent citing this reason for relocating although another 4.8 percent moved because their employer transferred them.

A large proportion of the households had incomes which fell in the range of \$10,000 to \$19,999 (30 percent). There were 17 percent receiving between \$5,000 and \$9,999 and an additional 14 percent receiving less than \$5,000. A total of 300 persons (31 percent) received family incomes of less than \$10,000. Eighteen percent received between \$20,000 and \$29,999. About 10 percent reported receiving more than \$30,000 and another 10 percent did not know or refused to indicate their annual household income. Incomes generally were received from either full or part-time employment, 520 and 141 households, respectively. This was followed by social security or some other form of retirement payments. Only 78 households reported receiving food stamps or some form of welfare while 135 persons reported being unemployed. The more common occupations for all members of the households were housewife (586) and student (472), while 384 were retired. Income was received from a wide variety of occupations. The more common ones were skilled trades (114 persons), farmer (112), and professional (109). There were a total of 190 persons involved in white collar or business management types of occupations.

A majority of the adults in the nine counties surveyed had at least a high school diploma; 759 had finished high school and 122 had attended vocational school. However, a large number did not finish high school (410 persons) or grade school (450). A total of 373 persons attended college with 197 of these having some type of degree. There were 554 persons attending grade school, 244 persons in high school, and 70 in college or some other type of school at the time of the survey.

SATISFACTION WITH SERVICES

The individuals interviewed were, in general, satisfied with the services covered by the questionnaire (Table 1). Average scores based

on the one to five scale were less than three for 18 of the services. These included aspects of police, fire, emergency medical, public health, education, shopping and library services. On the other hand, there were relatively more of the interviewees who were dissatisfied with road maintenance, transportation, housing and recreational services. These results were in general agreement with the findings by Kuehn (1976) from a 1974 survey in three Northern West Virginia counties, although the general level of satisfaction was higher in the earlier study. The data on satisfactions were analyzed by use of other variables from the survey to develop a better understanding of factors affecting service satisfaction.

Location

The county where the respondents lived was the primary location variable and appeared to have a very strong influence on the level of satisfaction. There were statistically significant effects for county from all three techniques used - chi-square, Duncan's tests, and regression analysis - a five percent probability level was used in all statistical tests. Residents of southern (primarily coal) counties, except for Raleigh County, tended to be less satisfied than those in other parts of the State. The surveyed residents in McDowell County were, on the average, the least satisfied, followed by those in Webster and Lincoln Counties. McDowell County respondents were least happy with 18 of the 26 services and those from Webster were least satisfied for the other eight services. The Duncan's multiple range test for the mean service satisfaction scores indicated that not only were the average scores higher but there were statistically significant differences between those and scores in the other counties. Raleigh County, the one exception in the southern part of the State, is in the center of the coal fields but has had considerably more industrial development than the other counties in that area.

The relatively more satisfied respondents tended to be located in the panhandle counties, Northern and Eastern, more frequently than elsewhere. Respondents in Doddridge County also were relatively satisfied (or less dissatisfied for those services where dissatisfaction was the more prevalent response). In general, counties with higher average levels of satisfaction were those with higher average incomes and with better, less rough terrains. While the levels of satisfaction were different it should be noted that there was a fairly general agreement between counties in the way the individual services were rated in relation to each other.

Within the counties, persons who considered their places to be farms tended to be more satisfied than did those who considered their places to be primarily residences. The Duncan's tests indicated that the interviewees on the farms were more satisfied for 18 of the 26 services, while also having lower, but not significantly lower, scores for six of the remainder. This finding held whether the farms were classified as full-time or part-time operations.

Socio-Economic Factors

Socio-economic factors appear to have con-

Table 1. Degree of Satisfaction with Public Services by Rural Residents in West Virginia.

	No. of Responses	Avg. Score	Percentage of Respondents*				
			1	2	3	4	5
Law Enforcement - State Police	989	2.49	9.9	58.4	13.6	10.1	8.0
Law Enforcement - County Sheriff	989	2.52	9.1	54.4	19.9	9.0	7.6
Law Enforcement - Conservation	989	2.48	8.8	45.9	37.2	4.7	3.4
Fire Protection	989	2.12	24.7	54.8	9.2	6.3	5.0
Emergency Medical Service	987	2.04	25.1	56.9	10.3	4.3	3.4
Public Health Services	983	2.47	12.0	46.0	30.8	5.3	5.9
Education - Primary Grades	988	2.66	11.0	40.1	29.2	11.7	3.0
Education - Secondary Grades	987	2.75	7.1	41.1	31.0	11.7	9.1
Education - Vocational Training	988	2.43	12.9	42.6	36.6	4.8	3.1
Education - Adult Education	986	2.56	8.3	37.8	45.8	5.9	2.2
Water Services	934	2.73	8.1	39.3	34.5	8.0	10.1
Sewage Treatment	922	2.95	2.1	33.8	44.2	7.1	12.8
Sanitary Landfill	984	2.76	5.0	35.1	45.9	6.4	7.6
Garbage Collection Services	981	2.46	5.3	46.5	22.9	7.9	7.4
Road Maintenance Services	988	3.80	3.3	21.7	6.5	28.2	40.3
Enforcement of Land Reclamation	950	2.92	3.1	29.8	48.0	10.1	9.1
Public Transport - Rural Areas	967	3.38	1.5	25.4	29.3	21.5	22.3
Public Transport - Between Cities	975	3.33	2.9	22.7	34.5	18.0	21.9
Recreation - For Children	984	3.29	5.8	29.2	19.1	21.9	24.0
Recreation - For Teenagers	984	3.49	4.2	21.7	20.9	27.6	25.6
Recreation - For Adults	984	3.40	3.8	25.4	21.7	25.6	23.5
Recreation - For Senior Citizens	985	3.02	8.2	30.7	27.9	17.3	15.9
Other Services for Senior Citizens	985	2.85	7.9	35.9	32.2	11.6	12.4
Local Shopping Facilities	986	2.95	9.9	45.1	5.9	18.4	20.7
Housing Situation	986	3.06	3.4	41.4	20.0	16.0	19.2
Library Services	987	2.27	18.7	51.6	19.4	4.7	5.6

* 1 = Very Satisfied 2 = Satisfied 3 = Neutral or Don't Know 4 = Not Satisfied
5 = Very Dissatisfied.

siderable influence on levels of satisfaction with services. Among the factors tested for relationships to satisfaction were income, education, occupation, household composition and background of the persons.

Income was significantly related to satisfaction with most of the services, 17 of 26 according to analysis of variance and Duncan's tests and 24 from the chi-square analysis. The regression models indicated that the relationships generally were not linear, with both the lowest and highest income categories tending to be more satisfied than the intermediate groups. The Duncan's multiple range test of the means helped confirm this finding. The means of the scores for respondents in the under \$5,000 income group and the over \$50,000 group were both at the lower end of the scale for 15 of the 26 services and one or the other were at the lower end for 10 out of the 11 remaining services.

Household size and composition were factors in satisfaction with services. There were significant differences in satisfaction for family size (1, 2, 3, 4, 5 or more) for 18 of the 26 services. Satisfaction generally decreased as household size increased. Single person households were most satisfied for 11 of the services while those with 5 or more were least happy for 20 of the services. There was a tendency, although somewhat less pronounced than for size, for respondents from households without children to be more satisfied than for those with children, whether it was a single person household or a husband and wife household. For those households with children the level of satisfaction appeared to vary little whether the household was father, mother, and children or mother and children. Other types of households were not prevalent enough to use in the analysis.

The other socio-economic factors used in the analysis, education, occupation and place of birth, were not found to be strongly related to the level of satisfaction. There were, for example, only seven services for which the Duncan's test showed statistically significant differences in the means for level of education categories and there was no consistent pattern in the ranking of the education categories.

Migration

Migration was examined by use of four variables - time when moved, geographic area moved from, reasons for moving and type of place moved from. All were related to the satisfaction but with the geographic area moved from (within county, within State, and outside of State) being less related. About one-fourth of the respondents said that they had "never moved." This group was the most satisfied with services. The chi-square, Duncan's and regression analyses all indicated relatively strong influence for the time of last move variable and most of the services (there were statistically significant relationships indicated for all the services using the chi-square analysis). The strong statistical significance appears to have resulted due to the distinct nature of the group of non-movers. Although there was relatively little difference in satisfaction for the three groups who had moved, the analysis indicates the level of satis-

faction tended to increase with the length of time since the last move.

The type of places moved from were categorized as farm, rural residence, small town and urban. Generally, significant relationships were found by use of Chi-square and Duncan's tests. Those who had moved from farms tended to be more satisfied while those who had moved from urban areas also were frequently in the more satisfied group. The least satisfied were from rural non-farm residences.

Reasons for moving included to obtain employment, transferred by employer, a preference for rural living, to change lifestyles, and a dislike for the previous place. There were 22 services for which significant relationships were found - for both the chi-square and Duncan's tests. The most satisfied group typically were those who had moved as a result of being transferred whereas the less satisfied groups tended to be those who disliked their previous residence and those who had moved to change lifestyles or to find employment.

SUMMARY AND CONCLUSIONS

The study results indicate that rural residents of the surveyed counties in West Virginia appear to be satisfied with most of the services studied. The average scores for the service satisfaction scale indicated that relatively more respondents were satisfied than not for 18 of the 26 services. However, when the respondents were divided into groups on the basis of various locational, socio-economic, and migration characteristics, there were statistically significant differences that have important implications.

The primary location variable was the county where the household was living. The results were about what could have been anticipated on the basis of a priori knowledge about the income and services being provided and therefore only re-emphasize the deficiencies in counties where resources are inadequate. Within counties, however, it was found that persons living on farms were more satisfied with services than those who said their place was a rural residence or in a rural subdivision. Many of the places which the interviewees considered to be farms would not qualify under the new census definition because few or no products were sold. However, they generally had several acres of land. Since it appears that a larger proportion of the rural population consists of rural residences, this could imply that the increasing population could result in more dissatisfaction and increased agitation for improvements in services.

Among the socio-economic factors, income, household size and household composition were significantly related to service satisfaction. Both those with low and high incomes tended to be more satisfied than those with intermediate incomes. Possible explanations are less expectations for lower income persons and the ability of the wealthier to obtain services with their own resources. An implication is, again, that this pattern will probably result in increased demand for services, since the majority of the rural residents are in the intermediate income groups.

The final set of variables examined the relationships with satisfaction for those who moved i.e., with migration related variables. The most outstanding finding was that those who said that they had never moved were distinctively more satisfied than those who had moved. Among the movers, factors that had effects were time of moving, place moved from, and reason for moving. Respondents tended to be more satisfied the longer ago they had moved, if they had moved from within the State, if they had moved from farms or urban areas, or if they had moved as a result of being transferred. With rural population increasing and since recent movers tend to be those from rural residences or small towns, it would appear that pressure will increase for improved services. On the other hand, more of those who had moved did so from within the State than from outside, which would result in relatively less demand for services.

The net impact of the changes in rural population and the findings of this study indicate that demands for improved services are apt to intensify as rural development continues. Increases in population result in increases in level of services desired. This analysis indicates that many persons living in rural areas are less satisfied with services and that these tend to belong to the categories of people who are contributing to the growth in rural populations. This increased demand can be expected despite the finding that people are, in general, satisfied with most services.

Because of page limitations and the volume of material required to reproduce them, the results of the statistical procedures are not presented in this paper. Additional information may be obtained from the senior author.

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