

COMMUNITY TYPE, SCHOOL SIZE, AND STUDENT BEHAVIOR**Paul Lindsay, University of North Carolina at Greensboro****INTRODUCTION**

In his "reassessment of conventional wisdom," about rural education, Sher (1972) points to two characteristics of rural schools. 1) Rural schools are smaller than urban schools. There are few small public schools left in urban areas. 2) There is often a closer relation between school and community in the rural setting. There is a considerable body of empirical research on the school size factor. Barker and Gump (1964) found more participation and leadership experiences in extra curricular activity and more student satisfaction in smaller high schools, using a Kansas sample. These findings were replicated with other regional and national samples (Baird 1969; Lindsay 1982; Morgan, Alwin 1980). Here we test the hypothesis that the type of community in which a school is located has independent effects on student behavior, controlling for school size.

The advantages of small groups, organizations and communities are suggested in Barker's (1978) theory of behavior settings. A given setting, such as performance of a school play, has a limited number of places for active participants. When the total number of persons in a setting is relatively small, the setting is more likely to be "undermanned" because a greater portion of those present are required to operate the activity. This leads to higher rates of participation, which leads to more satisfaction. The population size of a given habitat is a powerful determinant of individual behavior. Barker illustrates his point with an example of a base ball game. Mead used this analogy to characterize the social process by which an individual learns what is expected in a given social situation and behaves in accordance with the expected role. Barker imagines an 8-person baseball team with no center fielder. Each player now is expected to do more. Outfielders and infielders adjust their positions and responsibilities to compensate for the gap in center field. The undermanned setting creates new obligations for each participant. Barker's theory has been supported and extended by Willems (1969) who finds that the effect of school size on sense of obligation is stronger for students of

lower socioeconomic status and school performance.

Although Barker's theory includes community as well as organizational settings, the effects of the community on student behavior have not been studied as extensively as school size. It is axiomatic in sociological theory that the community context affects many aspects of school life, from the level of financial support to student and parent involvement to specific types of learning problems. The urban black ghetto, white ethnic neighborhood, affluent suburb, small town and rural community present different problems and challenges to schools. Case studies have illuminated characteristics of such communities and their impact on schools (Levy 1970; Peshkin, Larkin 1979). We will compare schools in rural settings to those in three other community types: small town, large city, and suburb. I propose that Barker's theory is appropriate for explaining not only student participation and satisfaction, but also attendance and retention in high school. Therefore, attendance rates and dropout rates are included as dependent variables. There is much diversity among rural communities. One dimension of the rural community is the extent to which the population is engaged in agriculture. A related hypothesis to be tested is that the degree to which students in rural high schools come from farm and nonfarm families will make a difference in attendance and dropout rates.

METHOD

Data from the base year and first follow-up surveys of the National Longitudinal Study of the high school class of 1972 are used (Riccobono 1981). This is a representative sample of seniors enrolled in public and private schools in the United States in the spring of 1972. A stratified sample of schools was drawn representing public and private schools, geographic regions, school size, proximity of institutions of higher learning, percentage minority group enrollment, income level of the community, and degree of urbanization. Then a random sample of 18 seniors was drawn from each school. Further data

was provided by school administrators about the students and the schools. The response rate in the base year survey was 71 percent, providing a sample of 16,683 students. This analysis was limited to public high schools. Cases with missing data on one or more variables have been excluded, yielding a sample of 13,638 students. Due to the nature of the data, analysis will proceed on two levels; the individual and the school. 1) The effect of community location on individual student participation and satisfaction rates will be examined. 2) The effect of rural location on school attendance rates and male and female dropout rates will be considered. The school level analysis includes data gathered in the first follow-up survey, in which the response rate was 92 percent. Excluding cases with missing data, the sample consists of 1060 schools.

Communities are divided into four types: 1) Rural or farming community; 2) Small town, under 50,000; 3) City, over 50,000; 4) Suburb of a city. Schools are classed in Table 1 and Table 2 as large (L) with more than 150 students enrolled in the senior class, and small (S) with 150 or fewer students in the senior class. Indicators of student participation are based on student responses to a question about their participation or leadership functions in nine categories of extracurricular activities. Indicators of satisfaction are based on questions about whether they feel that they are a part of their school, and whether they consider required courses in the curriculum a waste of time. Attendance rate, measured at the school level, is the approximate average daily percentage attendance. Dropout rates for men and women, also measured at the school level, represent the percentage of students who enter the tenth grade, but drop out before graduation, excluding transfers to other schools.

RESULTS AND DISCUSSION

The advantages of rural schools with respect to student participation, leadership experience, and satisfaction are shown in Table 1. Rural schools are higher in all categories than schools in small towns and cities, which in turn, are higher than large city and suburban schools. Between the latter two types there is very little difference. Similarly, rural school attendance rates are considerably

higher than those in other types of communities, as shown in Table 2. Large city attendance rates are the lowest, with small town and suburban rates about the same. Dropout rates for men and women are lowest in suburban schools, but rural schools compare favorably with small town and large city schools. The main question in this study is whether differences in individual outcomes and school rates are due to the community location or to the size of the school.

The relation between community type and student outcomes is weaker when school size is controlled. Generally, men's and women's participation in extracurricular activities remains higher in both large and small rural schools. Results from small schools in cities and suburbs should be interpreted with caution, since the sample size for these groups is small. Leadership experience and satisfaction tend to be higher for women in both small and large rural schools, but not for men. School size explains a considerable part of the advantage of rural schools with regard to these individual student variables.

In terms of Barker's theory of behavior settings, when the variable to be explained is behavior of students in schools, the immediate behavior setting factor, *organization size*, appears more important than the wider setting factor, *type of community*. However, there is an added independent effect of community location. In accounting for individual differences in participation, leadership, and satisfaction, the community effect is stronger for women than for men.

School rates of attendance and dropouts are also strongly affected by size of the school. With school size controlled, attendance rates in rural, small town, and suburban schools are about the same, while large city attendance is poorest. There are insufficient small schools in cities and suburbs for meaningful comparison. Statements about city and suburban schools are based on large schools only. Dropout rates, on the other hand, are lowest in suburban schools. Size makes an especially important contribution to the dropout rates in rural schools. When rural schools are small, their dropout rates are considerably lower than rates in similar size schools in small towns. However, dropout rates among large schools are higher for rural than for small town

TABLE 1: STUDENT ACTIVITY & SATISFACTION BY SEX, SCHOOL SIZE & COMMUNITY TYPE

(Percentages; N values in italics; Gamma decimals omitted.)

Response	Size:	Rural		Town		City		Suburb		Gamma _{.05}	
		S	L	S	L	S	L	S	L	S	L
Males											
2+ activities		69	56	64	53	76	46	58	48	ns	-08
Has leader role		38	27	36	28	41	25	28	25	ns	ns
Feels involved		65	62	64	62	57	58	67	60	ns	ns
Curriculum OK		51	43	54	46	56	45	48	44	ns	ns
(N)		<i>1006</i>	<i>359</i>	<i>518</i>	<i>1404</i>	<i>37</i>	<i>1854</i>	<i>60</i>	<i>1516</i>		
Females											
2+ activities		80	60	78	61	65	53	62	53	-16	-10
Has leader role		46	32	42	29	26	27	31	26	-16	-06
Feels involved		71	68	68	64	58	61	69	57	ns	-10
Curriculum OK		62	54	61	52	56	49	65	48	ns	ns
(N)		<i>996</i>	<i>366</i>	<i>468</i>	<i>1489</i>	<i>62</i>	<i>1948</i>	<i>65</i>	<i>1490</i>		

TABLE 2: SCHOOL ATTENDANCE & DROPOUT RATES BY SEX

(Percentages; N values in italics; Gamma, decimals omitted.)

Attendance	Dropout Rate	Size:	Rural		Town		City		Suburb		Gamma _{.05}	
			S	L	S	L	S	L	S	L	S	L
Over 95%			22	11	19	11	33	4	38	10	ns	-07
Under 5%												
	Males		52	24	43	38	44	25	63	54	ns	23
	Females		62	33	44	45	67	32	63	66	ns	26
	(N)		<i>165</i>	<i>54</i>	<i>79</i>	<i>229</i>	<i>9</i>	<i>287</i>	<i>8</i>	<i>229</i>		

schools. Among large schools, rural and large city dropout rates are similar. For the variables explored here, many, but not all of the advantages of rural schools are explained by their smaller size, rather than by their community location. There was no significant difference comparing students from predominantly farm families to those from nonfarm families, which may be due to the small number of schools where this distinction could be made.

Interesting findings emerge in the comparison of males and females. Not only do girls like school better than boys, but their

rates of participation, leadership, and retention in school are higher for all types of community. Less expected, and closely related to our main interest, is that male-female differences are greatest for schools in rural locations. This appears in Tables 1 and 2 in the sex categories. Females are 8 percent more likely than males to hold leader positions in rural schools, while their advantage elsewhere is only about 2 percent. Controlling for school size, this pattern prevails with few exceptions. Comparing male and female dropout rates, in Table 2, while women tend to stay in school

longer than men, there is no clear pattern of difference between rural and urban schools.

SUMMARY

The community setting does make some difference in student participation, satisfaction, attendance, and dropout rates. However, much of the rural advantage is due to the smaller size of the rural schools. Small size seems to reinforce the advantages of rural schools respecting attendance and dropout rates, while large rural schools tend to have low attendance and high dropout rates. Insofar as the community type affects student participation and satisfaction, this effect is stronger for women than for men. Finally, the advantage of women over men in participation and satisfaction is greater in rural than in urban schools.

REFERENCES

- Baird L 1969 Big school, small school: A critical examination of the hypothesis. *J of Educational Psych* 60 253-260
- Barker R G 1978 *Habitats, Environments, and Human Behavior*. San Francisco Jossey Bass

Barker R G, P V Gump 1964 *Big School, Small School: High School Size and Student Behavior*. Stanford U Press

Larken R W 1979 *Suburban Youth in Cultural Crisis*. New York Oxford U Press

Levy G 1970 *Ghetto School: Class Warfare in an elementary School*. Syracuse U Press

Lindsay Paul 1982 Effect of high school size on student participation, satisfaction and attendance. *Educational Evaluation & Policy Analysis*. 4 57-65

Mead G H 1934 *Mind, Self, and Society*. Chicago U Press

Morgan D L, D F Alwin 1980 When less is more: School size and social participation. *Social Psych Qtrly* 43 241-252

Peshkin A 1979 *Growing Up American: Schooling and the Survival of Community*. Chicago U Press

Riccobono J, L Henderson, G Burkheimer, C Place, J Levinsohn 1981 National Longitudinal Study: Base Year (1972) Through Fourth Follow-Up (1979). *Data File Users' Manual*. Washington DC National Center for Education Statistics.

Sher J 1977 ed *Education in Rural America: A Reassessment of Conventional Wisdom*. Boulder Colorado Westview Press

Willems E P 1967 Sense of obligation to high school activities as related to school size and marginality of student. *Child Development*. 38 1247-1260