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ABSTRACT

Employing similar variables, along with an assessment of the participation-aspiration hypothesis for athletes residing in rural Louisiana, a partial replication was attempted of previous studies of the athletic participation-aspiration relationship. A further extension of past studies was made by assessing the effects of selected predictor variables (athletic participation included) on aspirations within rural and urban residence categories, and a statistical comparison of the regression models obtained was also made between residence groups. Data were derived from a stratified, proportionate random cluster sample of all high school seniors in Louisiana (1970). Group interviews yielded usable responses from 254 rural white males and 630 urban white males. Variables utilized included: (1) father's education, (2) mother's education, (3) grade point average, (4) parent's educational encouragement, (5) educational aspiration, (6) athletic participation. Findings indicated that participation in high school athletics had "an extremely moderate, independent, positive effect on level of educational aspiration." Analysis revealed that of all the predictor variables investigated, athletic participation manifested the weakest relationships to educational aspirations in both residence categories. (JC)

Residence and the Athletic Participation - Educational Aspiration Hypothesis*

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Residence and the Athletic Participation - Educational Aspiration Hypothesis

One of the most consistent empirical findings in the ever-expanding literature of the sociology of sport reveals that "participation" in high school athletics is "conducive" to higher levels of scholastic achievement and educational aspiration (Rehberg, 1969:82).[1] A role-theory approach for interpreting these results has emerged which suggests that normative perscriptions characteristic of the athlete-role, visibility afforded by this role and behaviors required of most athletes enhance academic accomplishments in school, as well as the formation of high status educational projections (Coleman, 1961; Schafer, 1968).[2]

Several empirical studies indicate that athletes make better grades in school than their non-athlete counterparts (Eidsmore, 1963; Schafer and Armer, 1968). Furthermore, Schafer and Rehberg (1970) and Sprietzer and Pugh (1973) report a tendency for athletes to receive more encouragement from teachers and counselors to attend college than non-athletes. Two recent in-depth studies found, after controlling for parent's socio-economic status, encouragement, and students' grade point average, that the athletic participation-educational aspiration relationship still obtained (Rehberg and Schafer, 1968; Sprietzer and Pugh, 1973).

These findings and others are strongly suggestive of the fact that interscholastic sports have a "positive" rather than "negative" effect on students' academic pursuits (Rehberg, 1969; Sprietzer and Pugh, 1973).[3] Furthermore, the analyses of past inquiries have determined that athletes

who fail to receive strong support through other "traditional predictor variables" in the area of achievement behaviors, e.g., socio-economic status, parental encouragement, grades, etc., receive an even greater payoff (in terms of high-level educational orientations) from participation in athletics (Rehberg and Schafer, 1968; Sprietzer and Pugh, 1973). The isolation of these "interaction" effects in all probability reflect Rehberg and Schafer's (1968:740) contentions that:

> ...some athletes who otherwise would not go to college probably desire to go primarily to continue their athletic careers.... Some athletes who otherwise would not enroll in college may do so essentially because of athletic scholarships.

Although the studies briefly noted above have utilized rather consistent variable operationalizations and analysis techniques, they are still somewhat limited in their scope.[4] The major studies to date have looked at urban white male athletes residing in the northeastern sector of the United States (Rehberg and Schafer, 1968; Schafer and Rehberg, 1970; Sprietzer and Pugh, 1973). Data analyses have been limited to bivariate distributions and multiple correlation analysis. This research summary will attempt a replication of previous correlational stratigies, employing similar variables, along with an assessement of the participation - aspiration hypothesis for rural athletes residing in the deep-South. A further extension of past studies is made by assessing the effects of selected predictor variables (athletic participation included) on aspirations within each residence category through a regression analysis; a statistical comparison of the regression models obtained is also made between residence groups.

Methodological Procedures

The Sample. The data for this study were part of a larger study on the value orientations of Louisiana youth. A stratified, proportionate random cluster sample of all high school seniors residing in the state was collected in November, 1970. Group interviews were conducted at 24 high schools, resulting in a final sample of 3,245 youth. Complete data on all variables included in this study were secured for 884 white males. Of these respondents, 254 classified themselves as being rural residents, while 630 classified themselves as being urban residents, according to Census criteria. A correlational analysis revealed that no appreciable bias was introduced due to deletion of respondents who had data missing on one or more analysis variables.[5]

Variable Operationalization: The variables utilized in this study were operationalized in the following manner:

> Father's education: determined by the students' response to a question which asked how many years of formal education did his father complete. Response alternatives ranged from 00 (no school) to 20 (Doctors' Degree, M.D., Ph.D., etc.).
>
> Mother's education: determined in a manner identical to father's education.
>
> Grade Point Average: This variable was operationalized in terms of students' reports of final grades received from an exhaustive list of possible high school courses. Students' grade point averages were calcualted by research workers. Actual grade point averages were obtained from school records for only 49 per cent of the sample. The zero-order correlation between actual and reported grades was found to be .788. Reported grade point average is utilized in order to minimize sample attrition. For more information on the use of students' reports of grade point average in research, see Davis, 1964.
>
> Parents' educational encouragement: determined by the students' assessment of how much encouragement he had received from his

parents to attend college. Response alternatives ranged from 1 (strongly discouraged) to 5 (strongly encouraged).

Educational aspiration: This variable was obtained from student responses to the following question: "How much education do you desire and will actively attempt to achieve?" Responses were coded as follows: 0 = None after high school; 1 = Graduate from a vocational-technical school; 2 = Some college, but do not plan to graduate; 4 = B.A. degree; 6 = Masters' degree; 8 = Doctorate degree or equivalent professional degree (M.D., D.D.M., etc.).

Athletic Participation: This variable was determined by the students' response to the following item: "Do you participate in high school athletics?" Response alternatives were simply Yes or No and reflect the traditional operationalization of this variable (Rehberg and Schafer, 1968).

Data Analysis: Previous studies on athletic participation and educational aspirations have utilized correlational techniques in their data analyses. In order to facilitate comparability of our findings with previous studies, initially we employ a partial correlation analysis. We do expand our analysis by including a regression analysis of the data. Furthermore, differences in effects of the predictor variables by residence are assessed in terms of a covariance analysis. The utility of parametric techniques for ordinal level data has been noted by Labovitz (1967;1970) and will not be treated in detail here (Also see, Boyle, 1970). All analyses are applied after residential controls have been exerted in order to facilitate our residential comparison.

Findings

The analysis will proceed as follows: first, descriptive statistics, along with a replication of previous multiple correlational approaches by residence will be presented; second, an analysis of educational aspiration levels will be made in order to assess the "inter-

action effect" noted in previous inquires; third, a regression analysis is performed, followed by a comparison of variable effects between residence categories.

Table 1 presents the means, standard deviations, and zero-order correlations for variables separately by residence categories. A quick look at this table reveals that comparable means and standard deviations obtained for the variables across residence categories. The educational aspirations of the urban respondents were found to be somewhat higher than the rural respondents. This empirical trend has dominated research in this general area (For more information, see: Kuvlesky and Reynolds, 1970). Additionally, and most important, the strength of the relationship between athletic participation and educational aspirations initially appears to be considerably stronger for the rural respondents ($r = .24$ rural; $r = .12$ urban). However, athletic participation was found to manifest stronger relationships with other variables for the rural respondents, suggesting that this original zero-order relation may be partly spurious. The findings presented in Table 1 for the rural respondents compare favorably with zero-order relationships obtained in earlier athletic participation studies. Rehberg and Schafer (1968) reported a gamma of .28 for their sample, while Spreitzer and Pugh (1973) found a comprable gamma of .26. The zero-order correlation of .12 for our urban respondents is the smallest correlation coefficient found in the literature to date between these variables.

(Table 1 About here)

In order to more fully grasp the nature of the zero-order correlations

obtained in Table 1, a series of partial correlations are presented in Table 2. A glance at the first-order partials indicate that the original zero-order relationship between athletic participation and aspirations is reduced substantially for the rural respondents when controls are exerted for academic performance. The largest reduction for the urban respondents is derived when controls are applied for mother's education.

(Table 2 About here)

The second-order partials reveal a substantial reduction in the original relationship for the rural respondents when father's education and academic performance are simultaneously controlled. The original correlation coefficient of .24 is reduced to .11. For the urban respondents, the original relationship of .12 is reduced to .07 when mother's education and academic performance are controlled. The third-order partial reveals that when parents' educational level and students' academic performance are controlled, a correlation of .07 remains for the urban respondents, while a correlation of .10 obtains for the rural respondents. The urban athletes in our sample appear to have mothers with higher levels of educational attainment, while rural athletes appear to achieve higher levels of academic performance as well as come from homes where their parents have completed higher levels of educational attainment. The findings for the rural respondents concerning academic performance are consistent with those reported earlier for urban youth by Eidsmore (1963) and Schafer and Armer (1968).

(Table 3 About here)

As noted earlier, several recent studies have documented and discussed in detail the finding that youth less-predisposed toward college training receive a substantial gain in educational aspiration level through their participation in interscholastic athletics (Rehberg and Schafer, 1968; Rehberg, 1969; Sprietzer and Pugh, 1973). In order to assess this trend in our study respondents were classified in terms of being "predisposed" toward college attendance and "non-disposed" toward college attendance. Predisposed youth were from upper socio-economic status origins, received high parental encouragement to go to college and had high grade point averages.[6] Table 3 presents mean educational aspiration levels for the four respondent categories which emerged when the above dichotomy is cross-classified by respondents' athletic status. "Predisposed" urban athletes manifested the highest-level educational aspirations, followed by rural "predisposed" athletes. "Non-disposed" athletes, notably from rural social origins, had higher mean level educational goals than those non-athletes classified in a similar manner. The findings presented in Table 4 reveal that when respondents were matched, in terms of high and low states, on three traditionally key variables in educational aspiration research,[7] that athletes consistently manifested high mean-levels for educational aspiration. Furthermore, the magnitude of the difference between aspiration means was more pronounced for the athlete-non-athlete comparison of "non-disposed" rural youth. This finding may indicate that athletic participation has more significance in influencing the educational aspiration levels of rural than urban youth

who are not predisposed toward future college attendance.

(Table 4 About here)

In an attempt to ascertain the independent effects of the predictor variables on educational aspiration, a regression analysis was performed after residential controls were applied to the data. In order to facilitate comparisons within as well as between residence categories, both unstandardized and standardized regression coefficients are presented in Table 5 (Blalock, 1967, Tuckey, 1954). All predictors were found to be statistically significant with the exception of mother's education for the urban subsample. The standardized coefficients reveal that athletic participation had the weakest effects within both control categories. Across categories, a comparison of unstandardized coefficients reveals the existence of rather similar positive effects (.339 urban;.491 rural). Parental encouragement and academic performance were found to be the strongest predictor variables for aspirations; these results correspond with traditional investigations of the aspiration formation process (Harrison, 1969; Woelfel and Haller, 1971, Williams, 1973).

(Table 5 About here)

A statistical comparison of coefficients across residence groups was conducted by utilizing a form of covariance analysis.[8] Table 5 reveals that the regression coefficients obtained in the analysis presented in Table 4 are similar in magnitude, except for mother's education. This variable exerted statistically differential effects across residence, having been found to be significant only for the educational aspirations of the rural respondents. Most important for this inquiry,no overall

residential difference in the effect of athletic participation was observed.

Conclusions

This research summary has attempted a residential comparison of the effects interscholastic athletic participation has upon the formation of high school students' educational aspirations. Previous investigations have isolated such a relationship for white urban male athletes residing in northeastern sectors of the United States. This study has conducted a partial replication and expansion of earlier inquiries by analyzing the athletic participation - aspiration relationship for rural white male athletes residing in the deep-South. Additionally, our inquiry was expanded to incorporate a regression analysis, which allowed for an assessment of the independent effects of athletic participation on aspirations within and between different communities of origin.

The results indicate that participation in high school athletics has an extremely moderate, independent, positive effect on level of educational aspiration. The partial correlation analysis and regression analysis suggest that of all predictor variables included in this study, athletic participation manifested the weakest relationships to deucational aspirations for athletes in both residence classifications.

Interesting results, by residence, did obtain for the analysis of "non-disposed" athletes. It appears that athletes who originate from low socio-economic backgrounds, who have parents who do not encourage them to continue education beyond high school, and who perform below average in high school courses, have considerably higher-level educational aspirations than similarly classified non-athletes. This trend appears

to be particularly salient for rural athletes in contrast to urban athletes. The "non-disposed" rural athletes were found to have a mean aspiration level of 3.00, which certainly includes college attendance if not graduation. On the other hand, "non-disposed" rural non-athletes manifested a mean aspiration level of 1.14, indicating a tendency to include only vocational-technical school graduation for their educational goals. A similar relationship of less magnitude was observed for the "non-disposed" urban athletes and non-athletes.

In conclusion, our results tend to compare with earlier studies even though the strength of the athletic participation - educational aspiration relationship found for our data is the weakest isolated in publications in this area. The rural athlete, like his urban counterpart, appears to incorporate academic "advantages" relating to the behaviors, rewards and visibilities afforded by his athlete role in school. Such advantages may engender "inflated aspirations" for the "non-disposed" rural athlete and possibly create special problems associated with later academic success in the college or university setting (Spady, 1970). Future longitudinal data sets should attempt to clarify the issues raised in this inquiry concerning the rural athlete as well as improve and broaden the theoretical and conceptual scope of the athletic participation variable to include such factors as leadership, athletic success, and scholarship aspirations. Such studies would go a long way toward clarifying the role of athletic participation in the status attainment process. The results of this study coupled with previous inquiry, suggests that athletic participation is a temporal-specific variable, having importance for certain academic achievement behaviors and significance for the educational aspirations held by

rural and urban student athletes who receive minimal structural, interpersonal and behavioral support for future educational and, indirectly, occupational achievement.

Footnotes

[1]The literature concerning other sociological and psychological variations between athletes and non-athletes appears to be rather inconclusive. Findings do exist which suggest that athletes are characterized by more outgoing personality characteristics and less delinquency than non-athletes (Schendel, 1965; Kane and Warburton, 1966; Schafer, 1969). However, other research reports contend that athletes, as a group, score lower on intelligence tests than non-athletes (Slusther, 1964); that athletics may have negative psychological consequences for participants (Biddoulph, 1954; French, 1970); and at best the evidence concerning most athlete - non-athlete sociological and psychological differences is limited and indeterminate in this relatively new area of concern for American sociologists (Edwards, 1973).

[2]For more detailed specifications of theoretical approaches and empirical results, see: Schafer, 1968, 1969; Rehberg and Schafer, 1968; Rehberg, 1969; Spady, 1970; Sprietzer and Pugh, 1973 and Edwards, 1973.

[3]The tone of some works may lead one to argue otherwise; for more information see: Coleman (1961). For a good discussion of this research area and the role of athletics and academic pursuits in high school, see: Rehberg, (1969 and Coleman (1969).

[4]It should also be noted that Sprietzer and Pugh (1973:177-178) found a tendency for the variable, "school value climate", to be a related intervening variable between athletic participation and educational expectations; Spady's (1970) longitudinal study indicates that athletic participation in high school may engender "inflated" educational goals, which become problematic for student success in the college setting. Our data do not afford us the opportunity to assess the role of value climate and actual educational achievements. However, future longitudinal studies employing more comprehensive sources of data may more accurately clarify the role of these variables for educational and occupational achievements.

[5]Tables will be furnished upon request. For more details of the sample design and selection, see: Picou, 1971.

[6]The logic of this typology stems from Rehberg and Schafer's (1968: 734) initial study in this area. Specifically, we classified respondents into high-low categories for the variables socio-economic status (greater than high school education = high), parental encouragement to go to college (no encouragement = low) and grade point average (on a 4.0 scale, greater than 2.5 = high).

[7] Studies from Bordua's (1960) early investigation to the development of and subsequent expansions of the "Wisconsin model" of status attainment (Sewell, Haller and Ohlendorf, 1970) have employed these three variables. For a comprehensive overview of research in this area, see: Carter and Carter (1971), Sewell and Hauser, (1972) and Haller and Portes (1973).

[8] The covariance model takes the following form:

$$Y = f(X_1, X_2, X_3, X_4, X_5, D, DX_1, DX_2, DX_3, DX_4, DX_5)$$

where:

Y = predicted dependent variable (ed. asp.)

X_1 = first predictor variable

$X_2 - X_5$ = second to fifth predictor variables

D = dummy variable, i.e., residence

DX_1 = product of X_1 and dummy variable and each observation

$DX_2 - DX_5$ = products of predictors and dummy variable for each observation, etc.

The model was run as a regression model. If the regression slope associated with the dummy variable is significant, the intercepts between residence groups differ when Y is regressed on X_1, X_2, etc. for each group. If the slope associated with either of the product terms is significant than the slopes differ between Y and the associated X when Y is regressed on X_1 and X_2 separately for categories represented by the dummy variable, i.e. residence.

TABLE 1: MEANS, STANDARD DEVIATIONS AND ZERO-ORDER CORRELATIONS FOR VARIABLES BY RESIDENCE.

URBAN N=630	X	SD	FATHERS ED.	MOTHERS ED.	PARENTS ENC.	ACADEMIC PERF.	ATHLETIC PART.	ED. ASP.	SD	X	RURAL N=254
FATH ED	12.62	3.66	1.00	.561	.177	.262	.205	.366	3.76	10.67	FATH ED
MOTH ED	12.12	2.80	.499	1.00	.218	.208	.169	3.66	2.90	11.34	MOTH ED
PARENT ENC	4.39	.80	.254	.240	1.00	.175	.047	.230	.84	4.14	PARENT ENC
ACA PERF	2.60	.62	.127	.171	.224	1.00	.263	.422	.72	2.58	ACA PERF
ATH PART	.56	.50	.056	.145	.082	.076	1.00	.238	.49	.59	ATH PART
ED ASP	4.33	2.34	.329	.278	.447	.369	.120	1.00	2.55	3.46	ED ASP

TABLE 2: PARTIAL CORRELATION ANALYSIS OF VARIABLES BY RESIDENCE

	URBAN	RURAL
ZERO-ORDER		
Educational Aspirations and Athletic Participation	.12	.24
FIRST-ORDER PARTIALS		
E.A. and A.P. Controlling for Mother's Education	.08	.19
E.A. and A.P. Controlling for Father's Education	.11	.18
E.A. and A.P. Controlling for Parents' Encouragement	.12	.23
E.A. and A.P. Controlling for Academic Performance	.10	.15
SECOND-ORDER PARTIALS		
E.A. and A.P. Controlling for Father's and Mother's Education	.08	.17
E.A. and A.P. Controlling for Father's Education and Academic Performance	.09	.11
E.A. and A.P. Controlling for Mother's Education and Academic Performance	.07	.12
THIRD-ORDER PARTIAL		
E.A. and A.P. Controlling for Father's and Mother's Education and Academic Performance	.07	.10

TABLE 3: Mean level of Educational Aspiration by Residence and Predisposition Toward College Training

Control Category	Educational Aspiration Rural	Urban
Predisposed Athlete	4.14	4.78
Predisposed Non-Athlete	3.32	4.31
Non-Disposed Athlete	3.00	2.41
Non-Disposed Non-Athlete	1.14	1.57

TABLE 4: REGRESSION COEFFICIENTS IN STANDARDIZED AND UNSTANDARDIZED FORM FOR PREDICTOR VARIABLES BY RESIDENCE.[A]

Independent Variable and Control Category	Educational Aspiration	
RURAL		
Father's Education	.115*	(.169)
Mother's Education	.121*	(.138)
Parental Educational Encouragement	.344*	(.113)
Academic Performance	1.084*	(.304)
Athletic Participation	.491*	(.095)
R	.534	
URBAN		
Father's Education	.116*	(.182)
Mother's Education	.045	(.054)
Parental Educational Encouragement	.961*	(.328)
Academic Performance	.979*	(.258)
Athletic Participation	.339*	(.072)
R	.570	

[A]Standardized coefficients are in parentheses.

*$P_r(B \leq 0) < .05$

TABLE 5: COVARIANCE ANALYSIS BETWEEN GROUPS TREATING RESIDENCE AS A CATEGORIC VARIABLE.[A]

TERM	COEFICIENT	T-VALUE
R X FE	-.125	-.845
R X ME	.393	2.216*
R X PE	.101	.626
R X A.Per.	-.098	1.377
R X A.Part.	.017	.285

*Significant at .05 level of confidence

[A] Other values are actually meaningless for interpretation, but are available upon request from the senior author.

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