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Longitudinal Determinants of Occupational Plans of Low-Income Rural Young Adults[1]

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This study examined how well specific structural variables and social psychological variables served to explain occupational aspirations and expectations of a rural, low-income sample, during preadolescence, adolescence and young adulthood. These periods approximate the fantasy, tentative, and realism stages in the occupational choice process as identified by Ginzberg and his associates. Initially, status projection scores were examined to assess the salience of Ginzberg's theory. Then the influence of academic motivation and educational plans on the occupational aspirations, expectations and plans of preadolescent and adolescent youth in the sample were evaluated after the effects of sex, race, IQ, and family background were accounted for by preordered multiple regression analysis. A final step was completed by analysis of the sample at young adulthood. For this period, occupational aspirations, expectations and plans were assessed with respect to the influence of the aforementioned structural variables with the addition of educational attainment and the single attitudinal variable of achievement value orientation.

The occupational choice process has been the subject of considerable attention, initially by sociologists, and more recently by researchers from a wide range of disciplines who have focused on such diverse populations as racial minorities, females and youth, especially youth from low-income families. Few researchers, however, have made use of longitudinal data to study any of these populations [7].

In a highly technological society such as the United States, where specialization is the rule rather than the exception, occupational choice becomes an increasingly complicated and crucial decision. For no other group is the decision more difficult than for American youth. With over 20,000 occupations listed in the Dictionary of Occupational Titles, the occupational choice process for American youth, who must balance the myriad of choices with personal and environmental limitations, presents a formidable hurdle in their developmental process. For many, the choice of an occupation may be the difference between satisfaction and frustration experienced in adult years.

In a beginning step toward understanding the occupational choice process, this study examined how well specific structural variables and social psychological variables served to explain occupational aspirations and expectations of a rural, low-income sample, during preadolescence, adolescence, and young adulthood. These periods approximate the fantasy, tentative, and realism stages in the occupational choice process as identified by Ginzberg et al. [5]. For all three periods the structural variables utilized were race, sex, IQ, and family background. For the preadolescent and adolescent periods, academic motivation and educational plans served as social psychological indicators. For the young adult period, an achievement value orientation measure replaced academic motivation as a social psychological indicator and educational attainment became a structural variable replacing the previously used attitudinal variable of educational plans.

REVIEW OF LITERATURE

A conceptual distinction was made between occupational aspirations and expectations by Kuvlesky and Bealer [9] who established what they considered to be an accurate definition of occupational choice. Occupational choice was considered to reflect an individual's aspirations or preferences concerning work statuses while expectations signified the individual's anticipated attainment in reference to a particular occupational goal.

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Ginzberg et al. [5] and Super [18] have proposed theories of occupational choice which focus on the choice process within the context of an individual's development. Both theories proposed that, in relation to occupational choice, an individual moves through three stages—fantasy, tentativeness, and realism—that correspond with the life stages of preadolescence, adolescence, and adulthood. Ginzberg et al. [5] specified four major areas which influence occupational choice: (a) social and economic factors; (b) educational characteristics; (c) emotional needs and desires; and (d) individual values.

In contrast to Ginzberg's [5] and Super's [18] emphases on social psychological factors, Blau and Duncan [1] focused on structural variables such as race, sex, and economic circumstances which are considered outside the realm of an individual's control. Other investigators have suggested that a complete explanation of the occupational choice process requires consideration of both structural and social psychological variables [6; 8; 16].

STATEMENT OF THE PROBLEM

Two research questions serve as primary foci of this study:

1. Do the occupational aspirations, expectations and plans (status projections) of low-income, rural youth decrease over time as they move through the fantasy, tentative and realism periods, as suggested by Ginzberg's theory?
2. If occupational aspirations, expectations and plans do decrease, as suggested by Ginzberg's theory, will the amount of explained variability increase over time as youth move through each successive developmental period?

Based on these questions, the status projection scores were examined to assess the salience of Ginzberg's theory. Then the influence of academic motivation and educational plans on the occupational aspirations, expectations and plans of low-income rural preadolescent and adolescent youth were assessed after the effects of the structural variables of sex, race, IQ, and family background were accounted for by preordered multiple regression analysis.

A final step in this longitudinal study was completed by analysis of the sample at young adulthood. For this period, occupational aspirations, expectations, and plans were assessed with respect to the influences of the aforementioned structural variables with the addition of educational attainment and the single attitudinal variable of achievement value orientation.

METHODS

The data for this longitudinal study were collected under the direction of the Southern Regional Research Projects S-63 and S-126 during 1969, 1975, and 1979. The sample was located in five southern states: Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

Sampling Procedures

A stratified cluster purposive sampling procedure [12] was used by each state in the regional project in an attempt to obtain a sample representative of these specific subcultural characteristics: Southern, low-income, rural and urban, black and white young people. Only schools from areas characterized by poverty and high levels of unemployment were considered. A population reflective of rural subculture was identified by the selection of 18 schools in counties or towns with populations of less than 2,500 people. Schools, judged by the researchers to represent these characteristics, were selected and then questionnaires were administered to entire populations of fifth and sixth graders in those schools.

The present sample was comprised of 447 individuals, of an original 954 in the rural subpopulation, who were able to be followed over time and from whom completed questionnaires were available for all three assessment periods. At the first contact, in 1969, the youth were in the fifth and sixth grades and ranged in age from 11 to 13 years. The 1975 phase was a follow-up of the youth, ages 17 to 19, when they could be expected to be juniors or seniors in high school. The early adulthood contact came four years later in 1979.

Data Collection Procedures

The initial questionnaire, pretested and revised by the participating states, was administered in 1969 in classrooms by two-person teams. In 1975 similar procedures were followed, combined with instructions on how to follow-up those students who were no longer in school and/or who had left the community. In 1979, a mail questionnaire procedure was used with an overall response rate of 46.7 percent. Further details on sampling and longitudinal data gathering procedures have been presented in a technical bulletin [17].

Operational Definitions of Variables

The primary dependent measures in this study were the occupational aspirations, expectations and plans endorsed by the sample at each of the three time periods. Occupational Aspirations were assessed by the following question: "If you could choose any job you wanted, what kind of job would you really like to have when you grow up?" Occupational Expectations were assessed by asking: "What kind of job do you think you really will have when you grow up?" In 1975 and 1979 the same questions were posed; however, "when you grow up" was changed to "in the future" in 1979. The job choice was then coded using the double digit NORC (National Opinion Research Center) classification structure developed by North and Hatt [13]. This scale, ranging from 0-100, measures the relative prestige of occupations. This measure was developed using a national sample of respondents who were asked to rank 90 occupations according to their personal opinion of the general standing of each job.

Occupational Plans is a composite measure constructed

by using the mean score obtained from combining responses about occupational aspirations and expectations. This measure is intended to reflect a balance between individuals' dreams and sense of reality with respect to their occupational futures.

Family Background is a composite socioeconomic status score based on the breadwinner's occupation, the level of education of the respondent's mother and father, and a six-item measure of social participation (voter registration and voting behavior, church attendance, memberships in organizations, frequency of watching news on television and reading the newspaper).

IQ was assessed in 1969 using the child's score on the Otis-Lennon Mental Ability Test. Otis and Lennon [11] reported validity coefficients ranging from .60 to .80.

Educational Plans were measured in 1969 and 1975 by the following two questions: "If you had your choice, how far would you like to go in school?" "How far do you think you really will go in school?" This composite measure was constructed in the same manner and according to the same rationale as Occupational Plans. Educational Attainment is a measure of the educational level reached by the respondents as of 1979.

Academic Motivation was assessed in 1969 and 1975 by using Elder's [4] scale which included such items as: "I am interested in my school work," "I really try to get good grades," and "I study or read at home." The total scale consists of five items and the Likert-type responses for each item range from "always" to "never".

Achievement Value Orientation is a scale of five items determined to be conceptually consistent through a factor analysis procedure utilizing the Varimax rotation method. This unidimensional scale was used to assess the degree to which a respondent agreed or disagreed with a series of statements representing beliefs about what is necessary to be occupationally successful in today's world. "A good son would try to live near his parents even if it means giving up a good job in another part of the country" is an example of an item used in this scale.

TABLE 1

Descriptive Summary of Occupational, Educational, and Individual Variables

Variable	Number of Cases	Mean	Standard Deviation	Minimum	Maximum
			Dependent Variables		
Occupational Aspirations					
1969	447	70.1	10.5	41	93
1975	392	69.0	9.7	37	89
1979	351	68.5	10.6	28	96
Occupational Expectations					
1969	447	67.1	10.6	41	93
1975	392	63.6	10.4	36	89
1979	305	62.1	13.4	1	89
Occupational Plans					
1969	447	68.5	9.4	41	93
1975	392	66.3	8.9	43	89
1979	283	65.9	10.4	28	89
			Independent Variables		
IQ	447	91.9	14.0	57	129
Family Background	447	130.6	22.9	67	233
Educational Plans					
1969	447	12.7	1.4	8	14
1975	392	12.0	1.6	8	15
Educational Level Attained (1979)	445	12.3	1.5	7	16
Academic Motivation					
1969	447	4.5	.5	1.8	5
1975	392	4.0	.6	1.7	5
Achievement Value Orientation (1979)	409	1.8	.2	1	2

Analyses

An inspection of the descriptive statistics about occupational aspirations and expectations for the three time periods was used to assess the salience of Ginzberg's developmental theory for this sample. A series of nine preordered multiple regression analyses, using the Statistical Package for the Social Sciences, SPSS [10], was utilized to compare the explanatory value of the previously specified structural and social psychological variables with respect to the three occupational measures over the three time periods.

RESULTS

Description of the Sample

Of the 447 respondents, 56 percent were female and 44 percent were male. The racial composition of the sample was 77 percent white and 23 percent black. The mean education level attained by the sample in 1979 was 12.3 (Table 1), indicating that the average respondent had completed high school and some additional training at a trade, vocational school or business college. It is noteworthy that although the level of education planned declined between 1969 and 1975, the typical respondent actually completed more years of schooling than anticipated in 1975. Descriptive information on the remaining independent variables is contained in Table 1.

Comparison of Aspirations and Expectations. As anticipated according to Ginzberg's theory, occupational aspirations declined slightly over the three time periods. Mean scores for this measure were 70.1, 69.0, and 68.5 for 1969, 1975, and 1979 (Table 1). A more dramatic decline was evidenced by the mean scores of occupational expectations: 67.1 (1969), 63.6 (1975), and 62.1 (1979). It appears that as the typical respondent moved from the fantasy stage of occupational development, through the tentative stage, to the realism stage that the level of expectations diminished substantially for each stage while the level of aspirations remained relatively stable.

As a result of the differing rates of decline between aspirations and expectations over time, the gap between an individual's occupational preference and his/her expected attainment widened with the passage of time. In 1969, the gap between aspirations and expectations was 3.0; in 1975, the gap increased to 5.4; and in 1979 the difference increased to 6.4.

Occupational Plans. A decline over time occurs in the mean scores for occupational plans (Table 1): 68.5 (1969), 66.3 (1975), 65.9 (1979). This represents a difference of 2.2 points between 1969 and 1975, and only .4 points between 1975 and 1979. These variations reflect the fluctuations evidenced in the two indicators (occupational aspirations and expectations) from which occupational plans has been composed.

Overall Multiple Regression Analyses

An inspection of the overall explained variability (R^2 values) for aspirations, expectations, and plans for the three time periods did not reveal the pattern anticipated by the research questions posed in this study (Tables 2, 3, and 4). It was expected that the regression models would account for a greater percentage of variability in 1975 than in 1969, and a further increase in explained variability was expected in 1979 when compared with 1975.

The model accounted for 14.4 percent of the variance in occupational plans in 1969, for 37.3 percent in 1975,

TABLE 2

Multiple Regression Analysis of Occupational Plans, 1969, 1975, 1979

	1969			1975			1979		
Variable	Beta	R^2	F	Beta	R^2	F	Beta	R^2	F
Sex (D1)	-.240	.066	27.13*	-.290	.098	41.84*	-.088	.015	2.47
Race (D2)	.130	.072	5.40*	-.007	.099	.02	.175	.020	7.37*
IQ	.075	.089	1.63	.130	.177	5.80*	.182	.090	6.84*
Family Background	.063	.099	1.67	.034	.198	.55	.157	.136	6.53*
Academic Motivation/ Achievement Value Orientation	.026	.105	.29	.087	.243	3.43*	.054	.136	.87
Educational Plans and Attainment	.213	.144	19.90*	.442	.373	80.45*	.337	.238	34.30*
Overall Values		.144	12.31*		.373	38.24		.238	13.36*

Total N = 163
*p<.01

TABLE 3

Multiple Regression Analysis of Occupational Aspirations, 1969, 1975, 1979

	1969			1975			1979		
Variable	Beta	R^2	F	Beta	R^2	F	Beta	R^2	F
Sex (D1)	-.147	.027	9.68*	-.238	.080	25.17*	-.083	.015	1.98
Race (D2)	.136	.032	5.64*	-.047	.082	.68	.139	.015	4.16*
IQ	.102	.054	2.88	.161	.155	8.03*	.195	.079	7.01*
Family Background	.071	.064	1.97	-.006	.163	.02	.155	.114	5.76*
Academic Motivation/ Achievement Value Orientation	.031	.069	.38	.107	.207	4.66*	.022	.114	.13
Educational Plans and Attainment	.187	.096	13.19*	.370	.298	50.30*	.205	.152	11.36*
Overall Values		.096	7.80*		.298	27.29*		.152	7.63*

Total N = 447
*p<.01

and 23.8 percent in 1979 (Table 2). There is a greater than 100 percent increase in the ability of the model to explain occupational plans from 1969 to 1975, 22.9 percentage points, and a substantial decline in explanatory value is evidenced from 1975 to 1979, 13.5 percentage points.

In 1969 and 1979 the total explained variability was substantially greater for occupational expectations than it was for aspirations, 14 percent compared to 9.6 percent in 1969, 23.6 percent compared to 15.2 percent in 1979 (Tables 3 and 4). In contrast, the R^2 values for aspirations and expectations in 1975 are within one percentage point of one another with the greater value (29.8%) occuring for aspirations, and the lesser value (28.7%) occuring for expectations.

Contribution of Structural Variables in Multiple Regression Models

Sex and Race. Sex and race were used as dummy variables with males and blacks represented by a value

TABLE 4

Multiple Regression Analysis of Occupational Expectations, 1969, 1975, 1979

	1969			1975			1979		
Variable	Beta	R^2	F	Beta	R^2	F	Beta	R^2	F
Sex (D1)	-.277	.083	36.20*	-.269	.071	31.60*	-.074	.010	1.75
Race (D2)	.100	.089	3.18	.031	.078	.29	.170	.021	6.91*
IQ	.032	.097	.31	.069	.126	1.45	.135	.069	3.73*
Family Background	.043	.103	.79	.063	.151	1.66	.126	.106	4.21*
Academic Motivation/ Achievement Value Orientation	.015	.107	.09	.047	.178	.89	.069	.107	1.45
Educational Plans and Attainment	.197	.140	16.99*	.403	.287	58.84*	.379	.236	43.18*
Overall Values		.140	11.91*		.287	25.85*		.236	13.17*

Total N = 392
*p<.01

of "1", and females and whites as "0". For all models evaluated, females were more likely to have higher status projections for their occupational aspirations, expectations and plans than were males. Of all the structural variables, sex explained more of the variance in occupational plans in both 1969 and 1975 than any other variable ($\beta = -.24, -.29$). In 1979, sex completely loses its salience ($\beta = -.09$). In 1969 and 1979 blacks were more likely than whites to anticipate holding higher status positions ($\beta = .13, .18$). In 1975, however, race contributes only one percent to the total explained variability of the model.

IQ. IQ became increasingly important to the occupational plans of the sample over time. Whereas intelligence had a negligible effect in 1969 ($\beta = .08$), it had a statistically significant effect in 1975 ($\beta = .13$) and in 1979 ($\beta = .18$). It appears that this variable has less practical significance than might have been expected, particularly during the preadolescent and adolescent stages.

Family Background. The composite variable of family background does not reach statistical significance until 1979 ($\beta = .16$). Even then, not unlike sex, race, and IQ, family background is of relatively little practical importance in explaining these rural young people's occupational plans.

Educational Attainment. This variable was measured only in 1979 because only then was it practical to use this indicator as representative of a terminal state, and therefore a structural variable. Attained education is the single most important contributor to the variability explained in occupational plans with a beta value of .34. The value of educational attainment differs greatly between the model for aspirations ($\beta = .21$) and that of expectations ($\beta = .38$). The increased importance of educational attainment in relation to occupational expectations is supportive of the view that, with adulthood, a more realistic assessment of occupational opportunities and the potential for achieving desired goals develops.

Social-Psychological Variables

Educational plans. For both periods in which this variable was measured, 1969 and 1975, educational plans was by far the most important of the social psychological variables ($\beta = .21, .44$). In 1975 this variable was the single most important contributor to this same model.

Academic Motivation and Achievement Value Orientation. Neither academic motivation, which was evaluated in both 1969 and 1975, nor achievement value orientation, which was assessed in 1979, contributed significantly to an explanation of occupational aspirations, expectations or plans. Academic motivation, although reaching statistical significance with respect to occupational aspirations and plans in 1975 ($\beta = .11, .09$), has, however, only modest practical value.

CONCLUSIONS

Salience of Ginzberg's Stages: Research Question 1

Status projections for this sample of low-income, rural young adults, conceptualized as occupational aspirations, expectations and plans, appear to parallel the fantasy, tentative, and realism stages delineated by Ginzberg's theory of occupational development. Over the course of the three time periods approximating Ginzberg's developmental stages, occupational aspirations diminished slightly. In contrast, occupational expectations declined dramatically for each time period. Status projections for occupational plans also declined. As would be anticipated by the utilization of this composite variable, the decline was less dramatic than that observed for expectations and greater than that for aspirations.

Upon closer inspection, there is a discrepancy between these findings and those predicted by Ginzberg's theory. As an individual moves toward the realism stage of occupational development, a convergence between occupational aspirations and expectations is anticipated. A conceptual component of realism would presumably include the ability of an individual to align desires and anticipated outcomes. Projections about occupational aspirations and expectations for this sample did not converge as predicted. Over the three time periods, there was increasing divergence as occupational expectations declined rapidly while occupational aspirations remained relatively stable.

A question raised by this study is why the young adults continue to aspire to occupations that they do not expect to attain. A related question, taking into account the findings of an earlier descriptive study [2] is why do these young adults remain optimistic about their life conditions in spite of the dissonance between their occupational aspirations and their anticipated future circumstances. Perhaps a beginning for further investigation is to consider Rodman's [14; 15] theory of "lower-class value stretch." According to this theory, members of the lower class share the dominant values of the society but "stretch" these values downward because they do not have the resources to achieve their highest goals.

Assessment of Prediction Model: Research Question 2

The explanatory models tested by multiple regression analysis were constructed from Ginzberg's prediction that increased movement toward realism would be accompanied by an increased ability of structural and social psychological variables to explain occupational plans. This prediction was not validated by the present study. There was, as anticipated, a substantial increase in the model's explanatory power between 1969 and 1975, paralleling the transition from the fantasy stage of preadolescence to the tentative stage of late adolescence. Explanatory power, however, decreased from the tentative [1975] to the realism [1979] stage of occupational development. Even though this study was conducted when the respondents had not reached mature adulthood, it was expected that the model's explanatory ability would increase from the earlier to later time periods. Further study is necessary to identify other variables influencing the occupational plans of these young adults.

The use of a single social psychological variable for each of the three models tested precludes any comparison

of explanatory power between structural and social psychological variables. The expectations that structural influences would have increased salience across developmental periods was substantiated only for the comparisons between 1969 and 1975. Additional investigation is needed to provide information about the lack of decline in salience of structural variables between adolescence and young adulthood. For example, other information provided by these young adults revealed that they did not perceive their sex, their race, their intelligence or their incomes to be important barriers to their occupational or educational attainment [3]. What they did perceive as significant barriers to their achievement were external factors in their communities such as the availability of educational/vocational training and job opportunities close to their residences.

The occupational choice process for American youth will not become easier in the coming decade. However, by more thoroughly understanding the variables influencing those choices, adolescents and young adults, in combination with responsive educational and social institutions, can develop the ability to make occupational choices that are both realistic and satisfying.

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