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ABSTRACT

A pilot study was conducted to examine selected noncognitive attributes to determine (1) if there were significant differences between norm groups for the attribute measures and the sample population, (2) if there were changes in these attributes as a result of participation in basic education instruction, (3) the association between the noncognitive attributes and independent variables, and (4) whether pretest and posttest scores on the noncognitive attribute measures could classify subjects as being participants and nonparticipants in the selected adult basic education programs. In 10 selected communities in North Carolina a total of 486 disadvantaged adults were pretested and 381 were posttested. The data from 343 (279 participants and 64 nonparticipants) were used in this study. The test battery consisted of Rotter's I-E Scale, Haller's Work Beliefs Checklist, Rundquist and Sletto Minnesota Survey of Opinions (three scales), Moon and McCann's Scale and McClosky and Schaar's Scale, and Fitts' Tennessee Self-Concept Scale. The data were treated by one-way analysis of variance, least squares regression technique, and multivariate discriminate analysis. Results show: (1) no significant differences were detected between participants and nonparticipants in adult basic education; (2) independent variables associated with dependent variables were participation, sex, reported monthly income, and social participation scores; (3) the noncognitive measures were not effective in distinguishing participants. (Author/DB)

NONCOGNITIVE ATTRIBUTES OF PARTICIPANTS AND NONPARTICIPANTS IN SELECTED ADULT BASIC EDUCATION PROGRAMS

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PREFACE

Dr. Moore's report provides insight into the use of basic education instruction for the modification of the noncognitive (attitudinal) matrix of disadvantaged adults. Basic education instruction has been given the publicity of being a possible "cure-all" for getting the disadvantaged into the economic mainstream of society. The results of this report, even with its limi tions, call this assumption into question and dictate the need for a tional research into the shaping and influence of attitudes by the disadvantaged adult population.

Additional research is generated by this report toward assessing the state-of-the-art for developing measures of attitudes maintained by disadvantaged adults.

For the researcher, the report presents a promising method of analysis through the use of the least squares regression technique. One significant feature of the technique permits the researcher to examine multiple influences upon the development of attitudes (or other variables) toward critical issues in education.

Without the support and assistance of the North Carolina Community College System, the Director of Adult Basic Education Programs, local ABE directors, and student personnel officers, this study would not have been possible. Special thanks are extended to the citizens of North Carolina who participated in the study.

The Center is indebted to Dr. Allen B. Moore who directed the study and to the following members of the panel who reviewed the report:

Dr. William J. Brown, Ed. D., Director of Research, Department of Public Instruction, State of North Carolina, Raleigh.

Dr. Joe R. Clary, Ed. D., Executive Director, State Advisory Council on Vocational Education, Raleigh, North Carolina.

Appreciation is also expressed to the following professors of North Carolina State University who were consulted during the preparation of this report:

Dr. Edgar J. Boone, Ph.D., Professor and Head, Department of Adult and Community College Education.

Dr. Robert J. Dolan, Ph.D., Professor of Adult and Community College Education.

Dr. Charles V. Mercer, Ph.D., Associate Professor of Sociology and Anthropology.

The Center also acknowledges the assistance of Mrs. Sue King, Mrs. Rosalie DeBrito, and the entire Center staff.

John K. Coster
Director

SUMMARY OF THE REPORT

A pilot study was conducted to examine selected noncognitive attributes to determine (1) if there were significant differences between norm groups for the attribute measures and the sample population, (2) if there were changes in these attributes as a result of participation in basic education instruction, (3) the association between the noncognitive attributes and independent variables, and (4) whether pretest and posttest scores on the noncognitive attribute measures could classify subjects as being participants and nonparticipants in the selected adult basic education programs.

Data for the study were obtained from 10 selected communities in North Carolina. The experimental group in each community consisted of approximately 30 individuals who were self-selected to participate in adult basic education instruction programs and 10 individuals who were randomly selected from each of the community areas to serve as a control group. A total of 486 disadvantaged adults were pretested, and 381 were posttested. Of the total number of adults tested, the data from 343 individuals (279 participants and 64 nonparticipants) were used in this study.

The pretest and posttest battery consisted of the following noncognitive measures: Rotter's I-E Scale as a measure of internal-external control; Haller's Work Beliefs Checklist as a measure of attitudes toward work; three scales of the Rundquist and Sletto Minnesota Survey of Opinions as a measure of law, education, and economic-conservatism; Moon and McCann's Scale and McClosky and Schaar's Scale as measures of anomia; and Fitts' Tennessee Self-Concept Scale as measures of several aspects of the self-concept.

The data were treated by one-way analysis of variance, least squares regression technique, and multivariate discriminate analysis. These analyses were introduced to examine the contribution of the treatment variation and the variation of other independent variables to the total variation associated with the difference scores for each of the noncognitive attributes (dependent variable).

In view of the constraints imposed on the study by the low test-retest reliability coefficients for the selected noncognitive measures, it is generally held that these results support the findings of related research on the disadvantaged. Further, the study sample is characterized as (1) being more anomic; (2) being more externally oriented; (3) maintaining more beliefs that are associated with difficulty in adjusting to an urban technological society; (4) having a higher disrespect for law; (5) evidencing a more conservative attitude toward the American economic system; and (6) reflecting more problems related to the self-concept and personal adjustment than the norm group populations for the standardized noncognitive attribute measures.

Specifically, the results of the study are:

1. No significant differences for the individual noncognitive attribute measures were detected from pretest to posttest between adults who participated and adults who did not participate in basic education instruction. Changes in noncognitive attribute scores, from the time of pretest to the time of posttest, were not very great for the two groups.

2. Using a reduced model of the least squares regression technique, it was possible to identify independent variables that were associated with the several dependent variables (pretest to posttest change in noncognitive attribute scores). Independent variables which were associated, as measured by frequency of occurrence, include participation (X_2), sex (X_4), reported monthly income (X_i), and social participation scores (X_{14}). There was no definable pattern of relationship between the independent variables specified above and the dependent variables.

3. At the time of pretest, approximately 25 of the 28 measures of the selected noncognitive attributes were able to distinguish between adults classified as participants and nonparticipants. For the posttest analysis, only 15 of the 28 measures were able to distinguish between the two groups of subjects.

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INTRODUCTION

In this chapter, the study is introduced by the statement of the problem and the conceptual framework and literature review.

The Statement of the Problem

More than 24 million of the nation's adults who are 25 years of age or over have less than an eighth-grade education and are considered to be disadvantaged (United States Office of Education, 1968). They have not had the skills or the opportunity to obtain the occupational or vocational abilities necessary for functioning effectively in the mainstream of a free society.

The findings of a number of studies (Adair, 1964; Bakke, et al., 1954; Bogue, 1964; and Browning, 1962) characterize the disadvantaged adult population in the United States by (1) low occupational mobility, (2) low geographic mobility, (3) low socio-economic status, (4) a high degree of anomia and alienation, and (5) attitudes and beliefs that tend to isolate them from the predominant patterns of the American society. In order to assist disadvantaged adults in participating more effectively in the social and economic life, national legislation such as (1) the Vocational Education Acts of 1963 (P.L. 88-210), (2) the Manpower Development and Training Act of 1964 (P.L. 88-452), (3) the Economic Opportunity Act of 1964 (P.L. 88-452, Part C), (4) the Title III of the Elementary and Secondary Education Act Amendments of 1966 (P.L. 89-750) and (5) the Vocational Education Amendments of 1968 (P.L. 90-576) has been enacted to provide special educational opportunities for this population. Generally, this legislation has provided adults the opportunity to:

1. Acquire basic skills in reading, writing and computation.

2. Assume responsible citizenship roles in society by raising their educational level.

3. Increase their potential for more productive and profitable employment by encouraging active participation in occupational preparation through training and retraining for job skills.

4. Meet and manage their personal and social responsibilities.

However, despite this interest in adult basic education instruction for disadvantaged adults in the nation, little attention has been directed at assessing the program and its effect on producing desirable behavioral changes in the participants. This lack of attention can be noted with regard to the impact of adult basic education instruction on continued adult participation in vocational and technical education,

changes in attitudes and value orientations, improved socio-economic status, and participation in the activities of the community.

The present study was directed toward an examination of the noncognitive attributes of disadvantaged adults--toward attitudes, beliefs, and values of this population. The central problem of the study was to ascertain whether participation in adult basic education programs induced changes in selected dimensions of the noncognitive or affective domain. In addition, however, there was interest in (1) comparing the noncognitive behavior of the sample of disadvantaged adults with that of norm group populations, (2) comparing the participants in approved adult basic education instructional programs with nonparticipants in the same communities on standardized measures of noncognitive behavior, (3) identifying independent variables--e.g., sex, age, and race--which are related to variations in the noncognitive attributes, and (4) determining whether participation in adult basic education programs can be predicted from scores on selected instruments designed to measure behavior in the noncognitive domain.

This study is justified on the basis of the need for assessing adult basic education programs and the need to focus more attention and resources on the link between basic education and occupational education in North Carolina. The assessment or evaluation of any program involved ". . . the degree of congruence between the objectives and the actual outcomes" (Coster and Morgan, 1969:11). Evaluating the changes in adult noncognitive attributes as a result of participating in basic education programs will direct attention to the systemic linkages between education and other social institutions, especially the "world of work." The National Advisory Committee on Adult Basic Education in 1968 specified that there is a national concern to direct basic education programs for adults toward basic education skills, civic participation, jobs, home and family life. The Committee states that in order for adults to adjust to modern-day society, they need to have a basis for status and security. Therefore, ". . . emphasis should be placed on employment and the world of work as the first step toward status and security" (National Advisory Committee, First Annual Report to the President of the United States, 1968:16).

The Conceptual Framework and Literature Review

The point of departure in the development of a conceptual framework for the present study is the work done by sociologists and psychologists in the noncognitive domain of anomia. More specifically, the present study has drawn heavily upon the study of adjustment of rural people in the South by Boyd and Morgan (1966) in which investigation of anomic behavior was given special attention and upon the work reported by McClosky and Schaar (1965). This section presents a chain of logic in the development of a conceptual framework which

starts with known quantities regarding the concept of anomia, proceeds through an adaptation of the McClosky-Schaar model for anomic behavior, and expands the model to deal with a wider range of noncognitive attributes.

Review of Previous Investigations in Anomia

Srole conceptualized anomia as a socio-psychological state which refers to ". . . the individual's generalized, pervasive sense of self-to-others distance and self-to-others alienation at the other pole of the continuum" (1956:711). Srole hypothesized that social malintegration, or anomia, in individuals is associated with a rejective orientation toward out-groups in general and toward minority groups in particular. To test his hypothesis, Srole designed five questions to probe for the feelings of estrangement from others, confidence in community leaders, belief in progress, and confidence in the future (Clinard, 1964). This scale is included in Appendix D. According to Moone (1963:52),

> Srole's scale was originally constructed to measure the phenomenon variously termed social dysfunction (malintegration) or group alienation (demoralization) as internalized into the psychological state of an individual rather than as the sociological condition of a group of a society.

Tumin and Collins (1959) used the Srole scale to study the relationship of anomia to mobility, socioeconomic status and attitude toward desegregation in Guilford County, North Carolina. They found that socioeconomic status and readiness for desegregation are directly related and that there is an inverse relationship between anomia and socioeconomic status and between readiness for desegregation and anomia. Killian and Grigg (1962), using the Srole Scale, reported that the relationship of social status and degree of urbanism was not systematically related to anomia; socioeconomic status is negatively related to anomia for urban Negroes but not for rural Negroes.

Simpson and Miller (1963) used the anomia scale developed by Srole to study the determinants of anomia variation within class levels. They found that anomia was greater for those of low status, that the ability to achieve life goals was not associated with anomia, and that anomia was greater for mobile individuals than for those individuals classified as not mobile in terms of class of destination. In another study of the relationship of anomia to socioeconomic status, Rhodes (1964) indicated that the relation of socioeconomic status to anomia disappeared when the aspiration level was controlled, and the relationship of anomia to aspiration did not disappear when socioeconomic status was controlled. Rhodes also used the Srole anomia measure. In the Tumin and Collins, Killian and Grigg, Simpson and Miller and Rhodes studies, anomia and its correlates have been studied using respondents generally considered to be above the educational attainment level (eighth-grade) of the disadvantaged adult.

Bell (1957) found a significant correlation existing between anomia and formal group participation of people of low status ($p < .05$).

The index of economic status was based on the respondent's occupation and education. Anomia scores were also found to be related to the independent variable age. The youngest age group (21-39) had a significantly lower anomia score ($p < .001$) than the oldest age group (65 and over). The respondents for this study were from four Negro neighborhoods around San Francisco and were males over 21 years of age. A total of 701 interviews were completed.

A tentative generalization drawn from a study of anomia by Meier and Bell (1959:190) was that:

> The evidence argues fairly consistently that in American society anomia results when individuals lack access to means for the achievement of life goals. Such lack of opportunity follows largely as a result of the individual's position in the social structure as determined by such factors as type of occupation, amount of education, income, age, sex, ethnicity, marital status, the type and amount of association in both formal and informal organizations and in informal groups of friends, work associates, neighbors and relatives, and the degree of commitment to particular beliefs, attitudes, and values.

In both the Bell (1957) and the Meier and Bell (1959) studies, the Srole anomia scale was used as a measure of the socio-psychological concept referring to the individual's eunomia-anomia continuum or interpersonal alienation.

Moon and McCann modified the Srole scale using six items to measure ". . . the socio-psychological state of the individual or his attitude" (Moon and McCann, 1965:55). This scale differs from the Srole scale by the addition of the statement "things have usually gone against me in life" which is concerned with the state of mind of the individual.

Lewis (1966) used the Moon and McCann scale to measure anomia and the relation between anomia and age, sex, income, and education of rural Negroes ($N = 827$) in 12 small Negro communities in North Carolina. He found a negative relationship between anomia and income, education, and age. No significant relationships were detected between age and anomia when income was controlled. Further, anomia and age were negatively related when controlling for education in the higher education (11th-grade and higher) groups.

McClosky and Schaar (1965:32) examined substantive beliefs (noncognitive attributes) and stated that:

> Individuals whose beliefs deviate widely from those commonly held are not likely to be wholly accepted into the community, for extreme views typically express, implicitly or explicitly, rejection not only of the commonly held beliefs but also of those who hold them. Thus, deviant beliefs constitute barriers to effective interaction and

therefore to the kind of learning that requires close and repeated association with others.

The authors report a high association between extreme beliefs and anomia ("anomy"). For the national sample, 70 percent or more of the individuals scored high on the anomia scale (low 0-2, medium 3-5, and high, 6-9) and scored high on scales measuring left and right wing attitudes, whereas 50 percent or more of the individuals scoring low on the anomia scale scored low on the extreme attitudes scales. Based on this study, McClosky and Schaar (1965:29) suggest that anomia may be regarded as a by-product of the socialization process, ". . . a sign of the failure of socialization and of the means by which socialization is achieved: namely, communication, interaction and learning."

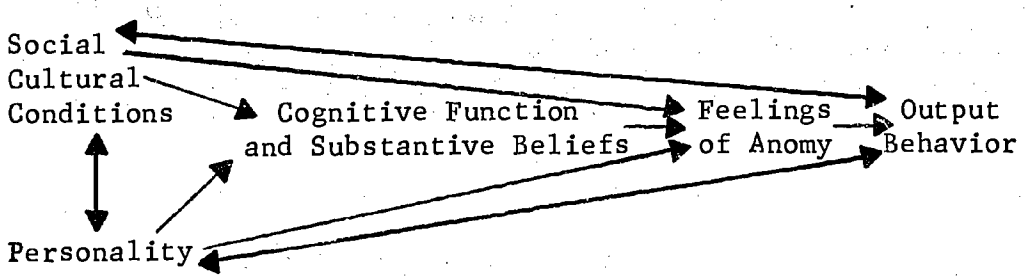
The Basic Model for the Study

The basis for the systematic framework of this study was a conceptual model developed by McClosky and Schaar (1965) which has been modified for the population being investigated. A review of the McClosky and Schaar (1965) model, cited in this section, is directly concerned with how feelings of anomia emerge as a result of interference with learning the norms, attitudes, and beliefs of the American society.

McClosky and Schaar (1965:19), in their investigation of the psychological dimensions of anomia ("anomy"), conceptualized anomia as a:

> State of mind, a cluster of attitudes, beliefs and feelings in the minds of individuals. Specifically, it is the feeling that the world and oneself are adrift, wandering, lacking in clear rules and stable moorings. The anomic feels literally de-moralized; for him the norms governing behavior are weak, ambiguous and remote. The core of the concept is the feeling of moral emptiness.

The conceptual schema for investigating anomia, according to McClosky and Schaar (1965), is illustrated as follows:



The authors stress that this model goes beyond the traditional schema which is used by many sociologists to study the conditions of normlessness--that of a social condition that leads to a psychological state

of mind in the individual, resulting in deviant behavior. The basic propositions undergirding the conceptual schema are that (1) the norms of society are learned, (2) anomic feelings are learned, and (3) whatever interferes with learning the norms of society tends to increase anomic feelings among its members.

The personality dimensions--the factors that impair learning and socialization--are divided into three categories (McClosky and Schaar, 1965:21):

> (1) cognitive factors that influence one's ability to learn and understand; (2) emotional factors that tend to lower one's ability to perceive reality correctly; and (3) substantive beliefs and attitudes that interfere with successful communication and interaction.

Cognitive factors include formal schooling, one's orientation toward and participation in intellectual and cultural activities, the respondent's knowledge of some basic features of the political and social system, the respondent's belief in mysticism, and an acquiescence measure--19 pairs of contradictory items. Ho: "Persons with low cognitive capacity will be more susceptible to anomy than persons with high cognitive capacity" (McClosky and Schaar, 1965:21).

Emotional factors include inflexibility, anxiety, low ego strength, and generalized aggression. Ho: "Some psychic states reduce one's ability to interact and, therefore, prevent one from becoming well acquainted with society's norms and values, . . ." (McClosky and Schaar, 1965:21).

Substantive beliefs and opinions include totalitarianism, facism, and left and right wing orientations. Ho: "Persons who fail to learn the dominant values of a group, or who hold beliefs and opinions not widely shared, are not likely to be well received by group members" (McClosky and Schaar, 1965:22).

The data for the McClosky and Schaar (1965) report were obtained from two samples. One was conducted in Minnesota (MB, 1955, N = 1,082), and the other was a National sample (PAB, 1958 N = 1,484) drawn by the Gallup Poll. In both samples the questionnaire was explained to the respondent and then left to be returned to the researchers. This is a deviation from standard questionnaire procedures that was considered necessary by the researchers because of the length and content of the instrument. It is assumed that both samples were obtained by random selection since no reference is made to the sampling schema utilized.

The agree-disagree questions on the nine-item scale are scored 1 or 0 with scores ranging from nine (9) to zero (0). Respondents scoring 6-9 are considered highly anomic, scores of 3-5 indicate medium anomic conditions, and scores of 0-2 indicate low anomic conditions. The nine-item scale developed by McClosky and Schaar is listed in Appendix E.

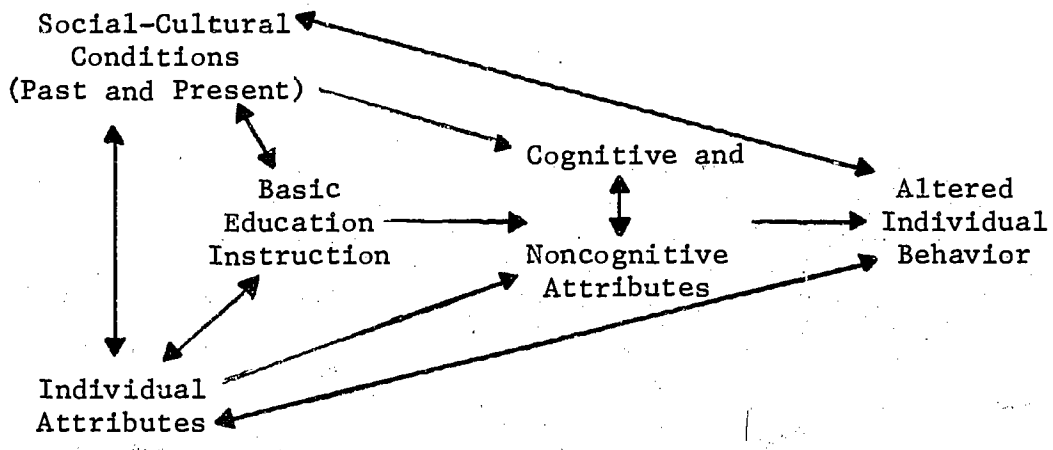
The correlations of the different scales, for the three subdivisions of personality factors, with anomia are reported by the authors as follows. With respect to cognitive factors, for the National survey (PAB), education and intellectuality are negatively correlated with anomia, whereas acquiescence is positively correlated with anomia. The Minnesota survey (MB) detected negative correlations for anomia and education, intellectuality, and awareness and positive correlations for mysticism and acquiescence with anomia. Emotional factors on both the PAB and MB surveys show negative correlations for anomia and life satisfaction, dominance, and social responsibility. Additionally, for the MB survey, self-confidence was negatively correlated with anomia. Positive correlations with anomia for both surveys included inflexibility, anxiety, ego strength, and aggression. Substantive beliefs and opinions on both the PAB and MB surveys show negative correlations for tolerance and faith in people. Positive correlations with anomia were determined for totalitarianism, facism, left and right wing opinions, Calvinism, elitism-unequalitarianism, and ethnocentrism.

The authors conclude that deficient cognitive capacity is directly related to bewilderment and the perceived incoherence in value systems. Emotional factors such as anxiety, hostility, and aggression tend to distort perceptions of the social reality; that is, fears and uncertainties of respondents are reflected in a perception of the world as hostile. The holding of extreme views prevents respondents from being accepted into groups and group interaction, which is a hindrance to successful socialization, i.e., learning the accepted norms of society.

Limitations of the study include too much data for adequate interpretation; that is, if smaller clusters of factors were investigated for their relationship with anomia, more adequate interpretations could be made. Further, the authors do not investigate the social-cultural conditions as specified in their model. It is assumed that they have omitted this dimension as a result of the previous research on anomia by sociologists.

The Conceptual Model for the Study

The McClosky and Schaar (1965) model has been expanded for the present study and is presented below. The model is comprised of six interrelated factors which will be discussed in the following section.



The generalizations or propositions which undergird the expanded model are taken from Dolan (1969), who states that:

1. Man is a social being who finds it necessary to meet his needs through relationships with others.

2. As a social being, man is thus an organized being who develops social systems through which he may adequately meet his needs.

3. As such, all interaction occurs within the context of the social system:

   a. Interaction involves two or more people reciprocally influencing each other's ways of thinking, feeling and acting.

   b. Interaction is toward objectives.

   c. Man is motivated to expend energy to achieve objectives.

   d. Interaction is normatively regulated.

4. Social systems represent organized patterns of behavior that exhibit to some degree order, regularity, predictability, stability and social integration.

5. Social systems are in a constant state of change.

These five propositions are descriptive of general features of all social systems and serve as a basis for the following discussion.

Social-Cultural Conditions and Individual Attributes

The past and present social-cultural conditions in the individual's environment involve his adjustment or socialization to the normative structure in which he lives. Excluding those inherent factors of sex, age, and race, the attributes of individuals have been influenced by the degree of adjustment which has been experienced.

In a study of adults in the rural South, Mangalam, et al.(1962) define adjustment (cited by Moon and McCann, 1966:6):

> . . . a dynamic state in which the actors in a given meaningful interactional system are able to live in relation to other members of their significant membership group, satisfying their basic needs, fulfilling the responsibilities of their major roles, and realizing the value ends of the system while maintaining the identity and integrity of the actors' individual selves.

Adjustment is both a process and a condition. It is the process of attaining a "state" or relationship of "harmony" or "equilibrium" between the individual and his environment and the condition of having reached such a goal (Pear, 1964). Adjustment to social situations is influenced by the individual's interaction with family, peers, his perception of the situation, and the social forces that may interfere with these factors. Thus, the nature of the adult's adjustment to a new or changing social environment depends on whether or not the adult is satisfied or dissatisfied with his environment (Eaton, 1947).

The process of adjustment involves social learning or socialization--the life-long process of learning the norms, attitudes, and beliefs of a culture. Elder (1968: 353) conceptualizes socialization as:

> . . . the transmission of cultural traditions, new knowledge and values, the development of skills and the utilization of training techniques to ensure appropriate learning.

Further, Broom and Selznick (1963) point out that through the socialization process society teaches its members what they need to know in order to function effectively. They state that socialization inculcates basic disciplines, instills aspirations, and teaches social roles and skills which provide the individual with a basic preparation for participation in adult activities. Individual attributes which affect this participation are education, residence location, employment status, employment prestige, income, and social participation.

McClosky and Schaar (1965) and Boyd and Morgan (1966) point out that successful socialization is the key to successful adjustment. According to Horton and Hunt (1964), successful socialization takes place when the individual adopts the norms, goals, and culture of his environment. That is, "he internalizes the norms of his culture so that he automatically and mechanically acts in the expected manner most of the time" (Horton and Hunt, 1964:160). Therefore, when new problems and issues are encountered by the individual adult, new or altered roles must be learned and old roles discarded.

Basic education instruction. The intervening variable, basic education instruction, is assumed to be the major element effecting change in the noncognitive attributes of the disadvantaged adults in the study. Basically this type of instruction is literacy training involving teaching adults who do not perform at the eighth-grade education level how to read, write, and make elementary computations. It should be pointed out that other intervening variables could be substituted in the place of basic education instruction and have an effect on the change and development of individual noncognitive attributes.

Noncognitive attributes. To clarify noncognitive attributes in the study, the concepts of norms, values, attitudes, and beliefs will be

discussed in this subsection. This discussion will strengthen the theoretical considerations of the conceptual model used in the study.

Norms: Bertrand (1967:28) describes norms as being "internalized in individuals through a long socialization process." Further, orderliness of behavior is brought about by respecting norms and the following universal elements of:

1. Folkways or commonly accepted rules of conduct which do not have a compulsive or "must" status.

2. Mores or "must" behaviors, which are strictly enforced.

3. Laws that codify and reinforce the mores and control behavior outside the scope of the mores.

Thus, norms can be characterized as being the smallest unit in the actor-related units of social structure (Bertrand, 1967); as being composed of two parts, goals and means; as having a value determined by a reference group; and, according to Cuber (1955), as being a statement of the course that action should follow, not a description of action that actually occurs.

Values: Generally, values are used in the social sciences to denote any object, need, attitude, or desire. Thomas and Znaniecki (1927: 21) state that a social value is "understood to be observable and experienced by members of a social group." Further, Parsons (1951:12) describes a value as being a "criterion or standard for selecting alternatives from among elements of a social system."

According to Williams (1960), there are approximately 15 major value orientations maintained by a large number of the people in the United States. These values are not universally accepted by all individuals, but they are a collection of the "dominant themes from the many important regional, class and other intracultural variations" (Williams, 1960:415). The values of specific importance to the proposed study are: achievement and success, activity and work, external conformity, science and secular rationality, and individual personality.

Attitudes: Allport (1935:810), a psychologist, defines an attitude as being "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations to which it is related." Similarly, Krech and Crutchfield (1948:152) state that an attitude is an "enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of the individual's world." Attitudes can be shown to be enduring since they can be transported to new situations, but they can also change through experiences in these new situations.

The attitudes that disadvantaged adults possess prior to participating

in basic education instruction are subject to change as a result of this new experience. The magnitude and direction, or orientation, of change are of major importance to the proposed study. Mager (1968:15) describes the orientation of attitudes, the individual's positive and negative evaluations, as follows:

> When we tag someone as having a "favorable attitude" (or positive attitude), we are predicting some term of moving toward responses, and this prediction is based on some "moving toward" behavior already seen. Conversely, tagging a person as having a "negative attitude" is predicting moving away from responses, and that prediction is based on some "moving away from" behavior already observed.

Beliefs: Beliefs are the latent and manifest opinions held by individuals or groups that help shape their attitudes which, in turn, influence their behavior. Loomis (1960:11) defines beliefs as "formulations of what is thought about the universe, its objects and relations." Further, Rokeach (IESS, 1968:450) states that beliefs are simple propositions, conscious or unconscious, inferred from what a person says or does. Therefore, beliefs are the mental images an individual has about his environment. These images form forces which influence the behavior of an individual as he acts and interacts in his social environment. Beliefs, then, are the guiding, directing, and motivating conditions that maintain balance in the patterned behavior of individuals.

From this discussion of norms, values, attitudes and beliefs, it follows that the processes of social adjustment and socialization influence the individual and what he learns about his environment. Thus, the individual's formation of noncognitive attributes about his culture affects his adjustment to a changing society, and any interference with these noncognitive factors creates a tendency for the individual to become disoriented.

Altered individual behavior. The final product of this schema is the altered behavior of the individual, which is assumed to be a result of the influence of the elements discussed in the model. This behavior has a dynamic and reciprocal effect on the individual attributes and social-cultural conditions and continues to influence the individual's noncognitive attributes.

The Selected Noncognitive Attributes

This section delineates the noncognitive attributes that were selected for the study, pursuant to the conditions described in the conceptual framework. The criteria that were applied in the selection of the attributes were (1) the congruency of the attributes with the intent of national legislation which led to the development of educational programs for disadvantaged adults and (2) the availability of standardized instruments to measure the attributes.

The intent of the legislation is that educational programs for disadvantaged adults should assist the members of the target population in (1) assuming citizenship roles, (2) increasing their economic productivity, and (3) modifying attitudes and personal characteristics. Thus, the battery of attribute measures was selected to include measures of attitudes toward work, measures of generalized attitudes, and measures of personal characteristics, including feelings of helplessness (i.e., anomia), feelings of control over environments (i.e., internal-external control), and self-concept (perception of self). These concepts and the instruments of measurement are presented in the subsections that follow.

Internal-external control. The construct of internal-external control of reinforcement was formulated by Rotter (1954) as a function of social learning theory and is measured by the Rotter I-E Scale. Internal-external control (Rotter, 1966) refers to an attribute of the individual by which he can be described as internal--i.e., he believes that he has control over his environment, or external--i.e., he believes that he lacks control over his environment. The external individual perceives the outcome of events as being the result of luck, chance, or fate, which is not influenced by his behavior (Peters, 1968).

Peters (1968) conducted a study in a correctional institution to determine the effect of internal-external control on retention of control-relevant information--that is, information which is perceived to be of use in controlling one's environment--and to investigate differences among prison inmates in their participation in occupational education programs.

Results of Peters' (1968) experiment supported the thesis that internal subjects retain more information than external subjects; however, the relevancy of the information did not make any significant difference. A significantly larger proportion of the inmates classified as internal participated in occupational education programs than did inmates classified as external. These findings supported those of Seeman and Evans (1962), Seeman (1963, 1966), Rotter (1966), and Davis and Phares (1967). The only difference was that the type of information, control-relevant or noncontrol-relevant, was not a major factor in achievement scores. Peters, however, indicated that this could be due to the short period of the treatment or to the fact that prisoners tend to perceive all information on parole as control-relevant information.

In the Seeman and Evans (1962) study, two groups of tuberculosis patients (N = 887) were matched on socioeconomic status and hospital experience but were different in their feeling of control of environment as measured by their I-E Scale scores. After the patients took the I-E Scale, they were given another objective test dealing with tuberculosis itself, its effective treatment, how it is contracted, and its communicability. The findings of the study showed that hospitalized tuberculosis patients with high I-E Scale scores had less objective knowledge about their own condition and were less inclined to participate in activities to gain information than those patients with low I-E Scale scores.

Seeman (1962) replicated the study in a prison in Chillicothe, Ohio. The prisoners were first administered the I-E Scale, followed by the presentation of information about prison life, factors influencing parole, and news from outside the prison. After a period of six weeks, the prisoners were tested to determine if they had retained any of the previous information. Those prisoners who were more internal knew more parole-relevant information than those who were more external. The correlation between internal-external control and parole learning was -.23, a coefficient that is not high but is statistically significant.

Seeman (1966) repeated this study in Sweden. A random sample of 558 male workers was drawn from the official government register for the city of Malmo. The subjects were tested for the level of internal-external control and for their political knowledge. Seeman (1966) reported partial correlation coefficients between I-E scores and political knowledge for both manual and nonmanual workers. The correlations were low, -.21 and -.15, but statistically significant beyond the .01 level.

Attitudes toward work. The measures of attitudes toward work (Haller, 1957) are based upon an index of value orientations conceptualized by Tonnies (1887) as Gemeinschaft and Gesellschaft. These are ideal constructs which do not exist as such in the empirical world. Tonnies used them to describe two successive stages of social development. The Gemeinschaft-type individual's will, wants, and needs are subordinate to those of the community or group. These relationships are characterized as being ". . . ends in and of themselves, they are spontaneous and affective and they are the outcome of interaction between status-roles such as mother and child . . . which traditionally or out of habit provide these qualities" (C. P. Loomis in Dictionary of the Social Sciences, 1964:281). Gesellschaft groups are characterized by the individual's interests being more important than community interests. Gemeinschaft groups, over time, become Gesellschaft-like in that they exhibit relationships characterized by ". . . less and less attachment to any community but more and more by contract to some association" (Roucek and Warren, 1967:245).

These ideal constructs have been compared to Durkheim's (The Social Division of Labor, 1893) conceptualization of social solidarity. However, the importance of Gemeinschaft and Gesellschaft to the proposed study is that they are broadly applicable to modern-day terms of "rural and urban" (Redfield, 1941) and "nonindustrialized and industrialized" (Faunce, 1968) social environments.

The selection of the 44 items, which make up the six subscales of the MSU Work Beliefs Checklist ". . . was based on . . . theory and empirical studies which attempt to explain two more or less opposing systems of value orientations to life and human actions" (DeHoyos, 1961: 55). The assumption underlying the development of these six scales is (Hodgkins, 1961:32):

> those subjects who agree with questions, identified as reflecting the proper work attitude for successful economic advancement in urban life, will have much higher probability of success in a given urban work situation . . . this assumption of relationship extends only to an adolescent population and is not necessarily true for adult groups.

These scales measure orientations toward work, structured time, physical mobility, change, internal-external control, and deferred gratification.

De Hoyos (1961) used the MSU Checklist to study the occupational and educational levels of aspiration of Mexican-American youth. The sample included junior and senior high school youths in eight schools in Lansing, Michigan. De Hoyos concludes that the members of the sample appear to be adopting the achievement values of the dominant group (American society) as measured by their scores on the MSU Work Beliefs Checklist; that is, they seem to accept the positive evaluations for subscales B, C, D, F, and internal determination, and they believe that work has expressive value (Subscale A of Appendix B).

In 1962, Haller and Wolff reported on a study of the personality orientation of farm, village, and urban boys in Lenawee County, Michigan. They used the MSU Work Beliefs Checklist as one of their instruments. The results of this study state that differences between farm and urban boys are detectable for subscales WBC and WBE. Important residence by status interaction differences between farm and urban boys are noted for subscales WBB, WBC, and WBF. However, in 1965, Haller and Wolff revised their findings for the interaction of residence by status, stating that the relationship for subscale WBF is the only important difference still tenable.

Haller and Miller (1963) report that the MSU Checklist is slightly correlated with their Occupational Aspiration Scale. The specific correlations for the six subscales are discussed in the Methodology section under Operational Definition and Measurement of Variability.

The MSU Work Beliefs Checklist has been used exclusively on high school age youths between the ages of 14 and 17. However, the implications from the various studies suggest that the scale might be applicable to disadvantaged adults in the rural and urban South.

Attitudes toward law, education and economic conservatism. The Minnesota Survey of Opinions was developed by E. A. Rundquist and R. F. Sletto and published in Personality in the Depression, 1936, by the University of Minnesota Press. These Likert-type scales were designed to ". . . measure the effects of the depression on the personality and family life of young people" (Rundquist and Sletto, 1936:1). Six separate scales were developed to measure attributes related to morale, feelings of inferiority, family adjustment, attitudes toward law, economic conservatism, and the value of education. In addition, a general adjustment scale was developed from items of the six scales.

The question of interest was (Rundquist and Sletto, 1936:1):

> Can unemployment alone produce unfavored personality manifestations, and if not, what are the other circumstances that are associated with such manifestations?

The different scales of the Minnesota Survey of Opinions were administered to four main groups: high school seniors, university sophomores, evening class students, and day class unemployed students. According to Rundquist and Sletto (1936:3-4):

> The six scales were administered to 560 University of Minnesota students, of whom 200 were in the elementary sociology class, 200 were in the General College psychology class, 100 were law freshmen, and 60 were students receiving federal aid; to 1,024 persons in the night school classes in the Adult Education Department of the Minneapolis Public Schools; to 412 in the special classes for unemployed supervised by the same department; to 642 high school seniors and 71 high school juniors; to 21 high school teachers; and to 52 men on the rolls of the Minneapolis Department of Public Relief. In all, the scales were administered to approximately 3,000 individuals. Elimination of incomplete papers reduced the total number of students to 2,882.

The differences for employed and unemployed groups of men and women were a major factor in developing these scales. The results of this study (N = 2,882) indicate that important differences between groups are detectable for the general adjustment, morale, economic-conservatism, and inferiority scales. However, the fact that no important differences between groups were detected for the education scale could be due to chance alone or to the characteristics of the population. A discussion of the validity and reliability of the law, education, and economic-conservatism scales will be presented in the Methodology section concerned with the operational definitions and measurement of variability.

Moon and McCann Anomia Scale. The dependent variable, anomia, as used in this study, refers to an internalized psychological state of an individual (Lewis, 1966). Anomia is a concept that describes an individual's feelings of hopelessness or normlessness. The anomic person is unable to cope with new situations and tends to reject social values. This scale has been discussed in detail in the preceding section.

McClosky and Schaar Anomia Scale. This scale was used to measure anomia ". . . as a state of mind, a cluster of attitudes, beliefs, and feelings in the minds of individuals" (McClosky and Schaar, 1965:19). The preceding discussion of the basic model for the study examines this scale in detail.

Self-concept. Studies by Klausner (1953) and Hawk (1967) showed

that the self-concept is more homogeneous among members of the same socioeconomic status groups, with the disadvantaged having a lower self-concept. This conclusion has been supported by Carroll (1945) and Battle and Rotter (1963), who characterize the self-concept of disadvantaged youths by low self-esteem, self-deflation, and self-depreciation.

The effects of racial segregation on the self-concept of Negro adolescents in a southern community was the focus of a study conducted by Williams and Byars (1968). The Tennessee Self-Concept Scale was administered to 134 Negro and 176 Caucasian senior high school students. Williams and Byars (1968:120) concluded:

> . . . that the Negro students were low in self-confidence, defensive in their self-descriptions, confused concerning their self-identity, and similar in their performance to neurotic and psychotic individuals. Negro students attending integrated schools did not differ significantly from those in segregated settings.

The Negro students did differ significantly, however, from Caucasian students on the subscales for Moral-Ethical Self, Personal Self, Social Self, Self-Criticism, Personality, Integration, Personality Disorder, and Psychosis. The level of significance was $p < .05$.

Roth (1954), Combs (1964), and Williams and Cole (1968) conducted studies to determine the association between students' self-concept and school achievement. All three studies indicated that self-concept is related to school achievement. Combs (1964:50), in describing the underachievers, stated that in comparison to achievers they:

> saw themselves as less adequate,
> saw themselves as less acceptable to others,
> saw their peers as less acceptable,
> saw adults as less acceptable,
> showed an inefficient and less effective approach to problems,
> and showed less freedom and adequacy of emotional expression.

Thus, it appears that each individual's self-concept is learned through socialization and social interaction and that future learning under appropriate conditions may cause an "adjustment" of the self-concept as well as of other noncognitive attributes.

Articulation of the Proposed Model

The factor of major importance to the proposed study is the altered individual behavior assumed to be a result of changes in noncognitive attributes. These changes in noncognitive attributes are considered to be a result of participation in basic education instruction at the selected institutions. The social-cultural conditions and

individual attributes influence each other, suggesting the need for adjustment to a changing society by disadvantaged adults. These elements also influence the individual's cognitive and noncognitive attributes, which, in turn, are assumed to have an effect on his behavior. Concomitant with the effect that these elements have upon the individual's behavior is the reciprocal influence of this behavior on the social-cultural conditons and individual attributes.

In the study, it is assumed that the past and present social-cultural conditions and individual attributes are not controllable but are "givens" in the investigation. These "givens," therefore, impinge upon the assumption that basic education instruction will change selected noncognitive attributes of adults and result in altered individual behavior.

Statement of the Rationale

The preceding review of literature permits the formulation of a statement of the rationale based on the conceptual model. That is, it is assumed that the legislation providing basic education instruction for disadvantaged adults is an attempt to modify the information inputs for these individuals in order to improve their adjustment process and economic condition in a technologically oriented society. The adjustment process is then assumed to affect the noncognitive attributes of the disadvantaged adults.

Support for the assumption that communications, interactions, and information inputs facilitated by basic education instruction do, in fact, affect the noncognitive attributes of adults is cited in relation to group participation (McKeachie and Doyle, 1966), communicative source (Katz and Lazarsfeld, 1955, and Klapper, 1960), receipt of new information (Sherif, Sherif, and Nebergall, 1965), interference with learning the norms, values, and beliefs of society (McClosky and Schaar, 1965), and reference groups (Siegel and Siegel, 1965).

In this study, basic education instruction consists of literacy training, involving teaching adults who do not perform at the eighth-grade education level how to read, write, and make elementary computations. It should be pointed out that other intervening variables could be substituted in the place of basic education instruction and have an effect on the change and development of individual noncognitive attributes.

Objectives of the Study

The specific research objectives for this study were:

1. To compare the study sample of disadvantaged adults to norm group populations on selected noncognitive attributes.

2. To compare the changes in the noncognitive attributes of adults who participated with those of adults who did not participate in the basic education instruction at the selected institutions.

3. To identify important independent variables that are associated with the changes in the noncognitive attributes of adults who participate in the basic education instruction at the selected institutions.

4. To determine if participation in adult basic education programs can be predicted from scores on selected instruments designed to measure selected noncognitive attributes.

METHODOLOGY

This chapter presents the methodological information and basis for analyzing the data. The chapter includes a description of the population and sample, a comparison of the sample studied with the population, definitions of the independent and dependent variables examined, the procedure for collecting the data, and the design of the study.

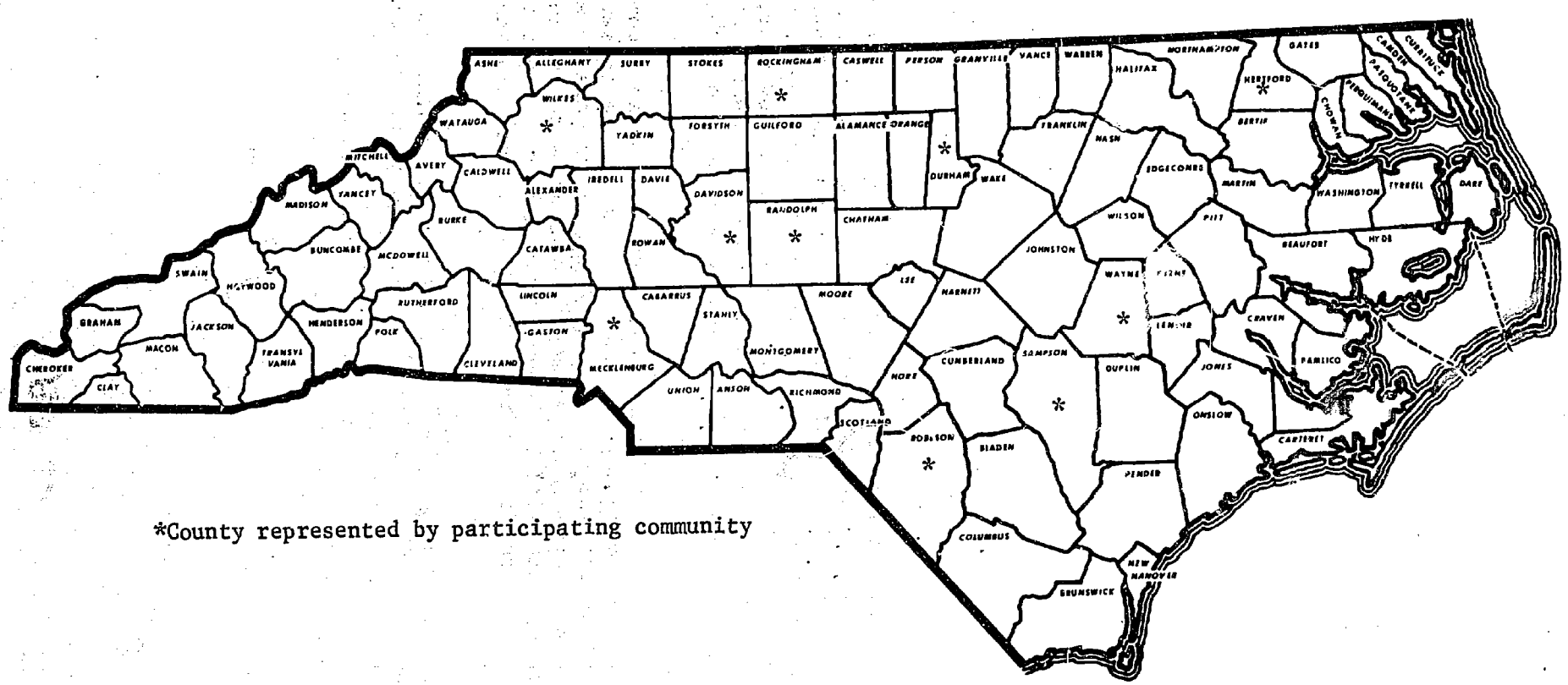
Population and Sample

Ten community colleges and technical institutes in North Carolina were selected for the study. A map showing the location of these institutions is found on page 20. In North Carolina, adult basic education programs are conducted in community colleges or technical institutes under the overall direction of the Director of Adult Education in North Carolina Department of Community Colleges. The ten institutions were selected in cooperation with the Director of Adult Education to represent diverse economic, social, and demographic characteristics of the state.

Each institution selected was requested to organize three adult basic education classes for disadvantaged adults in the community, and each class was to enroll approximately 10 students per class. The participants in the standard approved adult basic education classes constituted the "experimental" group for the study. Altogether, 381 adults were enrolled in the program and were pretested. This number was reduced to 279 participants because of attrition and failure to supply usable instruments.

A sample of nonparticipants was selected from each community served by the community college or technical institute to serve as the "control" group for the study. The nonparticipants were selected at random from lists of disadvantaged adults available to the institutions. The original sample included 105 nonparticipants who were pretested. The sample subsequently was reduced to 64 because of attrition and refusal to complete the posttest.

A comparison (Table 1) was made between the sample studied and the total number of adults enrolled in basic education instruction during the spring quarter of 1969 at the 54 institutions in the North Carolina community college system. There is a difference between groups for employment status and no differences for sex and race.



*County represented by participating community

Figure 1. Georgraphical Location of North Carolina Communities Participating in the Study.

Table 1

Comparison of the Study Sample of Adults (N = 343) and the Total Number of Adults (N = 7,401) enrolled in basic Education Instruction in North Carolina in the Spring of 1969

	Sample		Total Population[a]	
Variable	N	%	N	%
Sex				
Males	127	45.5	3,538	47.8
Females	152	54.5	3,863	52.2
Total	279	100.0	7,401	100.0
$X^2_{.05}$ with 1 df = 0.0862	N.S.	Critical Region =		3.84
Race				
White	74	26.5	2,296	31.1
Black	205	73.5	5,105	68.9
Total	279	100.0	7,401	100.0
$X^2_{.05}$ with 1 df = 2.82	N.S.	Critical Region =		3.84
Employment				
Employed Full Time	191	68.5	3,452	46.7
Not Employed Full Time	88	31.5	3,949	53.3
Total	279	100.0	7,401	100.0
$X^2_{.05}$ with 1 df = 54.52		Critical Region =		3.84

[a]Data from North Carolina Department of Community Colleges, Raleigh.

Operational Definitions and Measurement of Variability

Internal-External Control

The internal-external scale published by Rotter (1965) was the instrument selected to measure the dependent variable of internal-external control. This is a forced-choice scale and is largely the work of the late Professor Shepard Liverant, Ohio State University, Columbus, Ohio. The final version of the scale, refined through several item analyses, includes 23 items which offer alternatives between internal and external control interpretation of various events. The scale is designed to measure the individual's belief about the nature of his environment and his expectations about how reinforcement is controlled. The score range is from zero to 23, with the lower score indicating internality and the higher score indicating externality. Scale items appear in Appendix A.

Franklin (1963) reports a reliability coefficient of .69 for Rotter's I-E Scale using the Spearman-Brown formula on data obtained from a national stratified sample of 1,000 males and females. Peters (1968) reports a reliability coefficient of .64, using the split-half method for a sample of 78 Manpower Development Training Act (MDTA) trainees enrolled in ABE classes and a test-retest reliability coefficient of .76 for the second testing of the same group. These coefficients compare favorably with the reliability estimates obtained by other researchers who had used the I-E Scale.

MSU Work Beliefs Checklist

The MSU Work Beliefs Checklist developed by A. O. Haller and reported in the MSU Technical Bulletin No. 288, 1963, consists of 44 items. This scale is divided into six scales to measure different attitudes about work. These agree-disagree response scales measure orientations toward work, structured time, physical mobility, change, internal-external control and deferred gratification. The specific scales are defined as:

BVA Belief that work has expressive (intrinsic) vs. instrumental value.
BVB Positive vs. negative evaluation of structured time.
BVC Positive vs. negative evaluation of physical mobility.
BVD Positive vs. negative evaluation of change.
BVE Belief in internal vs. external determination of events.
BVF Positive vs. negative evaluation of deferred gratification.

The scores for scale BVA range from eight (8) to zero (0) with the higher scores reflective of individuals believing that work has expressive (intrinsic) value. Individuals with lower scores believe that work is simply a means to a financial end.

Scores for scale BVB range from eight (8) to zero (0). This scale is an indication of the individual's dealing with promptness, appointments, and the scheduling of time. High scores for this scale indicate that the individual has a positive evaluation of structured time; low scores indicate a negative evaluation.

Scale BVC measures the positive or negative evaluation of physical mobility. The scores range from six (6) to zero (0) with high scores reflective of a positive evaluation of mobility. Low scores indicate a negative evaluation or reluctance for physical mobility.

Scale BVD measures the individual's orientation toward change. Scores for this scale range from seven (7) to zero (0) with high scores indicating a positive evaluation of change and low scores indicating a negative evaluation of change.

Scores on scale BVE range from eight (8) to zero (0) with high scores indicating an individual's belief in internal determination of events. Low scores indicate a belief in external determination of events.

The BVF scale scores range from seven (7) to zero (0). High scores indicate an individual's positive evaluation for deferred gratification. Low scores indicate a negative evaluation for deferred gratification.

De Hoyos (1961:176) lists the correlations obtained for the six scales for Mexican-American youth in Michigan, which range from .03 for BVC with BVE to .50 for BVA with BVB. The Correlation Matrix is included in Appendix Table 38.

Hodgkins (1961) used Copp's technique of trace line analysis to determine the usefulness of the scales for his study. This technique is a method of item analysis used to determine the general reliability of the items on each scale. Hodgkins concluded that the six scales could be used in their entirety for his study of Lenawee County, Michigan, adolescent males. A discussion of the trace line technique and graphs of each scale are reported by Hodgkins.

The correlations of the six subscales for the three populations studied by Watts (1962) range from -.14 to +.36 for the Lenawee Sample (N = 439), from -31 to +.30 for the Turrialba Sample (N = 112), and from -.29 to +.50 for the Lansing Sample (N = 87). The correlations are included in Appendix Table 39.

Rundquist and Sletto Scales (Minnesota Survey of Opinions)

The scales of interest for the proposed study were the law, education, and economic-conservatism scales which measure the disrespect for law, disillusionment concerning the value of education, and attitudes

toward the economic system of government as a result of unemployment during the depression (Rundquist and Sletto, 1936). The given responses to each statement range from "strongly disagree" to "strongly agree." These scales were designed to prevent artificial responses by varying the form of the statements so that they are sometimes favorable and sometimes unfavorable to the value of education, law, and economic-conservatism. If the response to a statement is favorable toward law, education, and economic-conservatism, it is scored with one point assigned to "strongly agree" and five points assigned to "strongly disagree." Similarly, if the response to a statement is unfavorable to these scales, "strongly disagree" is assigned one point and "strongly agree" five points. A lower score indicates a more favorable attitude toward law, education, and economic-conservatism. These scales seem appropriate for the disadvantaged adult population because a large percentage of these people are unemployed, underemployed, or not full-time employed (Manpower Report to the President, 1965).

The reliability coefficients and correlations reported by Rundquist and Sletto (1936) for the different groups are available in Moore (1970) appendix tables 80-82. Generally, the Spearman-Brown reliability coefficients for the law, education, and economic-conservatism scales ranged from .75 to .90 for males and .78 to .88 for females of the different groups. Test-retest correlations for this scale were .81 for males and .84 for females, with the test-retest item correlations ranging from .40 to .90. For the proposed study, the law, education, and economic-conservatism scales were used to measure attitudes toward law, the value of education, and economic conservatism maintained by disadvantaged adults in selected North Carolina communities.

Moon-McCann Anomia Measure

In this study, anomia was measured using the Moon-McCann Modification of the Srole Anomia Scale (Moon and McCann, 1965). On this scale a high score indicates anomic behavior and low scores indicate normal behavior. The items for this scale appear in Appendix D.

The Moon-McCann Scale is a Guttman type with a coefficient of reproducibility of 89.4. This scale was compared with another Guttman-type anomia scale developed by Hammonds (1963) and with two scales developed by Whitson (1961), who used a factor analysis technique to select scale items. All four scales were developed using five of Srole's items plus three additional items. With the exception of one item, all items in the scales were the same. A Pearson product-moment correlation coefficient was computed for all combinations of the four scales. The values for the correlation ranged from .598 to .988.

McClosky and Schaar Anomia Measure

McClosky and Schaar (1965) have attempted to identify, measure, and explain some of the personality, cognitive, and attitudinal factors that contribute to anomia ("anomy").

Two questionnaires which included the McClosky and Schaar Anomia Scale were administered to two different samples. The 1955 questionnaire (MB) contained 63 scales with a total of 512 items, and the 1958 questionnaire (PAB) contained 47 scales with a total of 390 items. These scales were pretested over a two-year period on a sample of 1,200 residents in Minneapolis-St. Paul. Guttman scaling procedures were used to determine the internal consistency of the scales. One or more procedures of validity (criterion groups, panel of judges, or internal consistency and reproducibility) were carried out on each scale in the two surveys. Coefficients of reproducibility of .80 and .83 were obtained for the snomia scale on the MB and PAB samples respectively. The split-half reliability coefficient by Spearman-Brown yielded a coefficient of .76, and a method reported by Cronbach (1963) yields a reliability coefficient of .77.

The aforementioned noncognitive attributes make up the Survey of Opinions instrument administered to both groups in the study. The test-retest reliability coefficients for the scales on the Survey of Opinions are summarized in Appendix Table 1.

Self-Concept

The dependent variable, self-concept, was defined by Fitts (1965: 2) ". . . as the internal frame of reference within which the individual describes himself in relationship to others." The Tennessee Self-Concept Scale (TSCS) developed by Fitts (1965) was the instrument selected to measure this noncognitive attribute. The scale consists of 100 self-descriptive statements with which the subject is asked to agree or disagree. The scale items appear in Appendix F.

The Total Positive (TP) score, largest of the subscales, is a measure of the subject's overall self-concept. Fitts (1965:2) stated:

> This is the most important single score on the Counseling Form . . . . Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly.

Besides the Total Positive measure of self-esteem, the scale provides an assessment of Physical Self, Moral-Ethical Self, Personal Self, Family Self, Social Self, Identity of What He Is, Self-Satisfaction (how he accepts himself), Behavior (how he acts), and Self-Criticism. Other measures which can be derived from noting variations in responses are: Defensive Positive Scale (subtle defensiveness), General Maladjustment Scale (empirical index of adjustment-maladjustment), Psychosis Scale, Personality Disorder Scale, Neurosis Scale, and Personality Integration.

Concerning the norms for the TSCS (Fitts, 1965:13):

> The standardization group from which the norms were developed was a broad sample of 626 people. The sample included people from various parts of the country, and age ranged from 12 to 68. There were approximately equal numbers of both sexes, both Negro and white subjects, representative of all social, economic and intellectual levels and educational levels from 6th grade through the Ph.D. degree . . . .
>
> It has been apparent that samples from other populations do not differ appreciably from the norms, provided they are large enough samples (75 or more) . . . . The effects of such demographic variables as sex, age, race, education, and intelligence on the scores of this scale are quite negligible.

Test-retest reliability coefficients of the TSCS subscales range from .61 to .92. Sixty (60) college students were tested over a two-week period and yielded reliability coefficients of .92 for the Total Positive Self Concept measure. The test-retest reliability coefficients for the disadvantaged sample for each subscale are presented in Appendix Table 2.

Fitts (1965:17-30) presents the information on the validity of the TSCS with respect to (1) content validity, (2) discrimination between groups, (3) correlation with other personality measures, and (4) personality changes under particular conditions. Seven clinical psychologists, employed as a panel of judges, were in agreement on the classifications, meaningfulness, and communicability of the scale items.

The statistical analysis of 369 psychiatric patients and 626 non-patients on the TSCS, according to Fitts (1965:17), produced highly significant differences (mostly at the .001 level) between these two groups. Fitts reported that other studies demonstrated similar patient versus nonpatient differences.

Independent Variables

The use of selected independent variables or control variables is suggested by Kerlinger (1964) as a means of controlling for extraneous variation. That is, by introducing these variables into the study, it ". . . becomes possible to extract from the total variance of the dependent variable the variance due to the [independent] variable" (Kerlinger, 1964:285).

The independent variables were further delineated into the categories of continuous and classification. The continuous independent variables were treatment hours, age, income, employment prestige, and social participation index. The classification independent variables, specified as zero or one variables, were treatment participation, sex, race, residence location, formal education, and employment status.

The rationale for selecting the particular independent variables is discussed in the subsection dealing with each variable. The selection of sex, age, and race as independent variables was suggested by the review of literature for anomia.

Sex. Sex was specified as a zero or one variable--one if the individual was male and zero if female. Differences in the attitudes of males and females were noted by Rundquist and Sletto (1936) in their study of attitudes toward the value of education of young adults during the Depression.

Race. Race was specified as a zero or one variable--one if the individual was black and zero if white. Marsh and Brown (1965), using the Moon and McCann anomia scale, noted differences in feelings of normlessness between Negroes and whites. The possibility of similar findings for the McClosky and Schaar (1965) anomia scale was investigated for the disadvantaged population.

Education. The formal education level attained by the adults in this study was the actual education level attained and reported by the respondent on the interview guide. Generally, the studies concerned with the dependent variables did not include sample populations of adults in the lower educational levels.

Age. Age of the adults as recorded on the interview guide was used as a control variable for the study. Differences in ages were expected for the study in view of the fact that the measures of the noncognitive attributes had been used on adolescent boys (Haller and Miller, 1963; De Hoyos, 1961; and Hodgkins, 1961), college students (Rundquist and Sletto, 1936), and a cross-section of adults in the United States and Minnesota (McClosky and Schaar, 1965).

Residence location. Residence location was specified as a zero or one variable--zero if rural and one if urban. Differences were expected for the adults who have rural and urban backgrounds as indicated by the review of literature (Tonnies, 1887; Durkheim, 1893; Redfield, 1941; and Faunce, 1968).

Treatment hours between pretest and posttest. The number of classroom contact hours for the adults who participated in the study was used to assist in explaining any changes that may result from the effect of the treatment--basic education instruction.

Employment status. Employment status was specified as a zero or one variable--zero if not full-time employed and one if full-time employed. This classification was based on the employment condition of the adult at the time the interview guide was administered--between pretest and posttest. It was noted from the review of literature (Rundquist and Sletto, 1936) that the degree of employment may be an important factor which influences the noncognitive attributes of adults.

Employment prestige. Employment prestige, as measured by the modified North-Hatt Occupational Prestige Rating Scale (1949), is defined as the rating given to different occupations according to the esteem held for the particular occupations. A total of 90 occupations were rated by a cross-section of Americans (N = 2,930). For this study, employment prestige was defined as the North-Hatt rating for the occupations reported by the adults in the study which was recorded on the interview guide, questions 10, 11, and 12 in Appendix G.

Income. The income reported on a monthly basis by the adults in this study was used to assist in explaining any changes that may be noted for the selected dependent variables. Income is a socioeconomic factor that was reported by several researchers listed in the review of literature as affecting the dependent variables, especially anomia, for the populations studied.

Social participation. Chapin's Social Participation Scale (1955) was used to measure the degree of the adult's participation in community groups and organizations. Miller (1968:208-209) describes the Chapin scale as a Guttman-type scale which measures five components. The individual components are (a) membership, (b) attendance, (c) financial contribution, (d) membership on committees, and (e) offices held. The proposed study was primarily concerned with social participation as measured by (b) attendance and (c) financial contributions which have intercorrelations ranging from .80 to .89. Further, (a) membership is correlated with (b) attendance and (c) financial contribution of the order of .88 and .89, respectively. Mean scores for different occupational groups range from 20 for professional and proprietary to 8 for the semiskilled and 4 for the unskilled.

Treatment. The treatment administered to the disadvantaged adults was specified as adult basic education instruction. Adult basic education is defined in the Elementary and Secondary Education Act Amendments of 1966, Title III, Section 303, as:

> . . . education for adults whose inability to speak, read, or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability, which is designed to help eliminate such inability and raise the level of education of such individuals with a view to making them less likely to become dependent on others, to improving their ability to benefit from occupational training and otherwise increasing their opportunities for more productive and profitable employment, and to making them better able to meet their adult responsibilities.

The North Carolina State Plan for Adult Basic Education (1964:13) reiterates the above statement and includes the following:

> This [ABE] program of instruction shall include elementary

level instruction for adults with emphasis on the communicative skills of reading, writing, speaking, listening and computative skills using the content of materials that contain information on good buying, human relations, and home and family living.

Specifically, national legislation, such as the Economic Opportunity Act of 1964 and the Adult Education Act of 1966, proposes the encouragement and expansion of basic education programs to improve individual educational levels and provide an avenue for occupational improvement and employment. Thus, the purpose, objectives, and definitions of adult basic education specify the focus of the program as being both occupationally oriented and socially and family oriented. The marriage of occupational training and basic educational improvement are concomitant and reinforcing factors which attempt to provide the opportunities for the disadvantaged to become productive citizens in a technologically oriented society.

The nonparticipants or the control group did not take part in the basic education instruction offered by the community colleges or technical institutes during the period of February, 1969, to May, 1969. Further, they had not previously been exposed to this type of literacy training.

Therefore, the treatment factor is specified as a zero or one variable--zero if nonparticipant and one if participant. These individuals are adults between the ages of 18 and 70 who took part in the instruction or were members of a control group at the selected community colleges or technical institutes.

The treatment involved 60 hours of instruction. A limitation of the study, therefore, is related to the question of whether changes in noncognitive attributes may reasonably be expected to occur during the period covered by the treatment. A related question, which is unanswered, is whether extraneous factors and conditions which were not controlled in the investigation could either militate against or increase changes.

Collection of Data

Adult basic education program directors at the selected institutions administered the noncognitive measures to the nonparticipants and participants. Prior to the initial testing date in February, 1969, the directors participated in two training institutes designed to familiarize them with the objectives of the study, the noncognitive measures, and the appropriate means for administering the measures to the sample of disadvantaged adults.

The nonparticipants and participants were given a pretest battery

in May, 1969. Both the pretest and posttest batteries included the following instruments:

1. Internal-External Control by Julian B. Rotter, 1965.

2. Attitudes toward work as measured by the MSU Work Beliefs Checklist published by A. O. Haller, 1963.

3. Attitudes toward law, education, and economic conservatism by R. A. Rundquist and R. F. Sletto, 1936.

4. Feelings of anomia as measured by a six-item scale developed by Moon and McCann.

5. Feelings of anomia as measured by a nine-item scale developed by McClosky and Schaar, 1965.

6. Tennessee Self-Concept Scale, containing 16 subscales, by William H. Fitts, 1965.

In addition, an interview guide (Appendix G) was administered to the adult participants and nonparticipants at the selected institutions after pretesting and before posttesting. This instrument was designed to obtain historical information about the adults and their families.

The Design of the Study

This subsection of the report describes the design selected to attain the objectives of the study. As reported in the introduction, the study had these objectives:

1. To compare the study sample of disadvantaged adults to norm group populations on selected noncognitive attributes.

2. To compare the changes in the noncognitive attributes of adults who did not participate in the basic education instruction at the selected institutions.

3. To identify important independent variables that are associated with the changes in the noncognitive attributes of adults who participated and adults who did not participate in the basic education instruction at the selected institutions.

4. To determine if participation in adult basic education programs can be predicted from scores on selected instruments designed to measure selected noncognitive attributes.

Objective 1

To attain objective 1, the means for the study sample, both

participants and nonparticipants at the time of pretest, were compared to norm group populations on the selected noncognitive attribute measures. T tests were used to aid in determining if the study sample differed from the norm group populations.

Objective 2

To attain objective 2, the hypothesis of interest was $T_1 = T_2$ where T_1 denotes the true mean of the participants or "experimental" group and T_2 denotes the true mean of the nonparticipants or "control" group.

It should be pointed out that practical considerations precluded the conduct of a true experiment. Under ideal conditions, a sample of disadvantaged adults should have been drawn from each community and randomly assigned to experimental and control groups. This randomization was not possible under the conditions of the study where the institutions enrolled those disadvantaged adults who were interested in participating in the program. The "experimental" group was actually self-selected. Since this constitutes a violation of experimental design, it should be considered a limitation of the study. The "control" group, however, was randomly selected from populations of interest.

The general model used for attaining objective 2 was:

$Y_i = u + T_i + e_i$; where

Y_i = the difference between the pretest and posttest scores of the ith individual for the selected dependent variable;

u = the overall population mean;

T_i = the differential effect of basic education instruction as noted by participation and nonparticipation; and

e_i = a random element of error assumed to be (for this analysis) normally and independently distributed with mean equal to zero and variance equal to sigma square (NID: 0, σ^2).

Rejection of the hypothesis of interest will indicate a significant difference between pretest scores and posttest scores for participants and nonparticipants. However, if the hypothesis is not rejected for the selected dependent variables using the one-way analysis of variance model, it is believed that the error term is inflated and contains random error plus bias. In this case, provisions were made to examine the error term by the use of least squares regression analysis.

Objective 3

The least squares regression analysis (Draper and Smith, 1966)

was introduced to examine selected independent variables in the presence of the dependent variable. This method was used to extract important sources of variation from the error (e). The variation is partitioned into single degree of freedom effects to test for their association with the dependent variable. The "full" models for the least squares analysis of variance are summarized in tables in the appendix. Testing the effect of each of the selected independent variables individually provides justification for adding nonsignificant variables to the error term creating a reduced regression model. The "reduced" models for the least squares analysis of variance are summarized in tables in the analysis of data section of this chapter.

The "full" model used for the regression analysis was:

$$Y_{ij} = a + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + B_8X_8 + B_9X_9 + B_{10}X_{10} + B_{11}X_{11} + B_{12}X_{12} + B_{13}X_{13} + B_{14}X_{14} + e_{ij}$$

Y_{ij} = the difference between pretest and posttest for the selected dependent varibles;

a = the intercept of the regression line;

$B_1, B_2, B_3 \ldots$ = regression coefficients for the selected independent variables;

$X_1, X_2, X_3 \ldots$ = the value for each of the selected independent variables;

X_1 = Race (Black or White)

X_2 = Participation (Participants or Nonparticipants)

X_3 = Residence (Rural or Urban)

X_4 = Sex (Male or Female)

X_5 = Age (Reported Age)

X_6 = Education (Reported Education Level Attained)

X_7 = Current Employment Status (Employed Full-Time or Not Employed Full-Time)

X_8 = Income (Reported Monthly Income)

X_9 = Q36 (Do you have any [illegible]s for continuing your own education?)

X_{10} = Q37 (Do you plan to receive more training for the job you now have?)

X_{11} = Q38 (Do you plan to prepare for another job?)

X_{12} = North-Hatt Work Done Most of the Time (Employment Prestige Score)

X_{13} = Treatment Hours (Hours Participated in Basic Education Instruction)

X_{14} = Social Participation Score (Chapin's Social Participation Scale)

e_{ij} = A random element of error assumed to be (for this analysis) normally and independently distributed with mean equal to zero and variance equal to sigma square (NID: 0, σ^2).

The hypotheses for the regression analyses were that the beta (B) values equal zero or have no effect and, therefore, that the particular variable may be added to the error term.

The use of a "reduced" regression model facilitates determining which selected independent variables are significantly associated with the dependent variable. This analysis is made regardless of the size of the correlation coefficient.

Related T tests were computed to help interpret the regression analysis. These tests were made on the scores for each individual at the time of pretest and the time of posttest to detect important differences between testing periods for the selected independent variables.

Objective 4

The experimental group (participants) in this study represents a self-selected population in that they chose to take advantage of the basic education program while the control group (nonparticipants) did not elect to do so. Some question arises concerning whether or not the two groups of respondents emanate from different populations. If heterogeneity is indicated, do the respondents fall into two well-defined categories? To determine if there is a decisive criterion, such as scores on an individual scale, which can be used to discriminate between participants and nonparticipants, the multivariate discriminatory analysis was applied (Kendall, 1947).

For each of the 343 respondents, 28 scale scores corresponding to the following variates were utilized:

X_1, internal-external control of environment (I-E)

X_2, belief that work is of expressive value vs. instrumental value (BVA)

X_3, positive vs. negative evaluation of structured time (BVB)

X_4, positive vs. negative evaluation of physical mobility (BVC)

X_5, positive vs. negative evaluation of change (BVD)

X_6, belief in internal vs. external determination of events (BVE)

X_7, positive vs. negative evaluation of deferred gratification (BVF)

X_8, increased disrespect for law (LAW)

X_9, disillusionment concerning the value of education (EDU)

X_{10}, economic conservatism (ECON)

X_{11}, feeling of anomia--Moon and McCann (MMA)

X_{12}, feeling of anomia--McClosky and Schaar (MSB)

X_{13}, self-criticism (S-CRIT)

X_{14}, total positive self (T-P)

X_{15}, identity self (IDEN-S)

X_{16}, self-satisfaction (S-SAT)

X_{17}, behavior self (BEH-S)

X_{18}, physical self (PHY-S)

X_{19}, moral-ethical self (M-E-S)

X_{20}, personal self (PER-S)

X_{21}, family self (FAM-S)

X_{22}, social self (SOC-S)

X_{23}, defensive positive scale (DP)

X_{24}, general maladjustment scale (GM)

X_{25}, psychosis scale (PSY)

X_{26}, personality disorder scale (PD)

X_{27}, neurosis scale (N)

X_{28}, personality integration scale (PI)

RESULTS AND DISCUSSION

Preceding the results and discussion of this study, three preliminary analyses are presented which are relevant to the interpretation of the research findings. First, the individual scales utilized to measure the selected noncognitive attributes of the adults were factor analyzed. Second, test-retest reliability coefficients were calculated for each scale. Third, the pretest and posttest mean scores for participants and nonparticipants and norm groups are presented.

The statistical analysis and research findings are organized and presented as follows:

1. Analysis of variance of each scale.

2. Regression analysis of each scale.

3. Discriminate analysis for distinguishing between each scale for participants and nonparticipants.

4. Related T test for interpreting the regression analysis. This information is included in appendices.

Each of the scales is defined and discussed in the following sequence:

Y_1 Internal-external control of environment (Rotter)

Y_2 BVA, Belief that work is of expressive value versus instrumental value (Haller)

Y_3 BVB, Positive versus negative evaluation of structured time

Y_4 BVC, Positive versus negative evaluation of physical mobility

Y_5 BVD, Positive versus negative evaluation of change

Y_6 BVE, Belief in internal versus external determination of events

Y_7 BVF, Positive versus negative evaluation of deferred gratification

Y_8 Increased disrespect for law (Rundquist and Sletto)

Y_9 Disillusionment concerning the value of education

Y_{10} Economic conservatism

Y_{11} Feeling of anomia (Moon and McCann)

Y_{12} Feeling of anomis (McClosky and Schaar)

Y_{13} Self-criticism (Fitts)

Y_{14} Total positive self

Y_{15} Identity self

Y_{16} Self-satisfaction

Y_{17} Behavior self

Y_{18} Physical self

Y_{19} Moral-ethical self

Y_{20} Personal self

Y_{21} Family self

Y_{22} Social self

Y_{23} Defensive positive scale

Y_{24} General maladjustment scale

Y_{25} Psychosis scale

Y_{26} Personality disorder scale

Y_{27} Neurosis scale

Y_{28} Personality integration scale

Factor Analysis

Each scale was factor analyzed by using the principal component analysis. Following the suggestions of Kaiser (1960), factors with eigenvalues greater than one were retained and rotated orthogonally. The factor analysis was made on data obtained from 486 participants ar nonparticipants. However, this number was reduced to 343 for some of the scales due to (1) the characteristics of one group which exceeded the education level as defined for disadvantaged adults, (2) attrition of participants and nonparticipants during the instruction period, and (3) incomplete data for subjects.

Factor analyses for Rotter's, Haller's, Rundquist and Sletto's, Moon and McCann's, McClosky and Schaar's, and Fitts' scales have been completed and are available in Moore (1970). The results of the factor analysis for the I-E Scale (Rotter) were arrived at by using the split-half technique. Factor analysis of the first half yielded eight factors and the factor analysis of the second half produced nine factors. Comparing the factor analyses (all items and the two halves), one notes that no one factor on any of the three separate analyses contained similar items.

The results of the factor analysis of the I-E Scale and the relatively low reliability of .517 called into question the construct validity and the reliability of this measure for the study sample. The participant and nonparticipant responses were not consistent and appeared to be random in nature.

Factor analysis for the six scales making up the Haller Work Beliefs Checklist yields five unidimensional scales, i.e., BVA, BVB, BVC, BVD, and BVE. These scales measured 75 percent or more of the total variation in their respective analyses. The sixth scale, BVF, broke into three factors with the sum of these factors measuring 55 percent of the variation.

The Rundquist and Sletto (1936) scales for measuring the attitudes toward law, education and economic conservatism yield four factors when factor analyzed. The first factor (Factor I) accounted for 46, 48, and 42 percent of the total variance accounted for on the law, education, and economic conservatism scales, respectively. It was assumed that these scales measured what the authors (Rundquist and Sletto, 1936) purported that they measured. No attempt was made to separate and identify the other factors on the three scales.

The factor analysis of the Moon and McCann anomia measure resulted in the extraction of two factors accounting for 70 percent of the total scale variance. These findings were similar to those reported by Moon and McCann (1965) with Factor I identified as "world conditions" and Factor II identified as "individual conditions."

The McClosky and Schaar Anomia Scale yields one major factor accounting for 83 percent of the variation. Factor loadings were above .90 for all but one item on this scale.

The Tennessee Self-Concept Scale (TSCS) developed by Fitts (1965) is a multidimensional, 3 x 5 schema. The first dimension yields three measures; the second, five measures; the additional 10 items, one measure; and 20 other measures may be obtained by noting scoring variations in the responses.

The factor analysis on the TSCS for the study sample (N = 486) at the time of pretest yielded 30 factors that accounted for 65 percent of the total variance. The different factors accounted for the following amount of variation: Factor I, 13 percent; Factor II, 8 percent; Factor III, 4 percent; Factor IV, 3 percent; Factors V through XII, 2 percent; and Factors XIII through XXX, slightly over 1 percent.

The emergence of 30 factors is an indication of the complex nature of the TSCS. Nine of the 30 factors had only one item with a rotated factor loading of over .40. No attempt was made to interpret these nine factors. Upon examining the total 100 items, it is noted that 82 of these items have a rotated factor loading above the arbitrary value of .40 and can be assumed to be contributing to the factor formations.

Test-Retest Reliability

Test-retest reliability coefficients were calculated for each of the noncognitive measures for participants and nonparticipants. The reliability coefficients on the Survey of Opinions range from a high of .60 for participants on the education scale to a low of .05 for nonparticipants on the BVB scale. Reliability coefficients for the Tennessee Self-Concept Scales range from .60 for the Total Positive, Behavior and General Maladjustment scales for participants to .23 on the Social Self scale for nonparticipants. These data are summarized in Appendix Tables 1 and 2.

Change in Noncognitive Attributes from Pretest to Posttest for Participants and Nonparticipants

In this section, the means, standard deviations, and T values for the selected noncognitive measures are presented in Tables 2 and 3 to give the reader a perspective on the pretest to posttest changes in mean scores demonstrated by the two groups of disadvantaged adults compared to a norm group. The T values indicate that the study sample is similar to the norm group on the BVA, BVB, BVC, EDU, S-CRIT, and PER-S scales.

Summary of the Analysis of Data

There is no significant difference between participants and nonparticipants for any of the dependent variables (pretest-posttest difference for the selected noncognitive measures) as indicated by the one-way analysis of variance. Further, the "full" model least

Table 2. Means, standard deviations, and T values[a] for norm groups and the sample studied (N = 343) for the Survey of Opinions

Scale	Norm Group	N	Study Sample			
			Pretest		Posttest	
			Participant	Nonparticipant	Participant	Nonparticipant
I-E	8.50	1,000[b]	10.13 $\bar{x}$	11.09	10.54	10.81
	3.74		3.12 s.d.	3.55	3.36	3.82
			- 8.72 t	- 5.83	-10.14	- 5.11
BVA	6.6	433[c]	6.14	6.09	6.19	6.36
	1.20		1.45	1.34	1.33	1.40
			5.30	3.05	5.15	1.37
BVB	5.6	433	5.51	5.12	5.65	5.67
	1.66		1.49	1.44	1.58	1.83
			1.01	2.67	0.75	0.30
BVC	3.2	433	2.78	3.12	2.73	2.83
	1.04		1.18	1.30	1.18	1.34
			5.95	0.49	0.67	2.21
BVD	6.3	433	5.36	5.25	5.55	5.30
	0.94		1.44	1.55	1.36	1.49
			10.93	5.44	8.81	5.38
BVE	5.9	433	4.92	4.86	5.07	4.86
	1.49		1.51	1.49	1.58	1.63
			10.84	5.59	8.87	5.13
BVF	5.5	433	5.04	4.89	5.10	4.83
	1.13		1.16	1.23	1.27	1.15
			7.08	3.99	5.26	4.65

Table 2, continued.

Scale	Norm Group	N	Study Sample: Pretest Participant	Pretest Nonparticipant	Posttest Participant	Posttest Nonparticipant
Law	50.59[d] 49.39[e] (49.99)g	500[f]	61.72 8.65 -22.69	59.48 9.90 - 7.78	62.08 8.59 -23.52	61.03 10.13 - 8.69
Edu	50.29[a] 49.64[d] (49.96)	500	46.85 9.82 5.29	47.78 10.21 1.71	47.03 9.36 5.23	46.64 9.56 2.78
E-C	50.20[a] 50.13[d]	500	64.47 7.21 -33.10	64.75 6.45 -18.00	64.11 6.51 -35.83	65.05 6.56 -18.14
Moon-McCann Anomia	3.12 1.90	600[h]	3.49 1.58 - 3.97	3.62 1.69 - 5.00	3.12 1.66 0.00	3.55 1.75 - 4.17
McClosky-Schaar Anomia	--i	--i	6.36 1.80	6.20 1.96	5.37 1.98	5.45 2.03

[a] $t = \frac{\mu - \bar{x}}{s/n}$

[b] National Stratified Sample, Purdue Opinion Pool, 10th, 11th, 12th Grades (Rotter, 1966, p. 15).

[c] Lenawee County Michigan Sample (Watts, 1962).

[d] Males.

[e] Females.

[f] Rundquist and Sletto, 1936.

[g] Average of a and b.

[h] Data from Boyd and Morgan (1966), Project S-44.

[i] Data not available.

Table 3. Means, standard deviations and T values[a] for norm groups (N = 626) and the sample studied (N = 343) for the Tennessee Self Concept Scale

Scale	Norm Group[b]	Study Sample			
		Pretest		Posttest	
		Participant	Nonparticipant	Participant	Nonparticipant
S-CRIT	35.54	35.36 $\bar{x}$	36.12	34.76	35.61
	6.70	5.99 s.d.	5.94	6.27	7.24
		.50 t	- 0.78	2.09	- 0.77
T-P	345.57	328.03	325.00	328.18	325.62
	30.70	29.60	37.83	34.82	33.38
		9.89	4.40	8.34	4.79
IDEN-S	127.10	121.19	118.01	120.65	119.28
	9.96	12.62	16.27	14.01	13.82
		6.86	4.43	7.68	4.52
S-SAT	103.67	98.33	98.59	99.68	99.29
	13.79	11.31	15.86	13.57	13.17
		8.34	2.56	4.91	2.66
BEH-S	115.01	108.50	108.39	107.84	107.05
	11.22	11.82	13.27	13.62	11.88
		9.23	3.98	8.79	5.45
PHY-S	71.78	66.22	63.37	65.41	64.79
	7.67	7.82	9.66	8.79	9.29
		11.88	6.95	12.11	4.65
M-E-S	70.33	67.74	66.87	67.23	67.84
	8.70	7.91	9.95	9.66	9.62
		5.48	2.79	5.36	2.07
PER-S	64.55	63.36	63.91	64.09	62.51
	7.41	8.39	8.24	8.36	8.22
		6.17	0.63	0.92	1.96
FAM-S	70.83	66.35	65.98	66.69	66.09
	8.43	7.67	9.36	7.92	8.44
		9.76	4.14	8.73	4.49
SOC-S	68.14	64.34	64.86	64.76	64.37
	7.86	7.04	9.64	8.27	7.43
		9.03	2.73	6.83	4.05

Table 3, continued.

Scale	Norm Group[b]	Study Sample: Pretest: Participant	Study Sample: Pretest: Nonparticipant	Study Sample: Posttest: Participant	Study Sample: Posttest: Nonparticipant
DP	54.40	61.44	60.75	60.56	59.78
	12.38	12.24	14.34	13.68	12.39
		- 9.62	- 3.53	- 7.52	- 3.47
GM[c]	98.80	87.16	85.55	87.88	86.14
	9.15	9.23	12.56	10.79	10.66
		21.08	8.43	16.90	9.52
PSY	46.10	57.11	57.36	56.28	56.05
	6.49	7.34	7.32	8.00	7.86
		-25.08	-12.31	-21.25	-10.15
PD[c]	76.39	69.49	68.95	70.39	70.70
	11.72	10.27	11.09	11.80	11.81
		11.22	5.39	8.49	3.92
N[c]	84.31	79.03	77.83	78.85	77.44
	11.10	9.98	12.03	10.92	11.03
		8.84	4.98	8.36	4.98
PI	10.42	5.86	5.00	6.18	5.55
	3.88	3.55	3.19	3.70	3.58
		21.51	13.62	19.10	10.94

[a] $t = \frac{\mu - \bar{x}}{s / \sqrt{n}}$

[b] From Fitts (1965, p. 14).

[c] Scale reflected.

squares regression analysis failed to detect significant differences for the dependent variables. The "reduced" model least squares regression analysis did point out important variables associated with the selected dependent variable(s).

The discriminate analysis was able to distinguish between the two groups at the time of pretest and posttest. However, the discriminate analysis for this data set is not considered to be satisfactory for use as a decision-making tool in classifying disadvantaged adults according to their scores on noncognitive measures.

The remainder of this section contains the analysis of data on which the summaries are based. Supporting analyses cited in this section are found in the appendices. In addition, full model least squares regression analyses for each of the 28 dependent variables have been completed and are available in Moore (1970).

Internal-External Control of Environment

The F ratio for the I-E scale (Table 4) is not in the critical region; therefore, the hypothesis that the treatment effect is equal to zero is not rejected. By not rejecting the hypothesis, it is assumed that the analysis is not accounting for a significant source of variation which is in the error term (within groups variation).

Table 4. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Rotter Internal-External Scale

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_1 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev.
Participants	10.1290	3.1206	10.5412	3.3636
Nonparticipants	11.0937	3.5533	10.8125	3.8250

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	3579.9685		
Between groups	1	25.0324	25.0324	2.4014
Within groups (error)	341	3554.5360	10.4238	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the I-E Scale for the reduced model (Table 5) is in the critical region, indicating that variables X_2 and X_6 are significantly associated with the dependent variables I-E at the 0.05 level of significance with 2 and 340 degrees of freedom. From the data in Appendix Table 3, it is noted that the mean for the reported education level (X_6) of participants is 6.19, whereas the mean for nonparticipants is 6.85. The difference of .66, or two-thirds of a school year, may be accounting for the important association.

BVA: Belief that Work Is of Expressive Value versus Instrumental Value

The F ratio (0.8617) for the BVA scale (Table 6) is not in the critical region (3.84). Thus, the hypothesis that the treatment effect is equal to zero is not rejected. Therefore, it is assumed that the analysis is not accounting for a significant source of variation which is in the error term.

Table 5. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Rotter Internal-External Scale

Scale: I-E: Internal-External Control of Environment

Model: $Y(diff) = \alpha + B_6X_6 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_6 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	3579.5685		
Regression of Y on X_6 & X_2	2	66.8458	33.4229	3.2350
X_6	1	35.0612		
n X_2	1	31.7846		
Deviations	340	3512.7226	10.3315	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00; $F_{.05}$ with 1 and 341 df = 3.84.

$R^2 = 0.0186$

Model: $Y(diff) = 0.3362 + 0.1390\ X_6 - 0.7854\ X_2 + e$

Table 6. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the BVA: Belief that work is of expressive value versus instrumental value scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_2 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	6.1397	1.4513	6.1971	1.3332
Nonparticipants	6.0937	1.3418	6.3593	1.3957

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	895.8250		
Between groups	1	2.2582	2.2582	0.8617
Within groups (error)	341	893.5668	2.6204	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression model for the BVA scale is not in the critical region, indicating that none of the selected independent variables are significantly associated with the dependent variable (Table 7).

Table 7. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: BVA Scale

Scale: BVA: Belief that work is of expressive value versus instrumental value

Model: $Y(diff) = \alpha + B_3X_3 + B_2X_2 + e$

Significance level: .05

Hypothesis: $B_3 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	895.8250		
Regression of Y on X_3 and X_2	2	6.0180	3.0090	1.1497
X_3	1	2.6650		
X_2	1	3.3530		
Deviations	340	889.8070	2.6170	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00; $F_{.05}$ with 1 and 341 df = 3.84

$R^2 = 0.0067$

Model: $Y(diff) = -0.4355 + 0.0735\ X_3 + 0.2581\ X_2 + e$

BVB: Positive versus Negative
Evaluation of Structured Time

The F ratio for the BVB (Table 8) is not in the critical region, indicating that other independent variables may be significantly associated with the dependent variable. The variation associated with the independent variables is examined by using the least squares regression technique.

Table 8. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the BVB: Positive versus negative evaluation of structured time scale

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_3 = 0$

Means and standard deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	5.5197	1.4881	5.6523	1.5814
Nonparticipants	5.1250	1.4420	5.6718	1.8262

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	1286.8862		
Between groups	1	8.9337	8.9337	2.3838
Within groups (error)	341	1277.9526	3.747	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio (3.7035) for the BVB Scale (Table 9) for the reduced model is within the critical region, and the hypothesis that $B_5 = B_7 = 0$ is rejected. By partitioning the two variables into individual effects, it is noted that age (X_5) is significantly associated with the BVB Scale. The average age for participants and nonparticipants is 43 years. However, when the population is examined on the basis of four dichotomous variables (Appendix Table 36), race, participation, sex, and employment status, the mean age for the groups ranges from 31 to 62. The variation in age may be accounting for the association of age with structured time.

Table 9. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: BVB Scale

Scale: BVB: Positive versus negative evaluation of structured time

Model: $Y(diff) = \alpha + B_5X_5 + B_7X_7 + e$

Significance level: 0.05

Hypothesis: $B_5 = B_7 = 0$

Analysis of Variance

Source of Variation		df	Sum of Squares	Mean Squares	F Ratio
Total		342	1286.8862		
Regression of Y on X's, X_5 & X_7		2	27.4378	13.7189	3.7035
	X_5	1	20.7831		
	X_7	1	6.6547		
Deviations		340	1259.4484	3.7042	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00; $F_{.05}$ with 1 and 341 df = 3.84

$R^2 = 0.0213$

Model: $Y(diff) = -0.2580 + 0.0203\ X_5 - 0.3064\ X_7 + e$

BVC: Positive versus Negative
Evaluation of Physical Mobility

The F ratio for the BVC Scale (Table 10) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected. The variables which seemed to be associated with the dependent variable were examined by a reduced model. These data are summarized in Table 11.

The F ratio for the BVC Scale for the reduced model (Table 11) is in the critical region, and the hypothesis that the beta values are equal to zero is rejected. The North-Hatt Prestige Score (X_{12}) is not significant, and this is noted in Table 13, where the score average is 52 for both participants and nonparticipants. The participation variable (X_2) is significant, which may be explained by examining Appendix Table 37 for the multivariate analysis of variance for this scale. The majority of participants made a lower score on this scale at posttest than at pretest, indicating that they have a negative evaluation of physical mobility, i.e., they would be reluctant to move or seek a job in another location.

Table 10. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the BVC: Positive versus negative evaluation of physical mobility scale.

Model: $\cdots - e_i$
Significance Level: 0.05
Hypothesis: $T_4 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	2.7770	1.1817	2.7275	1.1817
Nonparticipants	3.1250	1.3032	2.8281	1.3399

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	731.8250		
Between groups	1	3.1682	3.1682	1.4826
Within groups (error)	341	728.6568	2.1368	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

Table 11. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: BVC Scale

Scale: BVC: Positive versus negative evaluation of physical mobility

Model: $Y(diff) = \alpha + B_{12}X_{12} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_{12} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	731.8250		
Regression of Y on X_{12} and X_2	2	14.4689	7.2344	3.4288
X_{12}	1	3.1682		
X_2	1	11.3007		
Deviations	340	717.3561	2.1098	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00; $F_{.05}$ with 1 and 341 df = 3.84

$R^2 = 0.0197$

Model: $Y(diff) = -1.2202 + 0.0264\ X_{12} - 0.2291\ X_2 + e$

BVD: Positive versus Negative Evaluation of Change

The F ratio for the BVD Scale (Table 12) does not lie within the critical region; therefore, the hypothesis that the treatment has no effect (is equal to zero) is not rejected.

Table 12. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the BVD: Positive Versus negative evaluation of change.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_5 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	5.3620	1.4424	5.5483	1.3638
Nonparticipants	5.2500	1.5532	5.2968	1.4872

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	906.1807		
Between groups	1	1.0131	1.0131	0.3816
Within groups (error)	341	905.1676	2.6544	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis (Table 13) of the BVD Scale is not in the critical region. The hypothesis that the beta values equal zero is not rejected. Reported education level (X_6) does account for more of the sum of squares than participation (X_2), but this amount is not statistically significant.

Table 13. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: BVD Scale

Scale: BVD: Positive versus negative evaluation of change

Model: $Y(diff) = \alpha + B_6X_6 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_6 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	906.1807		
Regression of Y on X's	2	9.1667	4.5833	1.7372
X_6	1	8.6633		
X_2	1	0.5034		
Deviations	340	897.6140	2.6382	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00; $F_{.05}$ with 1 and 341 df = 3.84

$R^2 = 0.0101$

Model: $Y(diff) = 0.6656 - 0.0613\ X_6 - 0.0985\ X_2 + e$

BVE: Belief in Internal versus
External Determination of Events

The F ratio for the BVE Scale (Table 14) is not in the critical region, and the hypothesis that the treatment has no effect is not rejected.

Table 14. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the BVE: Belief in internal versus external determination of events scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_6 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	4.9247	1.5142	5.0716	1.5783
Nonparticipants	4.8593	1.4892	4.8593	1.6317

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	928.0991		
Between groups	1	1.1242	1.1242	0.4135
Within groups (error)	341	926.9749	2.7184	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced model (Table 15) is in the critical region, indicating that these independent variables are significantly associated with the dependent variable. When the independent variables are partitioned into individual effects, it is apparent that participation (X_2) is not associated, whereas current employment status (X_7) is significantly associated with the dependent variable.

The related T test, summarized in Appendix Table 11, indicates that there is a significant difference for participants between pretest and posttest for those individuals who were employed full-time and those individuals not employed full-time. No significant differences were detected for nonparticipants.

Table 15. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: BVE Scale

Scale: BVE: Belief in internal versus external determination of events

Model: $Y(diff) = \alpha + B_7X_7 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_7 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	728.0991		
Regression of Y on X_7 and X_2	2	15.3747	7.6873	2.8636
X_7	1	15.2646		
X_2	1	0.1099		
Deviations	340	912.7243	2.6844	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0165$

Model: $Y(diff) = 0.7629 - 0.4327\ X_7 - 0.0467\ X_2 + e$

BVF: Positive versus Negative
Evaluation of Deferred Gratification

The F ratio for the BVF Scale (Table 16) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 16. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the BVF: Positive versus negative evaluation of deferred gratification scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_7 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	5.0394	1.1576	5.1003	1.2683
Nonparticipants	4.8906	1.2359	4.8281	1.1485

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	688.5072		
Between groups	1	0.7931	0.7931	0.3932
Within group (error)	341	687.5072	2.0167	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio (Table 17) for the reduced regression model of the BVF Scale is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected.

Summary for the Haller Work
Beliefs Checklist

The analyses of the Haller Work Beliefs Checklist scales are summarized in Table 18. According to the one-way analysis of variance model and the data set obtained for the Haller Work Beliefs Checklist, the author was unable to detect any significant differences for the treatment. The condition that no significant differences were detected indicates that the error term is inflated, containing random error plus bias. Thus, the assumption that e is normally and independently distributed with mean = 0 and variance = 0^2 does not hold. The error

Table 17. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: BVF Scale

Scale: BVF: Positive versus negative evaluation of deferred gratification

Model: $Y(diff) = \alpha + B_{13}X_{13} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_{13} = B_2 = 0$

Analysis of Variance

Source of Variation		df	Sum of Squares	Mean Squares	F Ratio
Total		342	688.5072		
Regression of Y on X_{13} and X_2		2	4.6721	2.3360	1.1614
	X_{13}	1	3.8789		
	X_2	1	0.7932		
Deviations		340	683.8351	2.0112	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00; $F_{.05}$ with 1 and 341 df = 3.84

$R^2 = 0.0067$

Model: $Y(diff) = -0.3727 + 0.0052\ X_{13} + 0.1551\ X_2 + e$

Table 18. Summary data on the analysis of variance techniques for the Haller Work Beliefs Checklist

Scale	One-Way ANOVA Ho: $T_i = 0$	Regression (Reduced) Bo: $B_i=B_j=\ldots=0$
BVA	Do not reject	Do not reject
BVB	Do not reject	Reject $B_5 = 0$
BVC	Do not reject	Reject $B_2 = 0$
BVD	Do not reject	Reject $B_6 = 0$
BVE	Do not reject	Reject $B_7 = 0$
BVF	Do not reject	Do not reject

variance was examined further by the use of least squares analysis technique to determine the association between the dependent variable and independent variables. The author was unable to detect any significant associations between the dependent and independent variables by using the full regression model. The full regression models for the Work Beliefs Checklist are available in Moore (1970). However, by using the reduced model, it was possible to identify variables which were associated with four of the noncognitive measures. Age (X_5) is associated with BVB: structured time; participation (X_2) with BVC: physical mobility; education (X_6) with BVD: change; and current employment status (X_7) with BVE: determination of events.

Increased Disrespect for Law

The F ratio for the Law Scale (Table 19) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

The F ratio for the reduced regression analysis (Table 20) for the Law Scale is in the critical region, and the hypothesis that the beta values are equal to zero is rejected. Both variable X_{10} (plans to receive more training for the job now holding) and variable X_{13} (treatment hours) are associated with the dependent variable. The related T test, summarized in Appendix Table 13 for the Law Scale indicates that variable X_{10} is not significantly different from the time of pretest to the time of posttest for participants or nonparticipants. However, variable X13 (treatment hours) is different for the two groups and does appear to have an effect on the participant's attitude toward law.

Table 19. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Rundquist and Sletto Scale: Increased disrespect for law.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_8 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	61.7204	8.6548	62.0824	8.5883
Nonparticipants	59.4843	9.9026	61.0312	10.1308

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	24807.3819		
Between groups	1	73.0852	73.0852	1.0075
Within groups (error)	341	24734.2966	72.5345	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

Table 20. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Law Scale

Scale: Increased disrespect for law

Model: $Y(diff) = \alpha + B_{10}X_{10} + B_{13}X_{13} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_{10} = B_{13} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	24807.3819		
Regression of Y on X_{10}, X_{13}, X_2	3	618.5905	206.1968	2.8897
X_{10}	1	302.5724		
X_{13}	1	267.5330		
X_2	1	48.4850		
Deviations	339	24188.7914	71.3533	

Critical Region: $F_{.05}$ with 3 and 339 df = 2.62; $F_{.05}$ with 1 and 339 df = 3.86

$R^2 = 0.0249$

Model: $Y(diff) = 2.1117 + 1.2531\ X_{10} - 0.0441\ X_{13} - 1.3788\ X_2 + e$

Disillusionment Concerning the Value of Education

The F ratio for the Education Scale (Table 21) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 21. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Rundquist and Sletto Scale: Disillusionment concerning the value of education.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_9 = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	46.8530	9.8157	47.0286	9.3612
Nonparticipants	47.7812	10.2096	46.6406	9.5574

Analysis of Variance

Source of Variation	df	Sum of Squares	Squares	F Ratio
Total	342	26356.3206		
Between groups	1	90.1920	90.1920	1.1709
Within groups (error)	341	26266.1286	77.0267	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced model (Table 22) of the Education Scale is not in the critical region, and the hypothesis that the beta values are equal to zero is not rejected. There does not appear to be any independent variable that is associated with the dependent variable for this data set.

Table 22. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Education Scale

Scale: Disillusionment with the value of education

Model: $Y(diff) = \alpha + B_1X_1 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	26356.3207		
Regression of Y on X_1, X_2	2	185.5949	92.7974	1.2055
X_1	1	95.4029		
X_2	1	90.1920		
Deviations	340	26170.7257	76.9727	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0070$

Model: $Y(diff) = 3.4955 - 1.2324\ X_1 - 1.1819\ X_2 + e$

Economic Conservatism

The F ratio for the Economic Conservatism Scale (Table 23) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 23. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Rundquist and Sletto Scale: Economic Conservatism.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{10} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	64.4659	7.2154	64.1111	6.5149
Nonparticipants	64.7500	6.4488	65.0468	6.5596

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	17891.3411		
Between groups	1	22.1107	22.1107	0.4219
Within groups (error)	341	17869.2303	52.4024	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced model (Table 24) for the Economic Conservatism Scale is in the critical region, and the hypothesis that the beta values are equal to zero is rejected. Both independent variables, treatment hours (X_{13}) and participation (X_2), are significantly associated with the dependent variable. Since participants were exposed to the basic education instruction and nonparticipants were not, it is reasonable to expect the number of treatment hours to be associated with the change in attitude from pretest to posttest.

Table 24. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Economic Conservatism Scale

Scale: Economic conservatism

Model: $Y(diff) = \alpha + B_{13}X_{13} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_{13} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	17891.3411		
Regression of Y on X_{13}, X_2	2	704.9216	352.4608	6.9727
X_{13}	1	468.5991		
X_2	1	236.3225		
Deviations	340	17186.4194	50.5482	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0394$

Model: $Y(diff) = 6.3853 - 0.0696\,X_{13} - 3.0442\,X_2 + e$

Summary of the Rundquist and Sletto Scales

The analyses of the Rundquist and Sletto Scales are summarized in Table 25. The one-way analysis of variance of the data set obtained for the three Rundquist and Sletto scales reveals that the author was unable to detect any significant differences for the treatment. The condition that no significant differences were detected indicates that the error term is inflated, containing random error plus bias. Thus, the assumption that e is normally and independently distributed with mean = 0 and variance = σ^2 does not hold. The error variance was examined further by the use of the least squares analysis technique to determine the association between the dependent variable and the selected independent variables. The author was unable to detect any significant associations between the dependent variables of law and education and the independent variables for the full model analysis. However, the full model for the economic conservatism scale indicates that some of the independent variables were associated with the dependent variable. The full regression models for the Rundquist and Sletto Scales are available in Moore (1970). By examining this relationship with the reduced regression model, independent variables X_{10} (plans to receive more training for the job now holding) and X_{13} (treatment hours) were significantly associated with the dependent variable. The reduced regression model indicated that variables X_{10} and X_{13} were associated with the response for the law scale. For the regression model and this data set, the author was unable to detect any significant associations between the dependent variable and the independent variables on the education scale.

Table 25. Summary data on the analysis of variance techniques for the Rundquist and Sletto Scales

Scale	One-Way ANOVA Ho: $T_i = 0$	Regression (Reduced) Ho: $B_i=B_j=\ldots=0$
Increased disrespect for law	Do not reject	Reject B_{10} 0 B_{13} 0
Disillusionment concerning the value of education	Do not reject	Do not reject
Economic conservatism	Do not reject	Reject B_{10} 0 B_{13} 0

Feeling of Anomia: Moon and McCann Scale

The F ratio for the one-way analysis of variance of the Moon and McCann Anomia Scale (Table 26) is not in the critical region and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 26. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Moon and McCann Anomia Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{11} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	3.4910	1.5774	3.1182	1.6654
Nonparticipants	3.6250	1.6949	3.5468	1.7541

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	1016.3615		
Between groups	1	4.5191	4.5191	1.5229
Within groups (error)	341	1011.8423	2.9672	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression model (Table 27) of the Moon and McCann Anomia Scale is in the critical region, and the hypothesis that the beta values for current employment status (X_7) and participation (X_2) are equal to zero is rejected. The related T test for the Moon and McCann Scale, summarized in Appendix Table 16, illustrates that there is a significant difference between pretest and posttest scores for participants who are not full-time employed.

Table 27. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Moon-McCann Anomia Scale

Scale: Feeling of anomia: Moon and McCann

Model: $Y(diff) = \alpha + B_7X_7 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_7 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	1016.3615		
Regression of Y on X_7 and X_2	2	26.0325	13.0162	4.4687
X_7	1	17.2709		
X_2	1	8.7616		
Deviations	340	990.3289	2.9127	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0256$

Model: $Y(diff) = -0.0910 - 0.5316\ X_7 + 0.4176\ X_2 + e$

Feeling of Anomia: McClosky and Schaar Scale

The F ratio for the one-way analysis of variance of the McClosky and Schaar Anomia Scale (Table 28) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 28. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the McClosky and Schaar Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{12} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	6.3655	1.7959	5.7347	1.9786
Nonparticipants	6.2031	1.9613	5.4531	2.0309

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	1599.7142		
Between groups	1	0.7393	0.7393	0.1576
Within groups (error)	341	1598.9749	4.6890	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced model (Table 29) of the McClosky and Schaar Anomia Scale is in the critical region, and the hypothesis that the beta values are equal to zero is rejected. Both variable X_4 (sex) and variable X_{10} (plans for receiving more training in the job now held) are associated with feelings of anomia as measured by the McClosky and Schaar Scale. The related T test, summarized in Appendix Table 17 reveals that participant males and females show a significant negative change in their feelings of anomia, indicating that they become less anomic over time. Nonparticipant females also made a significant negative change in their feelings of anomia for the same period while nonparticipant males did not. For variable X_{10} (plans for receiving more training in the job now held), it is noted that only participants who answered No to this question made a significant negative change in feelings of anomia from pretest to posttest. These individuals illustrate a significant change in anomia score, but they remain more anomic than those people answering Yes to this question. Further, the individuals answering No may perceive a need for additional job training at the time of participation in basic education instruction.

Table 29. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: McClosky and Schaar Anomia Scale

Scale: Feeling of anomia: McClosky and Schaar

Model: $Y(diff) = + B_4X_4 + B_{10}X_{10} + e$

Significance level: 0.05

Hypothesis: $B_4 = B_{10} = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	1599.7142		
Regression of Y on X_4 and X_{10}	2	48.9345	24.4672	5.3643
X_4	1	17.1116		
X_{10}	1	31.8228		
Deviations	340	1550.7797	4.5611	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0305$

Model: $Y(diff) = -0.6111 - 0.5116\ X_4 + 0.4791\ X_{10} + e$

Self Criticism

The F ratio for the one-way analysis of variance for the Self-Criticism Scale (Table 30) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 30. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Self-Criticism Scale.

Model: $Y = u + T_{13} + e$
Significance level: 0.05
Hypothesis: $T_{13} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	35.3620	5.9953	34.7598	6.2694
Nonparticipants	36.1250	5.9401	35.6093	7.2401

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	16893.2128		
Between groups	1	0.3897	0.3897	0.0078
Within groups (error)	341	16892.8230	49.5390	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Self-Criticism Scale (Table 31) is in the critical region, and the hypothesis that the beta values for race (X_1) and residence (X_3) are equal to zero is rejected. The related T test, summarized in Appendix Table 18 shows that black participants change significantly in the negative direction from the time of pretest to the time of posttest on their Self-Criticism scores, indicating that they have become less willing to accept criticism of themselves. No differences are detected for residence in Appendix Table 18.

Table 31. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Self-Criticism

Scale: Self-Criticism

Model: $Y(diff) = \alpha + B_1X_1 + B_3X_3 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_3 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	16893.2128		
Regression of Y on X_1, X_3, X_2	3	434.3666	144.7888	2.9821
X_1	1	171.9080		
X_3	1	246.8934		
X_2	1	15.5651		
Deviations	339	16458.8461	48.5511	

Critical Region: $F_{.05}$ with 3 and 339 df = 2.62

$R^2 = 0.0257$

Model: $Y(diff) = -0.3310 - 1.5749\ X_1 + 0.6121\ X_3 + 0.5351\ X_2 + e$

Total Positive Self

The F ratio for the one-way analysis of variance for the Total Positive Self Scale (Table 32) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 32. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Total Positive Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{14} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	328.0286	29.6027	328.1827	34.8176
Nonparticipants	325.0000	37.8296	325.6250	33.3802

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	343980.9154		
Between groups	1	11.5426	11.5426	0.0114
Within groups	341	343969.3728	1008.7078	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Total Positive Scale (Table 33) is not in the critical region, and the hypothesis that the beta values are equal to zero is not rejected for race (X_1) and participation (X_2). The hypothesis that the beta values are equal to zero is rejected for income (X_8) and social participation (X_{14}). The data summarized in Appendix Table 4 show there is an important difference between the participants' and nonparticipants' reported monthly income and their social participation scores.

Table 33. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Total Positive Self

Scale: Total Positive Self

Model: $Y(diff) = \alpha + B_1X_1 + B_8X_8 + B_{14}X_{14} + B_2X_2 + e$

Significance level: .05

Hypothesis: $B_1 = B_8 = B_{14} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	343980.9153		
Regression of Y on X_1, X_8, X_{14}, X_2	4	7987.3002	1996.8250	2.0087
X_1	1	288.7731		
X_8	1	4639.3605		
X_{14}	1	3038.0256		
X_2	1	21.1409		
Deviations	338	335993.6151	994.0639	

Critical Region: $F_{.05}$ with 4 and 338 df = 2.37

$R^2 = 0.0232$

Model: $Y(diff) = 15.1688 - 7.8194\ X_1 - 0.0194\ X_8 + 0.1950\ X_{14} + 0.6379\ X_2 + e$

Identify Self

The F ratio for the one-way analysis of variance for the Identity Self Scale (Table 34) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 34. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Identity Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{15} = 0$

Means and standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	121.1935	12.6237	120.6523	14.0165
Nonparticipants	118.0156	16.2661	119.2812	13.5723

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	79033.7142		
Between groups	1	169.9539	169.9539	0.7348
Within groups (error)	341	78863.7603	231.2720	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Identity Self Scale (Table 35) is in the critical region, and the hypothesis that the beta value for sex (X_4) is equal to zero is rejected. The related T test, summarized in Appendix Table 20 shows that male participants changed significantly in the negative direction from the time of pretest to the time of posttest. This change is indicative of a more realistic perception of one's identity.

Self-Satisfaction

The F ratio for the one-way analysis of variance for the Self-Satisfaction Scale (Table 36) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 35. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Identity Self

Scale: Identity Self

Model: $Y(diff) = \alpha + B_4X_4 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_4 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	79033.7142		
Regression of Y on X_4 and X_2	2	1431.3395	715.6697	3.1355
X_4	1	1324.7663		
X_2	1	106.5732		
Deviations	340	77602.3747	228.2422	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0181$

Model: $Y(diff) = -7.8955 + 3.8079\ X_4 + 1.3888\ X_2 + e$

Table 36. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Self-Satisfaction Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{16} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	98.3333	11.3095	99.6845	13.5723
Nonparticipants	98.5937	15.1863	99.2968	13.1712

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	57830.8046		
Between groups	1	21.8682	21.8682	0.1289
Within groups (error)	341	57808.9364	169.5276	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Self-Satisfaction Scale (Table 37) is in the critical region, and the hypothesis that the beta values for income (X_8) and social participation (X_{14}) are equal to zero is rejected. The related T test, summarized in Appendix Table 21, shows that participants who are not employed full-time increase in self-satisfaction scores over time. This increase represents an improvement in the individual's acceptance of self. Also, important differences are noted in Appendix 4 for participants and nonparticipants regarding their reported monthly income (X_8) and social participation scores (X_{14}).

Table 37. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Self Satisfaction

Scale: Self-Satisfaction

Model: $Y(diff) = \alpha + B_1X_1 + B_8X_8 + B_{14}X_{14} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_8 = B_{14} = B_2 = 0$

Analysis of Variance

Source of Variation		df	Sum of Squares	Mean Squares	F Ratio
Total		342	57830.8046		
Regression of Y on X_1, X_8, X_{14}, X_2		4	2349.8509	587.4627	3.5789
	X_1	1	100.7791		
	X_8	1	1151.2732		
	X_{14}	1	1074.1671		
	X_2	1	23.6315		
Deviations		338	55480.9537	164.1448	

Critical Region: $F_{.05}$ with 4 and 338 df = 2.37

$R^2 = 0.0406$

Model: $Y(diff) = 10.2855 - 4.2380\ X_1 - 0.0101\ X_8 + 0.1113\ X_{14} - 0.6744\ X_2 + e$

Behavior Self

The F ratio for the one-way analysis of variance for the Behavior Self Scale (Table 38) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 38. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Behavior Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{17} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	108.5017	11.8190	107.8458	13.6242
Nonparticipants	108.3906	13.2684	107.0468	11.8876

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	50778.0349		
Between groups	1	24.6297	24.6297	0.1654
Within groups (error)	341	50753.4052	148.8369	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Behavior Self Scale (Table 39) is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected.

Physical Self

The F ratio for the one-way analysis of variance for the Physical Self Scale (Table 40) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

The F ratio for the reduced regression analysis for the Physical Self Scale (Table 41) is not in the critical region, and the hypothesis that the beta value for race (X_1) is equal to zero is not rejected. The related T test for participants and nonparticipants is summarized in Appendix Table 23. This table shows that male participants, full-

Table 39. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Behavior Self

Scale: Behavior Self

Model: $Y(diff) = \alpha + B_8X_8 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_8 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	50778.0349		
Regression of Y on X_8, X_2	2	378.3647	189.1823	1.2762
X_8	1	304.5094		
X_2	1	73.8553		
Deviations	340	50399.6702	148.2343	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0074$

Model: $Y(diff) = 2.2759 - 0.0052\ X_8 - 1.1743\ X_2 + e$

Table 40. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Physical Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{18} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	66.2258	7.8251	65.4086	8.7928
Nonparticipants	63.3750	9.6650	64.7968	9.2893

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	27760.2798		
Between groups	1	260.9930	260.9930	3.2363
Within groups (error)	341	27499.2868	80.6430	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

Table 41. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Moral-Ethical Self

Scale: Physical Self

Model: $Y(diff) = \alpha + B_1X_1 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	27760.2798		
Regression of Y on X_1 and X_2	2	370.2538	185.1269	2.2980
X_1	1	57.6059		
X_2	1	312.6479		
Deviations	340	27390.0260	80.5589	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0133$

Model: $Y(diff) = -1.1236 - 1.1869\ X_1 + 2.3631\ X_2 + e$

time employed participants, and participants answering No for the question "Do you plan to receive more training for the job you now have?" make a negative shift in their Physical Self Scores from the time of pretest to the time of posttest. Nonparticipants who answer Yes to the question "Do you plan to prepare for another job?" made a positive shift in their Physical Self scores over the testing period. Participants have become more critical of the perception of their physical selves, whereas non-participants have become less critical.

Moral-Ethical Self

The F ratio for the one-way analysis of variance for the Moral-Ethical Self Scale (Table 42) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 42. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Moral-Ethical Self.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{19} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	67.7383	7.9099	67.2293	9.6629
Nonparticipants	66.8750	9.9530	67.8437	9.6184

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	28505.3410		
Between groups	1	113.6760	113.6760	1.3653
Within groups	341	28391.6650	83.2600	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Moral-Ethical Self Scale (Table 43) is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected.

Table 43. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Moral-Ethical Self

Scale: Moral-Ethical Self

Model: $Y(diff) = \alpha + B_{14}X_{14} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_{14} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	28505.3411		
Regression of Y on X_{14} and X_2	2	385.0299	192.5149	2.3276
X_{14}	1	230.6055		
X_2	1	154.4244		
Deviations	340	28120.3112	82.7067	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0135$

Model: $Y(diff) = -3.3915 + 0.0550\ X_{14} + 1.6625\ X_2 + e$

Personal Self

The F ratio for the one-way analysis of variance for the Personal Self Scale (Table 44) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

The F ratio for the reduced regression analysis of the Personal Self Scale (Table 45) is not in the critical region. The hypothesis that the beta values for race (X_1), residence (X_3), and participation (X_2) are equal to zero is not rejected.

Table 44. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Personal Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{20} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	63.3620	8.3954	64.0896	8.3620
Nonparticipants	63.9062	8.2437	62.5156	8.2192

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	26598.1107		
Between groups	1	233.5789	233.5789	3.0211
Within groups (error)	341	26365.5418	77.3183	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

Table 45. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Personal Self

Scale: Personal Self

Model: $Y(diff) = \alpha + B_1X_1 + B_3X_3 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_3 = B_2 = 0$

Analysis of Variance

Source of Variation		df	Sum of Squares	Mean Squares	F Ratio
Total		342	26598.1107		
Regression of Y on X_1, X_3 and	X_2	3	480.4803	160.1601	2.0788
	X_1	1	33.1857		
	X_3	1	228.4208		
	X_2	1	218.8738		
Deviations		339	26117.6304	77.0431	

Critical Region: $F_{.05}$ with 3 and 339 df = 2.67

$R^2 = 0.0180$

Model: $Y(diff) = 5.8386 - 0.6232\ X_1 - 0.6598\ X_3 - 2.0066\ X_2 + e$

Family Self

The F ratio for the one-way analysis of variance for the Family Self Scale (Table 46) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 46. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Family Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{21} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	66.3548	7.6768	66.6953	7.9192
Nonparticipants	65.9843	9.3579	66.0937	8.4397

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	23657.6676		
Between groups	1	2.7809	2.7809	0.0400
Within groups (error)	341	23654.8867	69.3691	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Family Self Scale (Table 47) is not in the critical region, and the hypothesis that the beta values for age (X_5) and participation (X_2) are equal to zero is not rejected. The hypothesis that the beta value for X_8 (monthly income) is equal to zero is rejected. The related T test, summarized in Appendix Table 26, shows a significant difference between the monthly income (X_8) reported for participants and nonparticipants.

Table 47. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Family Self

Scale: Family Self

Model: $Y(diff) = a + B_5X_5 + B_8X_8 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_5 = B_8 = B_2 = 0$

Analysis of Variance

Source of Variation		df	Sum of Squares	Mean Squares	F Ratio
Total		342	23657.6676		
Regression of Y on X_5, X_8, and	X_2	3	469.4438	156.4812	2.2876
	X_5	1	168.6162		
	X_8	1	281.1079		
	X_2	1	19.7197		
Deviations		339	23188.2238	68.4018	

Critical Region: $F_{.05}$ with 3 and 339 df = 2.60

$R^2 = 0.0198$

Model: $Y(diff) = 5.8483 - 0.0735\ X_5 - 0.0051\ X_8 - 0.6102\ X_2 + e$

Social Self

The F ratio for the one-way analysis of variance for the Social Self Scale (Table 48) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 48. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Social Self Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{22} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	64.3476	7.0372	64.7598	8.2694
Nonparticipants	64.8593	9.6409	64.3750	7.4268

Source of Variation	df	Sum of Squares	Squares	F Ratio
Total	342	22657.4285		
Between groups	1	41.8456	41.8456	0.6309
Within groups (error)	341	22615.5829	66.3213	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Social Self Scale (Table 49) is in the critical region, and the hypothesis that the beta values for race (X_1), sex (X_4), social participation scores (X_{14}), and participation (X_2) are equal to zero is rejected. The T test (Appendix Table 27) for selected dichotomous variables shows that there is a significant difference for Social Self scores over time for both participants and nonparticipants who answer No to the question "Do you have plans for continuing your own education?"

It is noted that there are two variables which show T values in the critical region at the 0.10 level of significance. White (X_1) participants change in the positive direction for the Social Self Scale over time. Nonparticipants who answered No to the question (X_{10}) "Do you plan to receive more training for the job you now have?" show a change in the negative direction for the Social Self Scale from the time of pretest to the time of posttest.

Table 49. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Social Self

Scale: Social Self

Model: $Y(diff) = \alpha + B_1X_1 + B_4X_4 + B_{13}X_{13} + B_{14}X_{14} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 + B_4 + B_{13} + B_{14} + B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	22657.4285		
Regression of Y on $X_1, X_4, X_{13}, X_{14}, X_2$	5	1090.9107	218.1821	3.4093
X_1	1	185.2914		
X_4	1	290.3816		
X_{13}	1	38.4053		
X_{14}	1	293.8538		
X_2	1	282.9786		
Deviations	337	21566.5178	63.9956	

Critical Region: $F_{.05}$ with 5 and 337 df = 2.21

$R^2 = 0.0481$

Model: $Y(diff) = 5.7279 - 2.5438\ X_1 + 2.3034\ X_4 - 0.0495\ X_{13} + 0.0589\ X_{14} - 3.1858\ X_2 + e$

Participants change in the positive direction, whereas nonparticipants change in the negative direction. A positive or negative change within the normal range of 59-87 is indicative of a perception of adequacy and worth in social interaction.

Social participation scores (X_{14}) are summarized in Appendix Table 3. It is noted that participants score significantly higher than nonparticipants on the Social Participation Scale.

Defensive Positive

The F ratio for the one-way analysis of variance for the Defensive Positive Scale (Table 50) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 50. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Defensive Positive Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{23} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	61.4372	12.2378	60.5591	13.6843
Nonparticipants	60.7500	14.3361	59.7812	12.3949

Analysis of Variance

Source of Variation	df	Sum of Squares	Squares	F Ratio
Total	342	61572.2215		
Between groups	1	0.4274	0.4274	0.0023
Within groups (error)	341	61571.7941	180.5624	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Defensive Positive Scale (Table 51) is in the critical region, and the hypothesis that the beta values for residence (X_3) and income (X_8) are equal to zero is rejected. It is noted in Appendix Table 13 that the mean reported monthly income for participants is over $100 more than that of the nonparticipants. The related T test, summarized in Appendix Table 28, shows an important difference for rural nonparticipants, indicating that their DP scores decreased over time.

Table 51. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Defensive Positive

Scale: Defensive Positive

Model: $Y(diff) = \alpha + B_1X_1 + B_3X_3 + B_6X_6 + B_8X_8 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_3 = B_6 = B_8 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	61572.2215		
Regression of Y on X_1, X_3, X_6, X_8, X_2	5	2266.2582	453.2516	2.5755
X_1	1	290.3494		
X_3	1	882.2625		
X_6	1	145.3355		
X_8	1	859.2830		
X_2	1	89.0275		
Deviations	337	59305.9633	175.9820	

Critical Region: $F_{.05}$ with 5 and 337 df = 2.21

$R^2 = 0.0368$

Model: $Y(diff) = 12.1813 - 3.9794\ X_1 - 1.2455\ X_3 + 0.3509\ X_6 - 0.0092\ X_8 - 1.3255\ X_2 + e$

General Maladjustment

The F ratio for the one-way analysis of variance for the General Maladjustment Scale (Table 52) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 52. Means, standard deviations and one way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: General Maladjustment Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{24} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	87.1648	9.9238	87.8817	10.7921
Nonparticipants	85.5468	12.5596	86.1406	10.6605

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	34242.8571		
Between groups	1	0.7888	0.7888	0.0078
Within groups (error)	341	34242.0683	100.4166	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the General Maladjustment Scale (Table 53) is not in the critical region. The hypothesis that the beta values for social participation scores (X_{14}) and participation (X_2) are equal to zero is not rejected.

Table 53. Least squares analysis of variance of the differences between pretest and posttest regressed on a reduced number of independent variables: General Maladjustment

Scale: General Maladjustment

Model: $Y(diff) = \alpha + B_{14}X_{14} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_{14} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	34242.8571		
Regression of Y on X_{14} and X_2	2	381.8772	190.9386	1.9172
X_{14}	1	381.1122		
X_2	1	0.7650		
Deviations	340	33860.9789	99.5911	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0111$

Model: $Y(diff) = -0.8339 + 0.0646\ X_{14} + 0.1170\ X_2 + e$

Psychosis

The F ratio for the one-way analysis of variance for the Psychosis Scale (Table 54) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 54. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Psychosis Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{25} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	57.1111	7.3390	56.2831	8.0059
Nonparticipants	57.3593	7.3254	56.0468	7.8647

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	21887.7142		
Between groups	1	12.2223	12.2223	0.1905
Within groups (error)	341	21875.4919	64.1510	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis of the Psychosis Scale (Table 55) is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected

Personality Disorder

The F ratio for the one-way analysis of variance for the Personality Disorder Scale (Table 56) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 55. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Psychosis

Scale: Psychosis

Model: $Y(diff) = \alpha + B_3X_3 + B_4X_4 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_3 = B_4 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	21887.7142		
Regression of Y on X_3, X_4, X_2	3	326.2003	108.7334	1.7095
X_3	1	171.1220		
X_4	1	114.2228		
X_2	1	40.8555		
Deviations	339	21561.5139	63.6032	

Critical Region: $F_{.05}$ with 3 and 339 df = 2.60

$R^2 = 0.0149$

Model: $Y(diff) = 3.6640 - 0.5919\ X_3 - 1.0920\ X_4 - 0.8701\ X_2 + e$

Table 56. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Personality Disorder Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{26} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	69.4910	10.2728	70.3942	11.8036
Nonparticipants	68.9531	11.0932	70.7031	11.8115

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	41421.7142		
Between groups	1	37.3271	37.3271	0.3075
Within groups (error)	341	41384.3871	121.3618	

Critical Region: $F_{.05}$ with 1 and 341 df + 3.84

The F ratio for the reduced regression analysis for the Personality Disorder Scale (Table 57) is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected.

Neurosis

The F ratio for the one-way analysis of variance for the Neurosis Scale (Table 58) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 57. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Personality Disorder

Scale: Personality Disorder

Model: $Y(diff) = \alpha + B_8X_8 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_8 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	41421.7142		
Regression of Y on X_8 and X_2	2	334.8801	167.4400	1.3855
X_8	1	331.3119		
X_2	1	3.5682		
Deviations	340	41086.8341	120.8436	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0080$

Model: $Y(diff) = 2.2657 - 0.0048\ X_8 + 0.2581\ X_2 + e$

Table 58. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Neurosis Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{27} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	79.0322	9.9842	78.8494	10.9248
Nonparticipants	79.8281	12.0271	77.4375	11.0810

Analysis of Variance

Source of Variation	df	Sum of Squares	Squares	F Ratio
Total	342	43801.1603		
Between groups	1	2.2485	2.2485	0.0175
Within groups (error)	341	43798.9118	128.4425	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Neurosis Scale (Table 59) is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected.

Table 59. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Neurosis

Scale: Neurosis

Model: $Y(diff) = \alpha + B_6X_6 + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_6 = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	43801.1603		
Regression of Y on X_6 and X_2	2	232.7885	116.3942	0.9083
X_6	1	232.0713		
X_2	1	0.7172		
Deviations	340	43568.3718	128.1422	

Critical Region: $F_{.05}$ with 2 and 340 df = 3.00

$R^2 = 0.0053$

Model: $Y(diff) = -2.1597 + 0.3279 - 0.1133 + e$

Personality Integration

The F ratio for the one-way analysis of variance for the Personality Integration Scale (Table 60) is not in the critical region, and the hypothesis that the treatment effect is equal to zero is not rejected.

Table 60. Means, standard deviations and one-way analysis of variance of the difference between pretest scores and posttest scores for participants and nonparticipants on the Fitts TSCS: Personality Integration Scale.

Model: $Y_i = u + T_i + e_i$
Significance level: 0.05
Hypothesis: $T_{28} = 0$

Means and Standard Deviations:	Pretest		Posttest	
	Mean	Std Dev	Mean	Std Dev
Participants	5.8602	3.5550	6.1827	3.6970
Nonparticipants	5.0000	3.1872	5.5468	3.5765

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	4637.4460		
Between groups	1	2.6189	2.6189	0.1926
Within groups (error)	341	4634.8271	13.5918	

Critical Region: $F_{.05}$ with 1 and 341 df = 3.84

The F ratio for the reduced regression analysis for the Personality Integration Scale (Table 61) is not in the critical region. The hypothesis that the beta values are equal to zero is not rejected.

The one-way analysis of variance technique for the difference between pretest scores and posttest scores of the noncognitive attribute measures was unable to detect any significant differences between participants and nonparticipants for this data set. The fact that no significant differences were found indicates that the error term is inflated and contains random error (e) plus bias. Thus, the assumption that the error is normally and independently distributed with mean = 0 and variance = 0^2 does not hold for this data set. The error variation was examined further by the use of the least squares analysis technique to determine the association between the dependent variable and the selected independent variables.

Table 61. Least squares analysis of variance for the difference between pretest and posttest regressed on a reduced number of independent variables: Personality Integration

Scale: Personality Integration

Model: $Y(diff) = \alpha + B_1X_1 + B_6X_6 + B_{13}X_{13} + B_2X_2 + e$

Significance level: 0.05

Hypothesis: $B_1 = B_6 = B_{13} = B_2 = 0$

Analysis of Variance

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio
Total	342	4637.4460		
Regression of Y on X_1, X_6, X_{13}, X_2	4	71.7411	17.9352	1.3277
X_1	1	11.4370		
X_6	1	16.4228		
X_{13}	1	27.3726		
X_2	1	16.5087		
Deviations	338	4565.7049	13.5080	

Critical Region: $F_{.05}$ with 4 and 338 df = 2.37

$R^2 = 0.0154$

Model: $Y(diff) = 1.2192 + 0.7501\ X_1 - 0.0817\ X_6 - 0.0171\ X_{13} - 0.7696\ X_2 + e$

The full model regression analyses (Moore, 1970, Appendix Tables 48-75) were unable to detect any independent variables which were significantly associated with the dependent variable. However, by using a reduced regression model, it was possible to detect several independent variables that were associated with eight of the Tennessee Self-Concept Scales. Reported monthly income (X_8) was found to be associated with the Total Positive, Self-Satisfaction, Family Self, and Defensive Positive Scales. Sex (X_4) was associated with the Identity Self and Social Self Scales. Race (X_4) was associated with the Self-Criticism and Social Self Scales. Participation (X_2) was associated with the Personal Self and Social Self Scales. Residence (X_3) was associated with the Self-Criticism and Defensive Positive Scales. Social Participation Scores (X_{14}) was associated with the Total Positive, Self-Satisfaction, and Social Self Scales.

Summary of the Tennessee Self-Concept Scales

The different analyses for the Tennessee Self-Concept Scales are summarized in Table 62.

Multivariate Discriminatory Analysis

Fisher (1936) and Mahalonobis (cited by Cramer and Bock, 1966) have proposed that the discriminate function be used as a method for examining information from a large number of correlated variables to classify subjects into one of two groups to which they must belong. In this study, the discriminate analysis technique was utilized to classify subjects into two mutually exclusive groups, participants and nonparticipants, based on their scores for selected dependent variables.

The third research question of interest was: can ABE participants and nonparticipants be differentiated by scores on the 28 noncognitive attributes? If the scores do discriminate, then it will be determined just how well they do serve to classify disadvantaged adults as basic education participants or nonparticipants (validation). Multivariate discriminatory analysis was calculated both at the time of the pretest and at the time of the posttest.

The 28 selected noncognitive variables, representing the instruments administered in 1969, were used to differentiate between the basic education participants and nonparticipants. The 28 measurements were as follows:

Table 62. Summary of selected analyses for the Tennessee Self-Concept Scales

Scale	One Way ANOVA	Least Squares Regression Analysis	
		Full Model	Reduced Model
	$Ho: T_i = 0$	$Ho: B_1 = B_2 = \ldots B_{14} = 0$	$B_1 = B_2 = \ldots B_{14} = 0$
Self-Crit.	Do not reject	Do not reject	$B_1 > 0$ $B_3 > 0$
Total Pos.	Do not reject	Do not reject	$B_8 > 0$ $B_{14} > 0$
Ident. Self	Do not reject	Do not reject	$B_4 > 0$
Self-Satis.	Do not reject	Do not reject	$B_8 > 0$ $B_4 > 0$
Behav. Self	Do not reject	Do not reject	Do not reject
Phys. Self	Do not reject	Do not reject	$B_2 > 0$
M-E Self	Do not reject	Do not reject	Do not reject
Personal Self	Do not reject	Do not reject	Do not reject
Family Self	Do not reject	Do not reject	$B_8 > 0$
Social Self	Do not reject	Do not reject	$B_1 > 0$ $B_4 > 0$ $B_{14} > 0$ $B_2 > 0$
Defensive P.	Do not reject	Do not reject	$B_3 > 0$ $B_8 > 0$
Gen'l. Madj.	Do not reject	Do not reject	Do not reject
Psychosis	Do not reject	Do not reject	Do not reject
Per. D'oder	Do not reject	Do not reject	Do not reject
Neurosis	Do not reject	Do not reject	Do not reject
Per. Integ.	Do not reject	Do not reject	Do not reject

X_1, internal-external control of environment (I-E);

X_2, belief that work is of expressive value vs. instrumental value (BVA);

X_3, positive vs. negative evaluation of structured time (BVB);

X_4, positive vs. negative evaluation of physical mobility (BVC);

X_5, positive vs. negative evaluation of change (BVD);

X_6, belief in internal vs. external determination of events (BVE);

X_7, positive vs. negative evaluation of deferred gratification (BVF);

X_8, increased disrespect for law (LAW);

X_9, disillusionment concerning the value of education (EDU);

X_{10}, economic conservatism (ECON);

X_{11}, feeling of anomia--Moon-McCann (MMA);

X_{12}, feeling of anomia--McClosky and Schaar (MSB);

X_{13}, self-criticism (S-Crit);

X_{14}, total positive self (T-P);

X_{15}, identity self (IDEN-S);

X_{16}, self-satisfaction (S-SAT);

X_{17}, behavior self (BEH-S);

X_{18}, physical self (PHY-S);

X_{19}, moral-ethical self (M-E-S);

X_{20}, personal self (PER-S);

X_{21}, family self (FAM-S);

X_{22}, social self (SOC-S);

X_{23}, defensive positive scale (DP);

X_{24}, general maladjustment scale (GM);

X_{25}, psychosis scale (PSY);

X_{26}, personality disorder scale (PD);

X_{27}, neurosis scale (N);

X_{28}, personality integration scale (PI).

The means and standard deviations at the time of the pretest show that the participants had a more positive score on 16 of the 28 noncognitive attributes and were also more homogeneous on 20 of the 28 noncognitive attributes (Table 63). The nonparticipants had more positive scores on 10 variables: BVC (positive vs. negative evaluation of physical mobility), LAW (respect for law), MSB (feeling of anomia), S-CRIT (self-criticism), S-SAT (self-satisfaction), PER-S (personal-self), SOC-S (social self), GM (general maladjustment), PD (personality disorders), and N (neurosis). For the variables I-E, EDU, ECON, MMA, MSB, GM, PD and N, a lower score is a more positive score.

The pretest scores were subjected to the analysis of variance, and the results are reported in Appendix Table 34. The results of the analysis of variance test indicated that there was a significant difference ($P < .05$) for the noncognitive variables I-E, BVC, and PHY. The means for I-E for participants were significantly more internal. The nonparticipants had a more positive attitude toward physical mobility (BVC) but were significantly lower on their self-concept of physical self (PHY).

Table 63. Variates, means, and standard deviations of pretest scores on the 28 attributes

Variate	Participants N=279		Nonparticipants N=64		Total N=343	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
X_1, I-E	10.13	3.12	11.09	3.55	10.31	3.22
X_2, BVA	6.14	1.45	6.09	1.34	6.13	1.43
X_3, BVB	5.52	1.49	5.12	1.44	5.45	1.48
X_4, BVC	2.78	1.18	3.13	1.30	2.84	1.21
X_5, BVD	5.36	1.44	5.25	1.55	5.34	1.46
X_6, BVE	4.92	1.51	4.86	1.49	4.91	1.51
X_7, BVF	5.04	1.16	4.89	1.24	5.01	1.17
X_8, LAW	61.72	8.65	59.48	9.90	61.30	8.93
X_9, EDU	46.85	9.82	47.78	10.21	47.02	9.88
X_{10}, ECON	64.46	7.22	64.75	6.45	64.52	7.07
X_{11}, MMA	3.49	1.58	3.62	1.69	3.52	1.60
X_{12}, MSB	6.43	1.80	6.20	1.96	6.34	1.82
X_{13}, S-CRIT	35.36	5.99	36.12	5.94	35.50	5.98
X_{14}, T-P	328.03	29.60	325.00	37.83	327.46	31.26
X_{15}, IDEN-S	121.19	12.62	118.02	16.27	120.60	13.41
X_{16}, S-SAT	98.33	11.31	98.59	15.19	98.38	12.08
X_{17}, BEH-S	108.50	11.82	108.39	13.27	108.48	12.08
X_{18}, PHY-S	66.22	7.82	63.38	9.66	65.69	8.26
X_{19}, M-E-S	67.74	7.91	66.88	9.95	67.58	8.32
X_{20}, PER-S	63.36	8.40	63.90	8.24	63.46	8.36
X_{21}, FAM-S	66.35	7.68	65.98	9.36	66.28	8.00
X_{22}, SOC-S	64.35	7.04	64.86	9.64	64.44	7.58
X_{23}, DF	61.44	12.24	60.75	14.34	61.31	12.64
X_{24}, GM	87.16	9.92	85.65	12.56	86.86	10.46
X_{25}, PSY	57.11	7.34	57.36	7.32	57.16	7.33
X_{26}, PD	69.49	10.27	68.95	11.09	69.39	10.42
X_{27}, N	79.03	9.98	77.83	12.03	78.81	10.39
X_{28}, PI	5.86	3.56	5.00	3.19	5.70	3.50

At the time of the posttest, the participants obtained a more positive mean score on 20 of the 28 and were more homogeneous on 21 of the 28 variables (Table 64). Four of the eight mean scores (Table 64) for which the nonparticipants had more positive scores at the time of posttest also had more positive scores at the time of the pretest--BVC, LAW, MSB, GM. However, the results of the analysis of variance test for these scores (Appendix Table 35) did not produce significant F ratios.

The noncognitive variables BVF, T-P, and IDEN-S did not discriminate between the two groups. Therefore, they are not included in Table 65. The means for the variable physical self were 66.22 for the participants and 63.38 for the nonparticipants. The F ratio for the analysis of variance computed for the physical self scores between participants and nonparticipants was 6.30 ($P < .05$, Appendix Table 34). Of the next four variables in Steps 2, 3, 4, and 5 (S-SAT, LAW, I-E, and BVC, respectively), BVC and I-E had F ratios significant at the .05 level and LAW at the .10 level. Differences in S-SAT scores were not significant (Appendix Table 34).

Results of the multivariate discriminatory analysis for the posttest are summarized in Table 66. The F ratios at the 0.05 level of significance are in the critical region for the first 18 steps. At Step 18, 173 participants and 43 nonparticipants were classified correctly. However,

Table 64. Variates, means, and standard deviations of post-test scores on the 28 attributes

Variate	Participants N=279		Nonparticipants N=64		Total N=343	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
X_1, I-E	10.54	3.36	10.81	3.82	10.59	3.45
X_2, BVA	6.20	1.33	6.36	1.40	6.23	1.34
X_3, BVB	5.65	1.58	5.67	1.83	5.66	1.63
X_4, BVC	2.73	1.17	2.83	1.34	2.75	1.21
X_5, BVD	5.55	1.36	5.30	1.49	5.50	1.39
X_6, BVE	5.07	1.58	4.86	1.63	5.03	1.59
X_7, BVF	5.07	1.27	4.83	1.45	5.05	1.25
X_8, LAW	62.08	8.59	61.03	10.13	61.89	
X_9, EDU	47.03	9.36	46.64	9.56	46.96	9.38
X_{10}, ECON	64.11	6.51	65.05	6.56	64.29	6.52
X_{11}, MMA	3.12	1.66	3.55	1.75	3.20	1.69
X_{12}, MSB	5.73	1.98	5.45	2.03	5.68	1.99
X_{13}, S-CRIT	34.76	6.27	35.61	7.24	34.92	6.46
X_{14}, T-P	328.18	34.82	325.62	33.38	327.70	34.52
X_{15}, IDEN-S	120.65	14.02	110.28	13.82	120.40	13.97
X_{16}, S-SAT	99.68	13.57	99.30	13.17	99.61	13.48
X_{17}, BEH-S	107.84	13.62	107.05	11.89	107.70	13.30
X_{18}, PHY-S	65.41	8.79	64.80	9.29	65.29	8.88
X_{19}, M-E-S	67.23	9.62	67.84	9.66	67.34	9.62
X_{20}, PER-S	64.09	8.22	62.52	8.36	63.80	8.35
X_{21}, FAM-S	66.70	8.44	66.09	7.91	66.58	8.00
X_{22}, SOC-S	64.76	7.42	64.38	8.26	64.68	8.11
X_{23}, DP	60.56	12.39	59.78	13.68	60.41	13.44
X_{24}, GM	87.88	10.66	86.14	10.79	87.56	10.77
X_{25}, PSY	56.28	.86	56.05	8.00	56.24	7.97
X_{26}, PD	70.39	11.81	70.70	11.80	70.45	11.79
X_{27}, N	78.85	11.08	77.43	10.92	78.59	10.95
X_{28}, PI	6.18	3.58	5.55	3.70	6.06	3.68

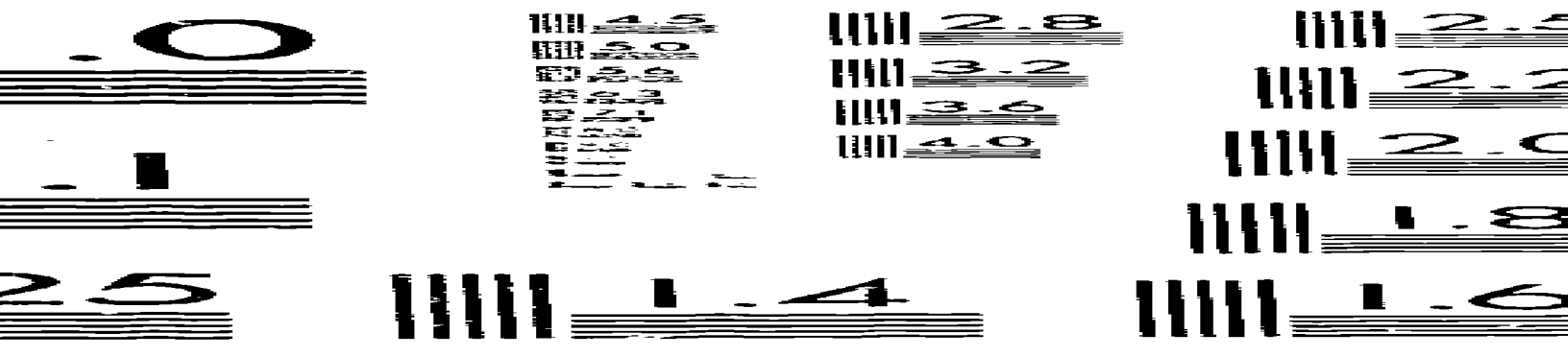


Table 65. Summary of actual classifications correctly predicted by various noncognitive scores and F ratio for pretest

Step No.	Variate[a]	No. Predicted by Largest Probability by Step Entered: Participants N=279	No. Predicted by Largest Probability by Step Entered: Nonparticipants N=64	df	Approximate F Ratio
1.	X_{18}	167	35	(1,341)	6.30
2.	X_{16}	163	32	(2,340	5.64
3.	X_{8}	172	32	(3,339)	5.54
4.	X_{1}	170	38	(4,338)	5.95
5.	X_{4}	179	42	(5,337)	5.76
6.	X_{19}	181	40	(6,336)	5.22
7.	X_{22}	183	43	(7,335)	4.78
8.	X_{28}	188	42	(8,334)	4.37
9.	X_{12}	187	42	(9,333)	4.03
10.	X_{5}	186	44	(10,332)	3.74
11.	X_{10}	193	45	(11,331)	3.47
12.	X_{20}	189	45	(12,330)	3.23
13.	X_{23}	187	43	(13,329)	3.08
14.	X_{24}	192	45	(14,328)	2.97
15.	X_{17}	191	44	(15,327)	2.86
16.	X_{3}	192	44	(16,326)	2.70
17.	X_{26}	[b]		(17,325)	2.56
18.	X_{21}			(18,324)	2.43
19.	X_{27}			(19,323)	2.32
20.	X_{25}			(20,322)	2.21
21.	X_{11}			(21,321)	2.11
22.	X_{2}			(22,320)	2.02
23.	X_{9}			(23,319)	1.93
24.	X_{13}			(24,318)	1.85
25.[c]	X_{7}	188	43	(25,317)	1.77

(Continued)

Table 65, continued

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[a]At each step, the next variable is added to the preceding variates, e.g., Step 1, X_{18}; Step 2, X_{18} and X_{16}.

[b]The variables in Step 17 to Step 25 did not pass the tolerance test for the computer program and were not printed.

[c]Variates X_6, X_{14}, and X_{15} did not have a sufficient F ratio level to enter.

Table 66. Summary of actual classifications correctly predicted by various noncognitive scores and F ratio for posttest

Step No.	Variate[a]	No. Predicted by Largest Probability by Step Entered: Participants N=279	No. Predicted by Largest Probability by Step Entered: Nonparticipants N=64	df	Approximate F Ratio
1.	X_{11}	158	35	(1,341)	3.38
2.	X_{12}	162	39	(2,340)	4.11
3.	X_{20}	156	40	(3,339)	3.46
4.	X_{19}	163	43	(4,338)	3.54
5.	X_{5}	173	41	(5,337)	3.13
6.	X_{2}	169	41	(6,336)	2.92
7.	X_{7}	165	41	(7,335)	2.78
8.	X_{13}	168	42	(8,334)	2.57
9.	X_{26}	171	43	(9,333)	2.42
10.	X_{28}	170	43	(10,332)	2.28
11.	Removed X_{19}	170	43	(9,331)	2.54
12.	X_{8}	172	44	(10,330)	2.35
13.	X_{10}	174	43	(11,329)	2.22
14.	X_{4}	175	42	(12,328)	2.08
15.	X_{15}	179	41	(13,327)	1.95
16.	X_{9}	177	42	(14,328)	1.83
17.	X_{18}	177	42	(15,327)	1.72
18.	X_{24}	173	43	(16,326)	1.62[b]
19.	X_{16}			(17,325)	1.54
20.	X_{25}			(18,324)	1.46
21.	X_{1}			(19,323)	1.39
22.	X_{19}			(20,322)	1.32
23.	X_{23}			(21,321)	1.20
24.	X_{3}			(22,320)	1.20
25.	X_{17}			(23,319)	1.14
26.[c]	X_{6}	172	41	(24,318)	1.09

(Continued)

Table 66, continued

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[a]At each step, the next variable is added to the preceding variable, e.g., Step 1, X_{11}; Step 2, X_{11} and X_{12}.

[b]F ratio $P < .05$.

[c]Variates X_{14}, X_{21}, X_{22}, and X_{27} did not have a sufficient F level to enter.

maximum predictability occurred at Step 15 where 179 participants and 41 nonparticipants (64 percent) were classified correctly.

Variables S-SAT, PSY, I-E, M-E-S, DP, BVD, BEH-S, and BVE did not discriminate significantly ($P < .05$ (Steps 19 to 26). Variables T-P, FAM-S, SOC-S, and N did not discriminate sufficiently to enter into the analysis, and approximate F ratios are not reported.

The univariate F test for the 28 variables in the posttest are reported in Table 66. No F ratios were found significant at the .05 level; however, the Moon-McCann Anomia score (Step 1) between participants and nonparticipants was significant at the .10 level.

Discussion of Discriminatory Analysis

The results of multivariate discriminatory analysis of both the pretest and the posttest give tentative support to an affirmative answer to the research question: Can basic education participants and nonparticipants be differentiated by their scores on the 28 noncognitive scores? At the time of the pretest, 25 of the 28 variables could significantly be used to classify correctly 69 percent of the respondents. Whereas, at the time of the posttest, only 15 of the 28 variables could significantly be used to classify 64 percent of the respondents as participants or nonparticipants.

In view of these findings, it would appear that discriminate equations can be generated from noncognitive scale scores that will aid in the classification of potential basic education participants from nonparticipants. However, the number of respondents correctly classified as participant or nonparticipant, while statistically significant, may not be of sufficient magnitude to justify the use of these scales as an aid in the guidance and classification of the disadvantaged adult.

CONCLUSIONS, INTERPRETATIONS, IMPLICATIONS AND RECOMMENDATIONS

The results of the study disclose (1) that there were no differences from pretest to posttest between participants and nonparticipants on the 28 noncognitive variables, (2) that there was no difference between pretest and posttest scores of either the participants or nonparticipants on the 28 variables, and (3) that the dependent variables were not effective in distinguishing between participants and nonparticipants. Obviously, the results are disappointing to program developers and administrators of adult basic education programs who might expect to detect changes in noncognitive behavior. However, it should be pointed out that the present study was a pilot study, and as that term might portend, the study had some obvious limitations. Before drawing conclusions and presenting interpretations, implications, and recommendations, these limitations will be reviewed so that the reader may draw his own conclusion regarding the findings and the implications of the findings for program planning and the administration of adult basic education programs.

Despite limitations in the design of the study (i.e., lack of random assignment of subjects to experimental and control groups), it is reasonable to expect changes in the noncognitive attribute scores between the pretest and the posttest for the participants in the instruction, provided that (1) the "treatment" could be expected to elicit change, (2) the change could be detected by the measures of the dependent variables, and (3) there was sufficient time for changes to occur. The results of this study could possibly be attributed to the fact that one or the other of these conditions did not obtain.

Despite the rationale of the study, based, in part, on the intent of national legislation, the programs may not actually be designed to produce changes in the variables selected for investigation. In other words, instructional objectives may not follow intent. Acquisition of basic educational skills may not be correlated with noncognitive behavior in disadvantaged adults. Or, adult basic education instructors may not be trained to modify noncognitive behavior. These issues were not within the scope of the present investigation.

There is also a time factor involved in the study. The instructional program provided for 60 hours of instruction distributed over approximately four months. The "treatment" may not be strong enough or prolonged enough to elicit change in noncognitive behavior. Either a longer or a more intensive program might have produced results in the desired direction.

With regard to the dependent variables, the low test-retest reliabilities raise serious questions about their suitability for the disadvantaged adult population. The low reliabilities make it highly unlikely that changes in noncognitive behavior could be detected. Obviously, more research on the measurement of variables of interest with the disadvantaged adult population is required prior to pursuing additional studies such as the one reported herein. The reliabilities obtained and reported in this

study are much lower than the reliabilities reported in the technical literature on the instruments used.

With regard to the differences between participants and nonparticipants, the design of the study may have militated against detecting differences between the two groups. The conditions under which the study was carried out precluded random assignments of subjects to experimental or control groups. Further, although the nonparticipants were selected randomly from lists of disadvantaged adults in the community, the lists were compiled from numerous sources (including welfare rolls, lists of potential participants, and personal knowledge of disadvantaged adults) and may not represent the range of the disadvantaged population in each community.

With regard to the part of the study addressed to distinguishing between participants and nonparticipants, the lack of difference between participants and nonparticipants on the variables of interest and the low test-retest reliabilities preclude the likelihood that the instruments included in this study could effectively distinguish between participants and nonparticipants when the data were subjected to multivariate discriminatory analysis.

In light of these limitations and conditions, it seems appropriate that judgment regarding the effect of adult basic instruction on noncognitive attributes be withheld pending the development of instruments more appropriate to the disadvantaged population. In addition, controlled, laboratory-type experimentation, as contrasted to field investigations, may be helpful in evaluating the influence of basic education instruction on the noncognitive attributes of disadvantaged adults.

Conclusions

1. The results of the study generally support the characteristics of disadvantaged adults which have been reported by Adair (1964), Bakke, et al. (1954), Bogue (1964), and Browning (1962). More specifically:

   a. The adults included in this study are more anomic than the normal population on the Moon and McCann (1965) Scale.

   b. The adults included in this study are more externally oriented than the populations as a whole, in that adults in the study scored higher on the Internal-External Scale (Rotter, 1966).

   c. The adults included in this study reflected behaviors on the Work Beliefs Checklist Scales that denote difficulty in adjusting to the demands of an urban technological society in relation to the population with which they were compared.

d. The adults included in this study evidenced a higher disrespect toward law and reflected conservative attitudes toward the economic structure. By contrast, however, their attitudes toward the value of education were more favorable than the population norm with which the adults in the study were compared. This generalization applies to participants and nonparticipants alike.

e. The adults included in the study revealed problems of self-concept that militate against personal adjustment. Only on the subscales of self-criticism (S-CRIT) and personal self (Per-S) did the target group score as high as the population norm with which it was compared.

2. There was no significant change in noncognitive attributes from pretest to posttest for the participants in basic education instruction.

3. There is no indication that the participants differ from the nonparticipants on the standardized noncognitive measures from pretest to posttest.

4. The selected noncognitive scales for this population provide low test-retest reliability coefficients, suggesting that the instruments may not be reliable for the disadvantaged sample in this study.

5. Except in isolated instances, no single independent variable or group of independent variables was significantly associated with the dependent variables. For those few independent variables that do appear to be associated with the dependent variables, there is no definable pattern or relationship among these variables.

6. The noncognitive attribute measures were not effective in distinguishing between participants and nonparticipants in adult basic education programs.

Interpretation of Conclusions

This study evolved from a pilot study designed to investigate the effect of basic education instruction on the acculturation and adjustment of disadvantaged adults. The constraints for the preceding conclusions are presented in this subsection.

The interpretation of the conclusions proceeds from the following considerations: (1) there appears to be no visible treatment effect on the noncognitive attributes of disadvantaged adults from the time of pretesting to the time of posttesting, (2) the time interval involved between the pretest and posttest may have been too brief for changes in noncognitive attributes to occur, (3) the treatment effect may have been confounded with extraneous factors which were not investigated, and (4) in view of the results obtained, there is reason to question the reliability of

the noncognitive measures based on the test-retest reliability coefficients for each scale.

1. The condition of no visible treatment effect may be a result of several factors which include (a) the efforts of the local institutions to comply with the intent of national legislation for basic education instruction, (b) the intent and design of the local programs to bring about changes in noncognitive attributes, and (c) time involved in participation in basic education instruction programs.

2. The application of the treatment is related to several factors, such as: (a) the time involved in basic education instruction from pretest to posttest may have been too brief to bring about significant changes in noncognitive attributes of the disadvantaged adults; and (b) the duration of the treatment periods, spaced over a 10-week period, may have been a contributor to the magnitude of noncognitive attribute change.

3. Other factors, which were not measured, such as family, work, and peer group interactions within the several communities, may have been instrumental in facilitating or inhibiting the noncognitive attribute change of the disadvantaged adults.

4. Reliability coefficients calculated on test-retest scores (pretest scores and posttest scores) were low, indicating that the tests are not very stable over time. This condition may be a result of several factors which include (a) the subject's orientation toward testing, (b) the subject's understanding of the concepts being measured, and (c) an unanticipated interaction between subjects and items where subjects score similarly on individual items but differ across items.

The above interpretations are made to point out the possibility that changes in noncognitive attributes, as a result of basic education instruction, may occur if (1) additional time were allocated for the treatment between pretesting and posttesting, (2) reliable noncognitive measures for the disadvantaged population were available, and (3) factors confounded with the treatment could be isolated and measured.

Implications

1. There is a need for reexamination of adult basic education instruction programs to assess their direction, objectives, and commitment to meeting the intent of national legislation.

2. Additional resources should be invested in the development of noncognitive measures that are effective and reliable in assessing the changes in the affective domain of disadvantaged adults.

3. There is a need for additional research in the affective domain to be conducted on other disadvantaged samples. Therefore, research should be designed to include additional measures of the affective domain

and their correlates.

4. Additional research is needed to determine the time interval necessary for changing attitudes for all populations of adults, including the disadvantaged. Concomitant with the need for this type of research is the determination of other treatments, in addition to basic education instruction, that will produce desirable changes in the noncognitive attributes of disadvantaged adults. For example, individual and group counseling, role playing, and redesigned educational program content may be introduced to facilitate and/or produce desirable noncognitive attribute changes in disadvantaged adults.

5. Evaluative research of educational programs, designed to produce changes in the cognitive and psychomotor domains, should be investigated for additional research implications applicable to the affective domain. Additional research is needed to design accurate and sophisticated statistical techniques for the measurement of change.

Recommendations

In view of the conclusions, suggested interpretations, and implications for additional research into the affective domain of disadvantaged adults drawn from this study, the following recommendations are presented as guides for additional research:

1. Suitable noncognitive measures should be designed, redesigned, tested, and retested on the disadvantaged population. For example, this may be accomplished by establishing equivalent form reliability, test-retest reliability, content validity, and predictive validity with the disadvantaged and other populations.

2. The control or measurement of extraneous variation should be maximized to determine the true effect of the applied treatment(s). Random sampling, controlled environmental conditions, and the measurement of external effects are a few of the means for eliminating systematic contamination of research.

3. Review of reliable research should be made to determine the time necessary to produce changes in the noncognitive attributes of disadvantaged adults. The implementation of pilot and follow-up studies may be necessary to accomplish this task.

4. A standardized treatment should be applied to all randomly selected subjects participating in the educational program. The type of treatment and frequency of application will need to be examined and pretested prior to implementation.

5. A plan for measuring the long-term effect, e.g., six months, one year, two years, and five years, of changes in noncognitive attributes of adults should be provided for in additional studies of the disadvantaged population.

The aforementioned recommendations are presented as a means of eliminating problems that may be encountered in the conduct of educational research. These points of interest should act as a guide to researchers who desire to examine the noncognitive attributes of disadvantaged adults participating in basic education instruction programs.

REFERENCES

Adair, J. B. 1964. "A Study of Illiteracy in Texas as Related to Vocational Education in Texas." Texas Education Agency, Austin, Texas.

Adult Basic Education. 1968. "Meeting the Challenge of the 1970's: First Annual Report of the National Advisory Committee on Adult Basic Education to the President of the United States and Secretary of Health, Education and Welfare." U. S. Office of Education, Washington, D. C.

Allport, G. W. 1935. Attitudes, p. 808. In C. Murchinson (ed.), Handbook for Social Psychology. Clark University Press, Worchester, Massachusetts.

Bakke, E. W., Philip M. Hauser, Gladys L. Palmer, Charles A. Myers, Dale Yoder and Clark Kerr. 1954. Labor Mobility and Economic Opportunity. Technology Press of Massachusetts Institute of Technology, Cambridge, Massachusetts.

Battle, E. W. and J. B. Rotter. 1963. "Children's Feelings of Personal Control as Related to Social Class and Ethnic Group." J. of Personality 31:482-490.

Bell, W. 1957. "Anomia, Social Isolation and the Class Structure." Sociometry 20(2) :105-116.

Bertrand, A. L. 1967. Basic Sociology: An Introduction to Theory and Method. Meredith Publishing Company, New York

Bogue, Donald J. 1964. "Residential Mobility and Migration of Workers: Manpower in the United States." Industrial Relations Research Association, Washington, D. C.

Boyd, V. A. and C. A. Morgan. 1966. Factors in the Adjustment of Families and Individuals in Low-income Rural Areas of the South. Southern Regional Cooperative Research Project S-44, Clemson University, Clemson, South Carolina.

Broom, L. and P. Selznick. 1963. Sociology: A Text with Adapted Readings. Harper and Row, New York.

Browning, M. A. 1962. "A Report of the Educational Needs of Migrant Workers." Texas Educational Agency, Austin, Texas.

Carrol, R. E. 1945. "Relation of School Environment to the Moral Ideology and Personal Aspirations of Negro Boys and Girls." School Review 53:30-38.

Chapin, F. Stuart. 1928. "A Quantitative Scale for Rating the Home and Social Environment of Middle Class Families in an Urban Community: A First Approximation of the Measurement of Socio-economic Status." Journal of Educational Psychology 19:99-111.

Cleland, Charles L. (ed.) 1965. "Scaling Social Data: A Comparison of Scales Developed Using Various Techniques." Southern Cooperative Series, Bulletin No. 108. Tennessee Agricultural Experiment Station, Knoxville, Tennessee.

Clinard, M. B. (ed.) 1964. Anomie and Deviant Behavior. The Free Press of Glencoe, New York.

Combs, C. F. 1964. "Perception of Self and Scholastic Underachievement in the Academically Capable." Personnel and Guid. J. 43:47-51.

Coster, J. K. and R. L. Morgan. 1969. The Role of Education in the Decision-Making Process. Occasional Paper No. 5. Center for Occupational Education, North Carolina State University at Raleigh.

Cramer, E. M. and R. D. Bock. 1966. "Multivariate Analysis." Review of Educational Research 36(5) :604-617.

Cronback, L. J. 1963. Essentials of Psychological Testing. (2nd ed.) Harper and Row, New York.

Cuber, John F. 1955. Sociology. Appleton-Century-Crofts, New York.

Davis, W. L. and E. J. Phares. 1967. "Internal-external Control as a Determinant of Informat[illegible]n a Social Influence Situation." J. of Personality 35(4) :547-561.

DeHoyos, Arturo. 1961. Occupational Educational Levels of Aspiration of Mexican-American Youth. Unpublished Ph. D. dissertation, Department of Sociology and Anthropology, Michigan State University, East Lansing.

Draper, N. R. and H. Smith. 1966. Applied Regression Analysis. John Wiley and Sons, Inc., New York.

Durkheim, Emile. 1968. The Division of Labor in Society. (Translated by George Simpson, 1933). The Free Press of Glencoe, New York.

Durkheim, Emile. 1951. Suicide. The Free Press of Glencoe, New York.

Eaton, W. H. 1947. "Alternative Meanings of Adjustment." American Sociological Review 12:75-81.

Faunce, William A. (ed.) 1967. Readings in Industrial Sociology. Appleton-Century-Crofts, New York.

Fisher, R. A. 1936. "The Statistical Utilization of Multiple Measurements. Annals of Eugenics 8:376-86.

Fitts, W. H. 1965. Tennessee Self-Concept Scale. Counselor Recordings and Tests, Nashville, Tennessee.

Franklin, R. D. 1963. Youth's Expectancies about Internal versus External Control of Reinforcement Related to N Variables. Unpublished Ph. D. dissertation, Psychology Department of Purdue University, Lafayette, Indiana.

Gould, Julius and William Kolb (ed.) 1964. Dictionary of Social Sciences. The Free Press of Glencoe, New York.

Haller, A. O. 1957. The MSU Work Beliefs Check List. Department of Sociology and Anthropology, Michigan State University, East Lansing, Michigan.

Haller, A. O. and C. E. Butterworth. 1960. "Peer Influences on Levels of Occupational and Educational Aspiration." Social Forces 38:289-295.

Haller, A. O. and I. W. Miller. 1963. "The Occupational Aspiration Scale: Theory, Structure and Correlates." Technical Bulletin No. 288. Michigan State University, East Lansing, Michigan.

Haller, A. O. and C. E. Wolff. 1962. "Personality Orientations of Farm, Village, and Urban Boys." Rural Sociology 27:338-340.

Haller, A. O. and C. E. Wolff. 1965. "A Note on Personality Orientations of Farm, Village, and Urban Boys." Rural Sociology 30:338-340.

Hammonds, Carsie. 1950. Teaching Agriculture. McGraw-Hill Book Company , New York.

Hatt, Paul and Cecil D. North. 1949. "Prestige Rating of Occupation." Opinion News 9:3-13.

Hawk, T. L. 1967. "Self-concepts of the Socially Disadvantaged." The Elementary School Journal 4:196-206.

Hodgkins, B. 1961. Religion, Socio-economic Status, and Work Value Orientations of Lenawee County Adolescent Males. Unpublished Master's thesis, Department of Sociology and Anthropology, Michigan State University, East Lansing, Michigan.

Horton, P. B. and C. L. Hunt. 1964. Sociology. McGraw-Hill, New York.

Kaiser, H. F. 1960. "The Application of Electronic Computers to Factors Analysis." Educ. Psychol. Measurement 20:141-151.

Katz, E. and Lazarsfeld, P. 1955. Personal Influence, Free Press, Glencoe.

Kendall, M. G. 1947. The Advanced Theory of Statistics. C. Griffin and Company, Ltd., London.

Kerlinger, F. N. 1964. Foundations of Behavioral Research. Holt, Reinhart and Winston, Inc., New York.

Killian, Lewis M. and Charles M. Grigg. 1962. "Urbanism, Race, and Anomia." American Journal of Sociology 67:661-665.

Klapper, J. T. 1960. The Effects of Mass Communications. Free Press, Glencoe.

Klausner, S. Z. 1953. Social Class and Self-concept. Journal of Social Psychology. McGraw-Hill, New York.

Krech, D. and R. S. Crutchfield. 1948. Theory and Problems of Social Psychology, McGraw-Hill, New York.

Lewis, C. E. 1966. Some Correlates of Anomia among Rural Negroes. Unpublished Master's thesis, Department of Rural Sociology, North Carolina State University at Raleigh.

Loomis, C. P. 1960. Social Systems: Essays on Their Persistence and Change. D. Van Nostrand Company, Inc., Princeton, New Jersey.

MacIver, R. M. 1950. The Ramparts We Guard. The MacMillan Company, New York.

Mager, Robert F. 1968. Developing Attitude toward Learning. Fearon Publishers, Palo Alto, California.

Marsh, C. P. and M. M. Brown. 1965. "Facilitative and Inhibitive Factors in Training Program Recruitment among Rural Negroes." Journal of Social Issues 21:110-125.

McClosky, H. and J. H. Schaar. 1965. "Psychological Dimensions of Anomy." American Sociological Review 30:14-40.

McKeachie, W. J. and C. L. Doyle. 1966. Psychology. Addison-Wesley Publishing Company, Inc., Reading.

Meir, D. L. and W. Bell. 1959. "Anomia and Differential Access to the Achievement of Life's Goals." American Sociological Review 24:189-202.

Miller, Delbert C. 1968. Handbook of Research Design and Social Measurement. David McKay, New York.

Moon, S. G. 1963. A Study of Factors in the Adjustment of Rural Families in Low-income Areas. Unpublished Ph. D. dissertation, North Carolina State University at Raleigh. University Microfilms. Ann Arbor, Michigan.

Moon, S. G. and L. C. McCann. 1965. Anomia scales, pp. 55-64. In L. Cleland (ed.), "Scaling Social Data." Tennessee Agricultural Experiment Station, Knoxville.

Moore, A. B. 1970. Noncognitive Attributes of Participants and Nonparticipants in Selected Adult Basic Education Programs. Unpublished Ph. D. dissertation. Department of Adult and Community College Education, N. C. State University, Raleigh, N. C.

"North Carolina State Plan for Adult Basic Education." 1964. North Carolina State Board of Education, State Department of Community Colleges, Raleigh, North Carolina.

Office of Manpower, Automation and Change. United States Department of Labor. 1963. "Mobility and Worker Adaptation to Economic Change in the United States." Bulletin No. 1. U. W. Department of Labor, Washington, D.

Parsons, T. 1951. The Social System. The Free Press of Glencoe, New York.

Pear, T. H. 1964. Adjustment, pp. 9-10. In J. Gould and W. L. Kolb (ed.), The Dictionary of the Social Sciences. The Free Press of Glencoe, New York.

Peters, J. M. 1968. Effect of Internal-external Control on Learning and Participation in Occupational Education. Center Research Monograph No. 1. Department of Adult Education and Center for Occupational Education, North Carolina State University, Raleigh.

Redfield, Robert, 1941. The Folk Culture of Yucatan. The University of Chicago Press, Chicago.

Rhodes, Lewis, 1964. "Anomia, Aspiration and Status." Social Forces 42:434-440.

Roth, R. M. 1959. "The Role of Self-concept in Achievement." J. of Exp. Education 27:265-281.

Rotter, J. B. 1954. Social Learning and Clinical Psychology. Prentice-Hall, Englewood Cliffs, New Jersey.

Rotter, J. B. 1966. "General Expectancies and Internal versus External Control of Reinforcement." Psychological Mono. 80(1):1-28.

Roucek, J. S. and R. L. Warren. 1967. Sociology: An Introduction. Littlefield-Adams, Totowa, New Jersey.

Rundquist, E. A. and R. F. Sletto. 1936. "Personality in the Depression." Child Welfare Monograph Series No. 12. University of Minnesota Press, Minneapolis.

Seeman, M. 1963. "Alienation and Social Learning in a Reformatory." Amer. J. of Soc. 69:270-284.

Seeman, M. 1966. "Alienation, Membership and Political Knowledge: A Comparative Study." Public Opinion Quarterly 30:353-367.

Seeman, M. and J. W. Evans. 1962. "Alienation and Learning in a Hospital Setting." American Sociological Review 27:772-783.

Sherif, C. W., M. Sherif and R. E. Mebergall. 1965. Attitude and Attitude Change. W. B. Saunders Company, Philadelphia.

Shills, D. L. (ed.) 1968. International Encyclopedia of the Social Sciences. The MacMillan Company, New York.

Siegel, A. E. and S. Siegel. 1965. Reference Groups, Membership Groups and Attitude Change. In. R. Proshansky and B. Seidenberg (eds.), Basic Studies in Social Psychology. Holt, Rinehart and Winston, New York.

Simpson, Richard L and H. Max Miller. 1963. "Social Status and Anomia." Social Problems 10:256-264.

Srole, Leo. 1956. "Social Integration and Certain Corollaries: An Exploratory Study." American Sociological Review 21(6): 706-712.

Steele, Robert G. D. and James H. Torrie. 1960. Principles and Procedures of Statistics. McGraw-Hill Book Company, New York.

Thomas, W. I. and F. Znaniecki. 1927. The Polish Peasant in Europe and America. Alfred A. Knopf, New York.

Tonnies, Ferdinand. 1940. Fundamental Concepts of Sociology. Translated and Supplemented by Charles P. Loomis. American Book Company, New York.

United States Department of Labor. 1965. "Manpower Report to the President: A Report on Manpower Requirements, Resources, Utilization, and Training." Government Printing Office, Washington, D. C.

Watts, H. J. 1962. Methodological Problems in the Measurement of Values. Unpublished Ph. D. dissertation, Department of Sociology and Anthropology, Michigan State University, East Lansing.

Williams, R. L. and H. Byars. 1968. "Negro Self-Esteem in a Transitional Society." Personnel and Guidance Journal 47:120-125.

Williams R. L. and S. Cole. 1968. "Self-concept and School Adjustment." Personnel and Guidance Journal 47:478-481.

Williams, Robin M., Jr. 1960. American Society: A Sociological Interpretation. Alfred A. Knopf, New York.

Wright, Verne. 1942. "Summary of Literature on Social Adjustment." American Sociological Review 7:407-422.

APPENDICES

Included in these appendices are the Rotter I-E Scale, the Haller Work Beliefs Checklist, three scales by Rundquist and Sletto, the Moon and McCann modification of the Srole Anomia Scale, the McClosky and Schaar Anomia Scale, the Tennessee Self-Concept Scale, and supporting data which may be useful to the reader for his own interpretations of the findings of the study.

Appendix A
Rotter's I-E Scale

Mark the response choice with which you agree the most _a or _b. Be sure to mark a or b for each combination of answers.

---

1. _a. Children get into trouble because their parents punish them too much.
   _b. The trouble with most children nowadays is that their parents are too easy with them.
2. _a. Many of the unhappy things in people's lives are partly due to bad luck.
   _b. People's misfortunes result from the mistakes they make.
3. _a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   _b. There will always be wars, no matter how hard people try to prevent them.
4. _a. In the long run people get the respect they deserve in this world.
   _b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. _a. The idea that teachers are unfair to students is nonsense.
   _b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. _a. Without the right breaks one cannot be an effective leader.
   _b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. _a. No matter how hard you try some people just don't like you.
   _b. People who can't get others to like them don't understand how to get along with others.

8. _a. Heredity plays the major role in determining what they're like.
   _b. It is one's experiences in life which determine what they're like.

9. _a. I have often found that what is going to happen will happen.
   _b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. _a. In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.
    _b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. _a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
    _b. Getting a good job depends mainly on being in the right place at the right time.

12. _a. The average citizen can have an influence in government decisions.
    _b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. _a. When I make plans, I am almost certain that I can make them work.
    _b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. _a. There are certain people who are just no good.
    _b. There is some good in everybody.

15. _a. In my case getting what I want has little or nothing to do with luck.
    _b. Many times we might just as well decide what to do by flipping a coin.

16. _a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    _b. Getting people to do the right thing depends upon ability; luck has little or nothing to do with it.

17. _a. As far as world affairs are concerned, most of us are victims of forces we can neither understand nor control.
    _b. By taking an active part in political and social affairs the people can control world events.

18. _a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    _b. There really is no such thing as "luck."

19. _a. One should always be willing to admit mistakes.
    _b. It is usually best to cover up one's mistakes.

20. _a. It is hard to know whether or not a person really likes you.
    _b. How many friends you have depends on how nice a person you are.

21. _a. In the long run the bad things that happen to us are balanced by the good ones.
    _b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. _a. With enough effort we can wipe out political corruption.
    _b. It is difficult for people to have much control over the things politicians do in office.

23. _a. Sometimes I can't understand how teachers arrive at the grades they give.
    _b. There is a direct connection between how hard I study and the grades I get.

24. _a. A good leader expects people to decide for themselves what they should do.
    _b. A good leader makes it clear to everybody what their jobs are.

25. _a. Many times I feel that I have little influence over the things that happen to me.
    _b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. _a. People are lonely because they don't try to be friendly.
    _b. There's not much use in trying too hard to please people; if they like you, they like you.

27. _a. There is too much emphasis on athletics in high school.
    _b. Team sports are an excellent way to build character.

28. _a. What happens to me is my own doing.
    _b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. _a. Most of the time I can't understand why politicians behave the way they do.
    _b. In the long run the people are responsible for bad government on a national as well as on a local level.

Appendix B

MSU Work Beliefs Checklist

If you agree with each of the following statements, circle (1); if you disagree, circle (2).

	Agree	Disagree
BVA:		
1.1 The only purpose of working is to make money.	1	2
1.2 I believe a man needs to work in order to feel that he has a real place in the world.	1	2
1.3 I feel sorry for people whose jobs require that they take orders from others.	1	2
1.4 Every man should have a job that gives him a steady income.	1	2
1.5 The happiest men are those who work only when they need money.	1	2
1.6 Doing a good job day in and day out is one of the most satisfying experiences a man can have.	1	2
1.7 A regular job is good for one.	1	2
1.8 I feel sorry for rich people who never learn how good it is to have a steady job.	1	2
BVB:		
2.1 I don't like people who are always right on time for every appointment they have.	1	2
2.2 I feel sorry for people who have to do the same thing every day at the same time.	1	2
2.3 I don't like to have to make appointments.	1	2
2.4 I believe that promptness is a virtue.	1	2
2.5 I usually schedule my activities.	1	2
2.6 I'd rather let things happen in their own way rather than scheduling them by a clock.	1	2
2.7 It makes me feel bad to be late for an appointment.	1	2
2.8 I expect people who have appointments with me to be right on time.	1	2
BVC:		
3.1 I would be unhappy living away from my relatives.	1	2
3.2 I hope to move away from here within the next few years.	1	2
3.3 People who can't leave their hometowns are hard for me to understand.	1	2
3.4 A man's first loyalty should be to his home community.	1	2

	Agree	Disagree
3.5 When a boy becomes a man, he should leave home.	1	2
3.6 I like to see new things and meet new people.	1	2
BVD:		
4.1 I like to try new things.	1	2
4.2 On the whole, the old ways of doing things are the best.		
4.3 Life would be boring without new experiences.	1	2
4.4 I like people who are willing to change.	1	2
4.5 On the whole, most changes make things worse.	1	2
4.6 The happiest people are those who do things the way their parents did.	1	2
4.7 New things are usually better than old things.	1	2
BVE:		
5.1 I believe that a person can get anything he wants if he's willing to work for it.	1	2
5.2 Man should not work too hard, for his fortune is in the hands of God.		
5.3 A man shouldn't work too hard because it won't do him any good unless luck is with him.	1	2
5.4 With a little luck I believe I can do almost anything I really want to do.	1	2
5.5 A person shouldn't hope for much in this life.	1	2
5.6 If a man can't better himself it's his own fault.	1	2
5.7 Practically everything I try to do turns out well for me.	1	2
5.8 I usually fail when I try something important.	1	2
BVF:		
6.1 I would rather work than go to school.	1	2
6.2 Money is made to spend, not to save.	1	2
6.3 I think there's something wrong with people who go to school for years when they could be out earning a living.	1	2
6.4 One gains more in the long run if he studies than if he gets a job.	1	2
6.5 The more school a person gets the better off he is.	1	2
6.6 Generally speaking, things one works hard for are the best.	1	2
6.7 When I get a little extra money I usually spend it.	1	2

Appendix C

Rundquist and Sletto Scales from the Minnesota Survey of Opinions

Economic Conservatism Scale

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
3.	The government should take over all large industries.	1	2	3	4	5*
7.	Labor should obey only those laws that seem reasonable.	1	2	3	4	5*
11.	Legislatures are too ready to pass laws to curb business freedom.	1	2	3	4	5
15.	For men to do their best, there must be the possibility of unlimited profits.	1	2	3	4	5*
19.	Poverty is chiefly a result of injustice in the distribution of wealth.	1	2	3	4	5
23.	The government should not attempt to limit profits.	1	2	3	4	5
27.	The more a man learns about our economic system, the less willing he is to see changes made.	1	2	3	4	5
31.	The government ought to guarantee a living to those who cannot find work.	1	2	3	4	5*
35.	Large incomes should be taxed much more than they are now.	1	2	3	4	5*
39.	Men would not do their best if government owned all industry.	1	2	3	4	5
43.	Most great fortunes are made honestly.	1	2	3	4	5
47.	Private ownership of property is necessary for economic progress.	1	2	3	4	5
51.	Without sweeping changes in our economic system, little progress can be made in the solution of social problems.	1	2	3	4	5*
55.	On the whole, our economic system is just and wise.	1	2	3	4	5
59.	Labor does not get its fair share of what it produces.	1	2	3	4	5*

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
63.	When a rich man dies, most of his property should go to the state.	1	2	3	4	5*
67.	If our economic system were just, there would be much less crime.	1	2	3	4	5*
71.	The incomes of most people are a fair measure of their contribution to human welfare.	1	2	3	4	5
74.	A man should strike in order to secure greater returns to labor.	1	2	3	4	5*
77.	A man should be allowed to keep as large an income as he can get.	1	2	3	4	5
80.	Money should be taken from the rich and given to the poor during hard times.	1	2	3	4	5*
83.	Our economic system is criticized too much.	1	2	3	4	5

Education Scale

2.	A man can learn more by working four years than by going to high school.	1	2	3	4	5*
6.	The more education a man has the better he is able to enjoy life.	1	2	3	4	5
10.	Education helps a person to use his leisure time to better advantage.	1	2	3	4	5
14.	A good education is a great comfort to a man out of work.	1	2	3	4	5
18.	Only subjects like reading, writing, and arithmetic should be taught at public expense.	1	2	3	4	5*
22.	Education is no help in getting a job today.	1	2	3	4	5*
26.	Most young people are getting too much education.	1	2	3	4	5*
30.	A high school education is worth all the time and effort it requires.	1	2	3	4	5
34.	Our schools encourage an individual to think for himself.	1	2	3	4	5
38.	There are too many fads and frills in modern education.	1	2	3	4	5*
42.	Education only makes a person discontented.	1	2	3	4	5*
46.	School training is of little help in meeting the problems of real life.	1	2	3	4	5*

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
50.	Education tends to make an individual less conceited.	1	2	3	4	5
54.	Solution of the world's problems will come through education.	1	2	3	4	5
58.	High school courses are too impractical.	1	2	3	4	5*
62.	A man is foolish to keep on going to school if he can get a job.	1	2	3	4	5*
66.	Savings spent on education are wisely invested.	1	2	3	4	5
70.	An educated man can advance more rapidly in business and industry.	1	2	3	4	5
73.	Parents should not be compelled to send their children to school.	1	2	3	4	5
76.	Education is more valuable than most people think.	1	2	3	4	5
79.	A high school education makes a man a better citizen.	1	2	3	4	5
82.	Public money spent on education for the past few years could have been used more wisely for other purposes.	1	2	3	4	5*

Law Scale

1.	The law protects property rights at the expense of human rights.	1	2	3	4	5*
5.	A person should obey only the laws that seem reasonable.	1	2	3	4	5*
9.	It is all right to evade the law if you do not actually violate it.	1	2	3	4	5*
13.	The sentences of judges in courts are determined by their prejudices.	1	2	3	4	5*
17.	On the whole, judges are honest.	1	2	3	4	5
21.	Juries seldom understand a case well enough to make a really just decision.	1	2	3	4	5
25.	On the whole, policemen are honest.	1	2	3	4	5
29.	A man should obey the laws no matter how much they interfere with his personal ambitions.	1	2	3	4	5
33.	Court decisions are almost always just.	1	2	3	4	5
37.	In the courts a poor man will receive as fair treatment as a millionaire.	1	2	3	4	5

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
41.	Personal circumstances should never be considered an excuse for lawbreaking.	1	2	3	4	5
45.	A man should tell the truth in court, regardless of the consequences.	1	2	3	4	5
49.	A person who reports minor law violations is only a troublemaker.	1	2	3	4	5*
53.	A person is justified in giving false testimony to protect a friend on trial.	1	2	3	4	5*
57.	A hungry man has a right to steal.	1	2	3	4	5*
61.	All laws should be strictly obeyed because they are laws.	1	2	3	4	5
65.	Laws are so often made for the benefit of small selfish groups that a man cannot respect the law.	1	2	3	4	5*
69.	Almost anything can be fixed up in the courts if you have enough money.	1	2	3	4	5*
72.	It is difficult to break the law and keep one's self respect.	1	2	3	4	5
75.	On the whole, lawyers are honest.	1	2	3	4	5
78.	Violators of the law are nearly always detected and punished.	1	2	3	4	5
81.	It is all right for a person to break the law if he doesn't get caught.	1	2	3	4	5*

Scoring * Reflect these items e.g. 1 = 5
2 = 4
3 = 3
4 = 2
5 = 1

Appendix D

Moon-McCann Modification of Srole's Anomia Scale

There are five possible answers to each of the following statements. After each statement is read, you are asked to circle one of the five numbers that best describes how you feel about the statements. Circle number 1 if you strongly

agree, number 2 if you agree, number 3 if you are undecided, number 4 if you disagree, and number 5 if you strongly disagree. Please circle one number for each statement.

	Strongly agree 1	Agree 2	Undecided 3	Disagree 4	Strongly disagree 5
1. Nowadays a person has to live pretty much for today and let tomorrow take care of itself.	1	2	3	4	5
2. In spite of what some people say, the lot of the average man is getting worse, not better.	1	2	3	4	5
3. It's hardly fair to bring children into the world with the way things look for the future.	1	2	3	4	5
4. These days a person doesn't know on whom he can count.	1	2	3	4	5
5. There's little use writing to public officials because often they aren't interested in the problems of the average man.	1	2	3	4	5
6. Things have usually gone against me in life.	1	2	3	4	5

Srole Anomia Scale

This scale was developed by Leo Srole and was reported in the American Sociological Review, Vol. 21, pp. 709-716, 1956.

Nowadays a person has to live pretty much for today and let tomorrow take care of itself.	1	2	3	4	5
In spite of what some people say, the lot (situation) (condition) of the average man is getting worse, not better.	1	2	3	4	5
It's hardly fair to bring children into the world with the way things look for the future.	1	2	3	4	5
These days a person doesn't really know on whom he can count.	1	2	3	4	5
There's little use writing to public officials because often they aren't really interested in the problems of the average man.	1	2	3	4	5

Appendix E

McClosky-Schaar Anomia Scale

This scale was developed by Herbert McClosky and J. H. Schaar and was reported in the American Sociological Review, Vol. 30, pp. 14-40, 1965.

	Responses* SA A U D SD
With everything so uncertain these days, it almost seems as though anything could happen.	1 2 3 4 5
What is lacking in the world today is the old kind of friendship that lasted for a lifetime.	1 2 3 4 5
With everything in such a state of disorder, it's hard for a person to know where he stands from one day to the next.	1 2 3 4 5
Everything changes so quickly these days that I often have trouble deciding which are the right rules to follow.	1 2 3 4 5
I often feel that many things our parents stood for are just going to ruin before our very eyes.	1 2 3 4 5
The trouble with the world today is that most people really don't believe in anything.	1 2 3 4 5
I often feel awkward and out of place.	1 2 3 4 5
People were better off in the old days when everyone knew just how he was expected to act.	1 2 3 4 5
It seems to me that other people find it easier to decide what is right than I do.	1 2 3 4 5

*Responses for this scale are: SA--strongly agree; A--agree; U--undecided; D--disagree; and SD--strongly disagree.

Appendix F

Fitts' Tennessee Self-Concept Scale

INSTRUCTIONS

On the top line of the separate answer sheet, fill in your name and the other information except for the time information in the last three boxes. You will fill these boxes in later. Write only on the answer sheet. Do not put any marks in this booklet.

The statements in this booklet are to help you describe yourself as you see yourself. Please respond to them as if you were describing yourself to yourself. Do not omit any item! Read each statement carefully; then select one of the five responses listed below. On your answer sheet, put a circle around the response you chose. If you want to change an answer after you have circled it, do not erase it but put an X mark through the response and then circle the response you want.

When you are ready to start, find the box on your answer sheet marked time started and record the time. When you are finished, record the time finished in the box on your answer sheet marked time finished.

As you start, be sure that your answer sheet and this booklet are lined up evenly so that the item numbers match each other.

Remember, put a circle around the response number you have chosen for each statement.

Responses:

Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
1	2	3	4	5

You will find these response numbers repeated at the bottom of each page to help you remember them.

	Item No.
1. I have a healthy body	1
3. I am an attractive person	3
5. I consider myself a sloppy person	5
19. I am a decent sort of person	19
21. I am an honest person	21
23. I am a bad person	23
37. I am a cheerful person	37
39. I am a calm and easy going person	39
41. I am a nobody	41
55. I have a family that would always help me in any kind of trouble	55

	Item No.
57. I am a member of a happy family	57
59. My friends have no confidence in me	59
73. I am a friendly person	73
75. I am popular with men	75
77. I am not interested in what other people do	77
91. I do not always tell the truth	91
93. I get angry sometimes	93
2. I like to look nice and neat all the time	2
4. I am full of aches and pains	4
6. I am a sick person	6
20. I am a religious person	20
22. I am a moral failure	22
24. I am a morally weak person	24
38. I have a lot of self-control	38
40. I am a hateful person	40
42. I am losing my mind	42
56. I am an important person to my friends and family	56
58. I am not loved by my family	58
60. I feel that my family doesn't trust me	60
74. I am popular with women	74
76. I am mad at the whole world	76
78. I am hard to be friendly with	78
92. Once in a while I think of things too bad to talk about	92
94. Sometimes, when I am not feeling well, I am cross	94
7. I am neither too fat nor too thin	7
9. I like my looks just the way they are	9
11. I would like to change some parts of my body	11
25. I am satisfied with my moral behavior	25

Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
1	2	3	4	5

	Item No.
27. I am satisfied with my relationship to God.....	27
29. I ought to go to church more.....	29
43. I am satisfied to be just what I am.....	43
45. I am just as nice as I should be.....	45
47. I despise myself.....	47
61. I am satisfied with my family relationships.....	61
63. I understand my family as well as I should.....	63
65. I should trust my family more.....	65
79. I am as sociable as I want to be.....	79
81. I try to please others, but I don't overdo it.....	81
83. I am no good at all from a social standpoint.....	83
95. I do not like everyone I know.....	95
97. Once in a while, I laugh at a dirty joke.....	97
8. I am neither too tall nor too short.....	8
10. I don't feel as well as I should.....	10
12. I should have more sex appeal.....	12
26. I am as religious as I want to be.....	26
28. I wish I could be more trustworthy.....	28
30. I shouldn't tell so many lies.....	30
44. I am as smart as I want to be.....	44
46. I am not the person I would like to be.....	46
48. I wish I didn't give up as easily as I do.....	48
62. I treat my parents as well as I should (Use past tense if parents are not living).....	62
64. I am too sensitive to things my family says.....	64
66. I should love my family more.....	66
80. I am satisfied with the way I treat other people...	80
82. I should be more polite to others.....	82
84. I ought to get along better with other people.....	84

Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
1	2	3	4	5

	Item No.
96. I gossip a little at times	96
98. At times I feel like swearing	98
13. I take good care of myself physically	13
15. I try to be careful about my appearance	15
17. I often act like I am "all thumbs"	17
31. I am true to my religion in my everyday life	31
33. I try to change when I know I'm doing things that are wrong	33
35. I sometimes do very bad things	35
49. I can always take care of myself in any situation	49
51. I take the blame for things without getting mad	51
53. I do things without thinking about them first	53
67. I try to play fair with my friends and family	67
69. I take a real interest in my family	69
71. I give in to my parents. (Use past tense if parents are not living)	71
85. I try to understand the other fellow's point of view	85
87. I get along well with other people	87
89. I do not forgive others easily	89
99. I would rather win than lose in a game	99
14. I feel good most of the time	14
16. I do poorly in sports and games	16
18. I am a poor sleeper	18
32. I do what is right most of the time	32
34. I sometimes use unfair means to get ahead	34
36. I have trouble doing the things that are right	36
50. I solve my problems quite easily	50
52. I change my mind a lot	52

Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
1	2	3	4	5

	Item No.
54. I try to run away from my problems.....	54
68. I do my share of work at home.....	68
70. I quarrel with my family.....	70
72. I do not act like my family thinks I should.....	72
86. I see good points in all the people I meet.....	86
88. I do not feel at ease with other people.....	88
90. I find it hard to talk with strangers.....	90
100. Once in a while I put off until tomorrow what I ought to do today.....	100

Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
1	2	3	4	5

Appendix G

Interview Guide

We are conducting a study of certain personal, family and occupational characteristics of adults who participate and who do not participate in ABE. Our hopes are that the findings will help teachers and administrators improve the educational opportunities for adults.

I would like to ask you some questions about yourself, your family and your plans for the future. Your answers will be completely confidential.

1. Name_____
2. Address_____
   (Street or Rural Route No.), (City) (County)
3. Race (by observation) White___ Negro___ Other(specify)
4. ABE participant? Yes___ No___
5. Home location
   _____Urban (in city)
   _____Suburban (near city)
   _____Small town
   _____Rural (non-farm)
   _____Rural (farm)--Do you own farm? Yes__ No__ No. of acres_____

6. Highest grade completed in school_____

7. What kind of work do you do most of the time? _____

_____

Full time___ Part time___ Seasonal___ Irregular___
Unemployed___

8. Are you employed at the present time?
Yes___ No___ (If "no," go to No. 9)
(If "yes," what kind of work are you doing?_____

_____

Name of company of employer_____
Address_____
How long have you worked for this company or employer?

_____

Date of last promotion to a better job_____
How many hours did you work last week?_____
Wages per hour $_____

9. If "no" to question 8, -- What type of work did you do the last time you had a job?_____

10. Do you have any plans for continuing your own education? Yes___ No___ If "yes," what are your plans?

_____

_____

11. Do you plan to receive more training for the job you now have? Yes___ No___ Why?_____

_____

_____

12. Do you plan to prepare for another job?
Yes___ No___
Why?_____

_____

_____

13. Participation in organizations. (Put a (✓) for each yes response. Leave blank if response is no.)

Name or Organization	A. Are you a member?	B. Do you attend?	C. Do you contribute money?	D. Do you serve on a committee?	E. Do you hold an office?
1. Church					
2. Sunday School					
Other Church Organizations (write in)					
3.					
4.					
5. Lodge or Society					
6. Civic Club (e.g., Lions)					
7. P. T. A.					
8. Community Club					
9. Veterans Organizations (American Legion)					
10. Labor Unions					
Others (e.g., OEO, NAACP, CORE, Political Party)					
11.					
12.					

Appendix H

Supporting Data

Appendix Table 1. Test-retest reliability coefficients for the Survey of Opinion Scales

Scale	Test-retest Reliability Coefficients	
	Participants (N=279)	Nonparticipants (N=64)
I-E	.53	.53
BVA	.33	.28
BVB	.27	.05
BVC	.22	.45
BVD	.34	.36
BVE	.44	.42
BVF	.31	.34
Law	.54	.56
Education	.60	.51
Economic-Conservatism	.44	.40
Anomia (Moon and McCann)	.48	.32
Anomia (McClosky and Schaar)	.39	.24

Appendix Table 2. Test-retest reliability coefficients for the Tennessee Self Concept Scales

Scale	Test-retest Reliability Coefficients	
	Participants (N=279)	Nonparticipants (N=64)
Self-Criticism	.36	.38
Total Positive Self	.60	.33
Identity Self	.43	.24
Self-Satisfaction	.54	.34
Behavior Self	.60	.31
Physical Self	.49	.32
Moral-Ethical Self	.52	.40
Personal Self	.46	.36
Family Self	.50	.32
Social Self	.52	.23
Defensive Positive	.49	.41
General Maladjustment	.60	.39
Psychosis	.46	.45
Personality Disorder	.53	.43
Neurosis	.46	.36
Personality Integration	.47	.48

Appendix Table 3. Means for six independent variables for both participants and nonparticipants and by individual groups

Variable	Mean	Variance	S.D.
Participants and Nonparticipants N=343			
Age	43.5014	208.3384	14.4339
Education	6.3206	6.3939	2.5286
Income	314.6909	39908.3135	199.7706
North-Hatt	52.7434	47.2439	6.8734
Treatment Hours	43.1895	841.2008	29.0034
Social Participation Score	21.4635	269.1265	16.4050
Participants N=279			
Age	43.4946	205.5890	14.3383
Education	6.1971	6.6984	2.5881
Income	338.1111	41077.2861	202.6753
North-Hatt	52.8673	50.6909	7.1197
Treatment Hours	53.0967	506.9222	22.5149
Social Participation Score	22.3691	283.4783	16.8368
Nonparticipants N=64			
Age	43.5312	223.7767	14.9591
Education	6.8590	4.7894	2.1884
Income	212.5937	22365.0704	149.5495
North-Hatt	52.2031	32.4184	5.6937
Treatment Hours	0	0	0
Social Participation Score	17.5156	190.6029	13.8059

Appendix Table 4. Related T tests between participant means and nonparticipant means for selected independent variables

Variable	Standard Error of the Difference	Difference between Groups	T Value = Difference between Groups / Standard Error of Difference
Age	2.1055	0.0366	0.0017
Reported Education Level	0.3165	0.6619	2.0946
Monthly Income	22.2861	125.5074	5.6316
North-Hatt Prestige Score	0.8299	0.6642	0.8003
Social Participation Score	1.9985	4.8535	2.4285

Appendix Table 5. Frequencies of dichotomous variables for participants and nonparticipants in basic education instruction in North Carolina

Variable	Participants N	Participants %	Non-Participants N	Non-Participants %	Total N	Total %
Sex						
Male	127	45.5	15	23.4	142	41.4
Female	152	54.5	49	76.6	201	58.6
TOTAL	279	100.0	64	100.0	343	100.0
Race						
White	74	26.5	10	15.6	84	24.5
Black	205	73.5	54	84.4	259	75.5
TOTAL	279	100.0	64	100.0	343	100.0
Employment Status						
Employed full-time	191	68.5	29	45.3	220	64.1
Not employed full-time	88	31.5	35	54.7	123	35.9
TOTAL	279	100.0	64	100.0	343	100.0
Residence						
Rural	205	73.5	32	50.0	237	69.1
Urban	74	26.5	32	50.0	106	30.9
TOTAL	279	100.0	64	100.0	343	100.0

Appendix Table 6. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Internal-external Control of Events

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	8.7837	3.2699	9.2837	3.6584	-1.3378
Black	205	10.6146	2.9243	10.9951	3.1381	-1.7432
Male	127	9.3937	3.0838	9.8346	3.6509	-1.6053
Female	152	10.7434	3.0263	11.1315	2.9893	-1.4984
EFT[a]	191	10.0994	3.1381	10.3403	3.5070	-1.0775
Not EFT	88	10.1931	3.0993	10.9772	3.0018	-2.2657
QEC-Yes[b]	243	9.9588	3.1357	10.3909	3.4400	-2.1471
QEC-No	34	11.4411	2.7873	11.7058	2.5646	-0.4721
QJT-Yes[c]	69	9.9130	3.6490	9.4347	3.7748	1.3250
QJT-No	185	10.1783	2.8409	10.8486	3.1603	-2.9503
QPAJ-Yes[d]	151	10.0860	2.9073	10.4503	3.2283	-1.4206
QPAJ-No	107	10.1588	3.4344	10.4953	3.6610	-1.1286
Nonparticipants						
White	10	11.2000	3.8815	10.7000	3.3349	0.5649
Black	54	11.0740	3.5280	10.8333	3.9370	0.4747
Male	15	10.666	2.7688	10.2666	3.5959	0.4023
Female	49	11.2244	3.7763	10.9795	3.9130	0.4852
EFT	29	11.2068	3.7926	10.9310	4.1311	0.4203
Not EFT	35	11.000	3.3954	10.7142	3.6102	0.4609
QEC-Yes	36	11.000	3.7032	10.5000	4.0743	0.8629
QEC-No	27	11.2962	3.4509	11.2222	3.5769	0.1012
QJT-Yes	8	10.3750	5.3167	8.6250	5.0972	4.2488
QJT-No	52	11.2307	3.3990	11.0576	3.6159	0.3251
QPAJ-Yes	29	11.6551	3.4669	10.6896	3.9197	1.6966
QPAJ-No	33	10.8484	3.5188	10.7878	3.8710	0.0963

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 7. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: BVA Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	6.5135	1.1963	6.6216	1.0688	-0.7605
Black	205	6.0048	1.5130	6.0439	1.3872	-0.3221
Male	127	6.2125	1.3070	6.2913	1.2222	-0.6467
Female	152	6.0789	1.5633	6.1184	1.4135	-0.2713
EFT[a]	191	6.2408	1.4343	6.1727	1.3751	0.5917
Not EFT	88	5.9204	1.4717	6.2500	1.2433	-1.8872
QEC-Yes[b]	243	6.2057	1.4312	6.2057	1.3418	0.0000
QEC-No	34	5.6764	1.5515	6.0882	1.2878	-1.1564
QJT-Yes[c]	69	6.1014	1.4465	6.2318	1.1649	-0.7555
QJT-No	185	6.1675	1.4404	6.2054	1.3795	-0.3053
QPAJ-Yes[d]	151	6.2185	1.4042	6.1324	1.3548	0.6415
QPAJ-No	107	6.0560	1.4910	6.3084	1.2842	-1.6229
Nonparticipants						
White	10	6.4000	1.4298	6.9000	1.2866	-1.0000
Black	54	6.0370	1.3312	6.2592	1.4033	-0.9794
Male	15	5.7333	1.0327	6.2000	1.4242	-1.2402
Female	49	6.2040	1.4139	6.4081	1.3981	-0.8366
EFT	29	5.7586	1.2720	6.3103	1.4168	-1.8635
Not EFT	35	6.3714	1.3522	6.4000	1.3974	-0.1011
QEC-Yes	36	5.8888	1.3893	6.4444	1.1818	-2.0685
QEC-No	27	6.4444	1.1875	6.2962	1.6598	0.4645
QJT-Yes	8	5.8750	1.8077	6.8750	0.8345	-1.7638
QJT-No	52	6.1730	1.5826	6.3653	1.4146	-0.8489
QPAJ-Yes	29	5.8275	1.5826	6.5172	1.2989	-2.2813
QPAJ-No	33	6.2727	1.0686	6.1818	1.5094	0.3209

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 8. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: BVB Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	5.6756	1.4055	5.7837	1.5551	-0.5520
Black	205	5.4634	1.5162	5.6048	1.5919	-1.0599
Male	127	5.6220	1.3623	5.6456	1.5093	-0.1572
Female	152	5.4342	1.5849	5.6578	1.6441	-1.3970
EFT[a]	191	5.6230	1.4306	5.7277	1.5624	-0.8063
Not EFT	88	5.2954	1.5913	5.4886	1.6188	-0.9170
QEC-Yes[b]	243	5.6008	1.5188	5.6213	1.5891	-0.1698
QEC-No	34	4.9411	1.1531	5.7647	1.5187	-3.4770
QJT-Yes[c]	69	5.7101	1.3943	5.8260	1.7060	-0.5052
QJT-No	185	5.4540	1.5355	5.5513	1.5104	-0.7231
QPAJ-Yes[d]	151	5.4768	1.5570	5.6291	1.5689	-0.9674
QPAJ-No	107	5.5700	1.4673	5.7196	1.6006	-0.6667
Nonparticipants						
White	10	5.2000	1.3165	5.2000	2.0976	0.0000
Black	54	5.1111	1.4751	5.7592	1.7797	-2.0564
Male	15	5.2666	1.3345	5.7333	1.5796	-0.8750
Female	49	5.0816	1.4837	5.6530	1.9099	-1.6991
EFT	29	4.8275	1.4409	6.0344	1.7213	-3.3284
Not EFT	35	5.3714	1.4159	5.3714	1.8800	0.0000
QEC-Yes	36	5.2500	1.4015	5.5555	1.7959	-0.9244
QEC-No	27	5.0000	1.5191	5.8518	1.9155	-1.6665
QJT-Yes	8	5.3750	1.6850	5.6250	2.3260	-0.4034
QJT-No	52	5.0769	1.4531	5.7115	1.8186	-1.9058
QPAJ-Yes	29	5.1379	1.4571	5.8275	1.7539	-1.9069
QPAJ-No	33	5.1212	1.4738	5.5757	1.9369	-1.0188

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training fot the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 9. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: BVC Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	2.6756	1.2398	2.9459	1.3738	-1.4700
Black	205	2.8146	1.1609	2.6487	1.0907	1.6662
Male	127	2.7874	1.2384	2.7795	1.2593	0.0594
Female	152	2.7697	1.1362	2.6842	1.1063	0.7177
EFT[a]	191	2.7748	1.2124	2.7801	1.2455	-0.0473
Not EFT	88	2.7840	1.1187	2.6136	1.0106	1.1701
QEC-Yes[b]	243	2.7777	1.1957	2.7366	1.2045	0.4256
QEC-No	34	2.7352	1.1094	2.5882	0.9571	0.6567
QJT-Yes[c]	69	2.7826	1.0828	2.8695	1.0834	-0.6519
QJT-No	185	2.7945	1.2251	2.6756	1.2125	1.0127
QPAJ-Yes	151	2.7947	1.1962	2.8874	1.1806	-0.7816
QPAJ-No	107	2.7757	1.1517	2.5700	1.1419	1.4091
Nonparticipants						
White	10	3.0000	1.4907	2.2000	1.1352	1.7142
Black	54	3.1481	1.2798	2.9444	1.3516	1.0965
Male	15	3.2000	1.0141	3.0666	1.1629	0.3808
Female	49	3.1020	1.3881	2.7551	1.3923	1.7253
EFT	29	3.2758	1.3600	2.9655	1.4010	1.0554
Not EFT	35	3.0000	1.2602	2.7142	1.2964	1.3782
QEC-Yes	36	3.1944	1.4306	2.8611	1.4373	1.2076
QEC-No	27	3.0370	1.1596	2.8148	1.2414	1.1854
QJT-Yes	8	3.2500	1.5811	3.3750	1.0606	-0.2153
QJT-No	52	3.0192	1.2444	2.7500	1.4124	1.4930
QPAJ-Yes	29	3.3793	1.3735	3.0344	1.4995	1.0213
QPAJ-No	33	2.9090	1.2339	2.6969	1.1854	1.3141

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 10. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: BVD Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	6.1081	0.9299	6.1891	1.0024	-0.7477
Black	205	5.0926	1.5003	5.3170	1.4044	-1.7947
Male	127	5.6377	1.4620	5.7401	1.2799	-0.7265
Female	152	5.1315	1.3890	5.3881	1.4144	-1.9460
EFT[a]	191	5.4136	1.5014	5.6125	1.3481	-1.7044
Not EFT	88	5.2500	1.3064	5.4090	1.3948	-0.9305
QEC-Yes[b]	191	5.4238	1.4507	5.6008	1.3408	-1.7411
QEC-No	34	4.8235	1.2666	5.0882	1.4005	-0.8430
QJT-Yes[c]	69	5.5362	1.3684	5.6231	1.2378	-0.4972
QJT-No	185	5.3135	1.5104	5.5027	1.4146	-1.5573
QPAJ-Yes[d]	151	5.4304	1.5033	5.6092	1.3315	-1.2914
QPAJ-No	109	5.3084	1.4235	5.4579	1.3959	-1.0464
Nonparticipants						
White	10	5.7000	1.2516	5.0000	1.3333	1.7685
Black	54	5.1666	1.5989	5.3518	1.5191	-0.7685
Male	15	5.4000	0.9856	5.5333	1.4074	-0.3966
Female	49	5.2040	1.6953	5.2244	1.5174	-0.0775
EFT	29	5.1724	1.4409	5.1724	1.6705	0.0000
Not EFT	35	5.3142	1.6586	5.4000	1.3328	-0.2889
QEC-Yes	36	5.2500	1.4015	5.5000	1.4040	-0.8841
QEC-No	27	5.1851	1.7549	5.0370	1.6048	0.4404
QJT-Yes	8	5.1250	1.8850	5.5000	1.6903	-0.5516
QJT-No	52	5.2692	1.5732	5.2884	1.5125	-0.0790
QPAJ-Yes	29	5.3793	1.4494	5.4827	1.2989	-0.3556
QPAJ-No	33	5.0909	1.6651	5.0606	1.6382	0.0910

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 11. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: BVE Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	5.2162	1.4455	5.5135	1.5636	-1.9057
Black	205	4.8195	1.5280	4.9121	1.5567	-0.7641
Male	127	4.9133	1.5014	5.1023	1.6224	-1.3722
Female	152	4.9342	1.5297	5.0460	1.5455	-1.3970
EFT[a]	191	4.8481	1.5670	5.1518	1.6101	-2.5912
Not EFT	88	5.0909	1.3866	4.8977	1.5012	1.1009
QEC-Yes[b]	243	5.0082	1.4965	5.1522	1.5632	-1.3850
QEC-No	34	4.2647	1.5237	4.4411	1.5990	-0.5562
QJT-Yes[c]	69	4.9710	1.4649	5.5362	1.5298	-2.9270
QJT-No	185	4.8270	1.5366	4.9081	1.5134	-0.5562
QPAJ-Yes[d]	151	4.9735	1.4964	5.2052	1.5634	-1.7379
QPAJ-No	107	4.7943	1.5765	4.9158	1.5608	-0.8096
Nonparticipants						
White	10	4.8000	1.9321	4.4000	1.8378	0.6123
Black	54	4.8703	1.4148	4.9444	1.5950	-0.3376
Male	15	5.0666	1.5337	4.4000	1.4040	1.3483
Female	49	4.7959	1.4857	5.0000	1.6832	-0.9112
EFT	29	4.7931	1.7602	4.8965	1.6764	-0.3241
Not EFT	35	4.9142	1.2454	4.8285	1.6176	0.3037
QEC-Yes	36	4.8888	1.4885	5.1944	1.6181	-0.9754
QEC-No	27	4.7407	1.4830	4.4444	1.6012	1.2470
QJT-Yes	8	5.2500	1.6690	5.0000	1.8516	0.4236
QJT-No	52	4.8653	1.4954	4.9230	1.5946	-0.2387
QPAJ-Yes	29	4.7241	1.4115	5.1379	1.6196	-1.2639
QPAJ-No	33	4.9393	1.5600	4.6666	1.6520	1.0000

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]Do you plan to prepare for another job? Yes - No.

Appendix Table 12. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: BVF Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	5.3918	0.9625	5.2972	1.0819	0.7662
Black	205	4.9121	1.1972	5.0292	1.3244	-1.0869
Male	127	5.1732	1.1062	5.1889	1.2066	-0.1319
Female	152	4.9276	1.1910	5.0263	1.3169	-0.8090
EFT[a]	191	5.1256	1.1675	5.1151	1.2385	0.1015
Not EFT	88	4.8522	1.1197	5.0681	1.3373	-1.4046
QEC-Yes[b]	243	5.0823	1.1397	5.1111	1.2952	-0.3096
QEC-No	34	4.7058	1.2680	5.0294	1.0867	-1.4824
QJT-Yes[c]	69	5.2608	1.1838	5.2173	1.0553	0.3641
QJT-No	185	4.9729	1.1629	5.1135	1.3076	-1.2328
QPAJ-Yes[d]	151	5.0529	1.1418	5.0794	1.2464	-0.2181
QPAJ-No	107	5.0373	1.1968	5.2056	1.2866	-1.3032
Nonparticipants						
White	10	4.6000	1.1737	4.6000	0.8432	0.0000
Black	54	4.9444	1.2501	4.8703	1.1982	0.3891
Male	15	4.6666	1.0465	4.8666	1.3557	-0.6756
Female	49	4.9591	1.2903	4.8163	1.0930	0.6998
EFT	29	4.7586	1.3270	4.9655	1.2095	-0.7967
Not EFT	35	5.0000	1.1631	4.7142	1.1000	1.2816
QEC-Yes	36	4.7500	1.3601	5.0277	1.2067	-1.1851
QEC-No	27	5.0000	1.0000	4.5185	1.0141	2.0495
QJT-Yes	8	5.6250	1.5059	5.6250	1.3024	0.0000
QJT-No	52	4.8076	1.2051	4.7692	1.0957	0.1924
QPAJ-Yes	29	4.7586	1.2998	5.0344	1.0170	-0.9547
QPAJ-No	33	5.0000	1.2247	4.6363	1.2702	1.7888

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 13. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Law Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	57.5675	9.2085	58.6756	8.2944	-1.1213
Black	205	63.2195	7.9511	63.3121	8.3765	-0.1610
Male	127	61.5118	9.1849	62.0393	8.5173	-0.7581
Female	152	61.8947	8.2125	62.1184	8.6751	-0.3171
EFT[a]	191	61.6282	9.0299	62.3036	8.4075	-1.2467
Not EFT	88	61.9204	7.8135	61.6022	8.9987	0.3025
QEC-Yes[b]	243	61.6131	8.7517	62.0164	8.4974	-0.7710
QEC-No	34	62.5588	8.2505	62.5882	9.4327	-0.0182
QJT-Yes[c]	69	61.3768	9.6392	61.8695	8.9523	-0.5903
QJT-No	185	61.4162	8.3278	62.2000	8.4040	-1.2627
QPAJ-Yes[d]	151	61.3178	9.3754	62.5629	8.7464	-1.9490
QPAJ-No	107	61.6915	7.4750	60.9906	8.7399	0.8297
Nonparticipants						
White	10	56.6000	15.4358	57.5000	13.8263	-0.2345
Black	54	60.0185	8.6165	61.6851	9.3138	-1.3709
Male	15	59.5333	9.5906	63.9333	7.1760	-2.3736
Female	49	59.4693	10.0935	60.1428	10.7819	-0.4774
EFT	29	60.3103	10.9580	59.3103	9.9178	0.6943
Not EFT	35	58.8000	9.0417	62.4571	10.2249	-2.1228
QEC-Yes	36	60.9722	8.4633	63.1111	9.5760	-1.4296
QEC-No	27	57.2222	11.4298	58.1111	10.4783	-0.4530
QJT-Yes	8	59.1250	9.4783	58.5000	10.6636	0.1900
QJT-No	52	59.0576	10.1390	61.0576	10.3173	-1.5123
QPAJ-Yes	29	61.6206	5.6783	62.6206	7.2821	-0.7251
QPAJ-No	33	57.7878	12.3104	59.9393	12.0128	-1.1073

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 14. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Education Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	41.6484	7.1929	42.2027	8.1727	-0.7158
Black	205	48.7317	9.9706	48.7707	9.1662	-0.0611
Male	127	45.4173	9.0505	46.1496	8.7523	-1.0562
Female	152	48.0526	10.2884	47.7631	9.8092	0.3922
EFT[a]	191	46.0261	9.7799	46.3664	9.0059	-0.5794
Not EFT	88	48.6477	9.7072	48.4659	9.9918	0.1810
QEC-Yes[b]	243	46.2263	9.2643	46.7448	9.2660	-0.9924
QEC-No	34	51.6470	12.4020	49.4411	9.9519	1.1754
QJT-Yes[c]	69	44.2318	9.4451	46.0000	8.9820	-1.9284
QJT-No	185	47.2864	9.9148	47.3729	9.4285	-0.1395
QPAJ-Yes[d]	151	46.7086	9.5879	47.4966	9.4296	-1.1055
QPAJ-No	107	46.2336	10.2041	45.7196	9.2805	0.6226
Nonparticipants						
White	10	43.0000	12.3017	46.8000	12.9254	-1.8358
Black	54	48.6666	9.6485	46.6111	8.9556	1.5061
Male	15	48.0666	10.3610	46.0666	10.6265	0.7664
Female	49	47.6938	10.2697	46.8163	9.3177	0.6301
EFT	29	50.1379	9.3721	48.5862	9.1320	0.8891
Not EFT	35	45.8285	10.5899	45.0285	9.7301	0.4649
QEC-Yes	36	48.7222	10.1463	46.3611	8.3705	1.4178
QEC-No	27	46.4444	10.5222	46.8148	11.2148	-0.2008
QJT-Yes	8	46.2500	11.1066	44.2500	7.9597	0.5428
QJT-No	52	47.4230	9.9987	46.4230	9.5821	0.7751
QPAJ-Yes	29	49.7241	8.0484	47.7241	8.3618	1.2101
QPAJ-No	33	45.8181	11.5093	46.0909	10.7015	-0.1561

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 15. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Economic Conservatism Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	59.4324	6.7824	60.5270	6.3918	-1.2380
Black	205	66.2829	6.4790	65.4048	6.0728	1.7756
Male	127	63.1889	7.6570	63.3779	7.3828	-0.2792
Female	152	65.5328	6.6640	64.7236	5.6418	1.4386
EFT[a]	191	63.9842	7.4927	63.8952	6.6155	0.1765
Not EFT	88	65.5113	6.4913	64.5795	6.3003	1.1097
QEC-Yes[b]	243	64.4485	7.1645	63.9300	6.5535	1.1386
QEC-No	34	64.8529	7.7932	65.7647	5.9800	-0.6331
QJT-Yes[c]	69	63.5942	8.1046	63.6376	7.6253	-0.0520
QJT-No	185	64.6162	7.0417	64.1891	6.2381	0.7821
QPAJ-Yes[d]	151	64.5165	7.4016	64.8609	6.5980	-0.6175
QPAJ-No	107	64.1401	7.3220	63.0373	6.5357	1.4565
Nonparticipants						
White	10	58.9000	8.9870	63.8000	10.6957	-1.5609
Black	54	65.8333	5.2977	65.2777	5.6012	0.6530
Male	15	65.5333	6.0929	65.9333	4.1827	-0.2983
Female	49	64.5102	6.5958	64.7755	7.1451	-0.2417
EFT	29	65.1379	7.3022	64.3103	5.9227	0.9606
Not EFT	35	64.2000	5.6972	65.6571	7.0708	-1.1143
QEC-Yes	36	65.1944	5.0642	65.7222	6.7426	-0.4613
QEC-No	27	63.8518	7.9066	64.2222	6.4470	-0.2574
QJT-Yes	8	63.5000	7.3872	64.8750	4.7939	-0.7588
QJT-No	52	64.9230	6.4923	64.9038	6.9458	0.0181
QPAJ-Yes	29	66.3793	4.2377	64.9310	6.2845	1.1311
QPAJ-No	33	63.3030	7.8441	65.0303	7.0466	-1.3555

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 16. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Moon-McCann Anomia Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
			Participants			
White	74	2.8918	1.6181	2.6891	1.6873	1.1564
Black	205	3.7073	1.5088	3.2731	1.6340	3.6664
Male	127	3.2047	1.6587	3.0078	1.6737	1.4986
Female	152	3.7302	1.4691	3.2105	1.6583	3.6245
EFT[a]	191	3.3612	1.5662	3.1780	1.6318	1.6783
Not EFT	88	3.7727	1.5736	2.9886	1.7386	3.9551
QEC-Yes[b]	243	3.4814	1.5728	3.0864	1.6703	3.9108
QEC-No	34	3.7552	1.4834	3.4411	1.6179	0.8015
QJT-Yes[c]	69	3.2318	1.6990	3.1594	1.6682	0.4017
QJT-No	185	3.5675	1.5205	3.1945	1.6235	3.1046
QPAJ-Yes[d]	151	3.4569	1.6154	3.2582	1.6226	1.6214
QPAJ-No	107	3.6074	1.5403	3.1121	1.6559	2.8328
			Nonparticipants			
White	10	3.4000	1.5776	4.1000	1.9692	-1.9090
Black	54	3.6666	1.7265	3.4444	1.7119	0.7716
Male	15	3.6666	1.4424	3.4000	2.0632	0.5311
Female	49	3.6122	1.7773	3.5918	1.6698	0.0694
EFT	29	3.4137	1.7220	3.4827	1.8635	-0.1910
Not EFT	35	3.8000	1.6768	3.6000	1.6838	0.5640
QEC-Yes	36	3.6944	1.7698	3.4722	1.9491	0.5660
QEC-No	27	3.6296	1.5725	3.6296	1.5228	0.0000
QJT-Yes	8	2.6250	2.0658	3.6250	2.0658	-1.2833
QJT-No	52	3.7307	1.5732	3.6153	1.6704	0.4341
QPAJ-Yes	29	3.6896	1.5607	3.4482	1.7644	0.5519
QPAJ-No	33	3.7272	1.7548	3.7272	1.7548	0.0000

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 17. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: McClusky and Schaar Anomia Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	6.5270	1.6320	5.8783	1.6957	3.2831
Black	205	6.3073	1.8519	5.6829	2.0726	4.0256
Male	127	6.2913	1.8648	5.7716	1.8395	3.1209
Female	152	6.4276	1.7400	5.7039	2.0933	3.9500
EFT[a]	191	6.3717	1.8073	5.9005	1.8511	3.4586
Not EFT	88	6.3522	1.7813	5.3750	2.1988	3.7215
QEC-Yes[b]	243	6.3209	1.8192	5.6831	1.9923	4.8240
QEC-No	34	6.7352	1.6387	6.2352	1.7762	1.2397
QJT-Yes[c]	69	6.3043	1.9800	5.9275	2.0673	1.5099
QJT-No	185	6.3135	1.7317	5.8108	1.8829	3.4274
QPAJ-Yes[d]	151	6.3245	1.8422	5.7682	1.8989	3.4257
QPAJ-No	107	6.4579	1.7444	5.8224	2.0595	2.9397
Nonparticipants						
White	10	5.9000	2.6012	5.5000	2.7988	0.7385
Black	54	6.2592	1.8447	5.4444	1.8900	2.3163
Male	15	6.0000	2.1380	6.7333	1.7199	-1.3395
Female	49	6.2653	1.9232	5.0612	1.9728	3.5152
EFT	29	5.8620	1.8655	5.2758	2.2344	1.3682
Not EFT	35	6.4857	2.0200	5.6000	1.8661	2.0079
QEC-Yes	36	6.2777	1.9214	5.3333	1.7885	3.0365
QEC-No	27	6.2592	1.9133	5.5185	2.3266	1.3441
QJT-Yes	8	6.0000	1.7728	5.0000	2.4494	2.0000
QJT-No	52	6.2692	2.0495	5.5192	1.9949	2.0892
QPAJ-Yes	29	6.0689	1.9987	5.3448	1.8180	1.5652
QPAJ-No	33	6.3636	1.9656	5.5757	2.2642	1.8310

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 18. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Self Criticism Scale

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	35.5135	5.4124	36.0405	5.7990	-0.6892
Black	205	35.3073	6.2039	34.2975	6.3812	2.0486
Male	127	35.1811	5.8708	34.9921	5.8736	0.3222
Female	172	35.5131	6.1126	34.5657	6.5948	1.6144
EFT[a]	191	35.5654	5.8924	35.1518	5.8248	0.8952
Not EFT	88	34.9204	6.2242	33.9090	7.1012	1.1742
QEC-Yes[b]	243	35.2427	5.9954	34.4691	5.4380	1.6905
QEC-No	34	36.4117	6.1057	36.9411	5.4380	-0.5430
QJT-Yes[c]	69	35.9420	6.0728	35.5217	5.5957	0.5627
QJT-No	185	35.3405	5.8223	34.8540	6.2489	0.9099
QPAJ-Yes[d]	151	35.8476	5.9674	35.9602	6.1512	-0.1924
QPAJ-No	107	34.9252	6.0355	33.8317	6.1329	1.6813
Inc <200[e]	84	34.9047	6.3523	34.0238	6.6113	1.1664
Inc 201+	195	35.5589	5.8406	35.0769	6.1063	0.9639
SPS < 18[f]	151	36.0331	5.6773	35.5231	5.6519	0.9114
SPS 18+	128	34.5703	6.2804	33.8593	6.8409	1.1371
Nonparticipants						
White	10	35.1000	5.3634	37.0000	9.6609	-0.6361
Black	54	36.3148	6.0682	35.3518	6.7855	1.0154
Male	15	36.2666	5.6120	36.1333	6.3117	0.1327
Female	49	36.0816	6.0924	35.4489	7.5555	0.5397
EFT	29	35.1379	5.3965	35.4482	6.2717	-0.2417
Not EFT	35	36.9428	6.3149	35.7428	8.0452	0.9094
QEC-Yes	36	35.8611	6.0636	35.9722	6.9507	-0.0788
QEC-No	27	36.5185	5.1468	35.3703	7.7516	1.0188
QJT-Yes	8	36.6250	7.8909	36.2500	4.4960	-0.3259
QJT-No	52	36.3846	5.8180	35.4230	7.5468	0.9132
QPAJ-Yes	29	36.4137	6.0857	35.4482	6.4175	0.6394
QPAJ-No	33	36.1818	5.9395	36.0606	8.0036	0.0997
Inc <200	37	37.7027	5.8350	37.0000	7.0474	0.5620
Inc 201+	27	33.9629	5.4735	33.7037	7.1940	0.1861
SPS <18	38	35.4736	5.2850	35.3157	8.2432	0.1280
SPS 18+	26	37.0769	6.7818	36.0384	5.5891	0.7351

(Continued)

Appendix Table 18, continued

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[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

[e]Inc--Reported monthly income.

[f]SPS--Social participation scores.

Appendix Table 19. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Total Positive Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	326.1756	26.1200	328.0000	27.7044	-0.7217
Black	205	328.6975	30.7955	328.2487	37.1125	0.2044
Male	127	326.2283	27.1951	324.6377	29.5389	0.7307
Female	152	329.5328	31.4838	331.1447	38.5276	-0.6109
EFT[a]	191	326.8167	29.2854	325.2774	32.2479	0.8449
Not EFT	88	330.6590	30.2817	334.4886	39.2917	-0.9919
QEC-Yes[b]	243	329.4032	29.5162	328.8559	34.6530	0.2870
QEC-No	34	317.7647	28.9765	324.2058	36.6397	-1.5221
QJT-Yes[c]	69	326.5942	29.2345	326.4782	30.4392	0.0478
QJT-No	185	328.2162	30.0600	327.2594	36.3770	0.4056
QPAJ-Yes[d]	151	327.5629	30.6286	326.6158	33.9603	0.4252
QPAJ-No	107	328.3457	27.9561	328.7850	35.9493	-0.1437
Nonparticipants						
White	10	315.6000	29.4776	315.1000	44.6229	0.0657
Black	54	326.7407	39.1635	327.5740	31.0091	-0.1392
Male	15	323.9333	38.2332	315.1333	39.3770	0.7740
Female	49	325.3265	38.0982	323.8367	31.0687	-0.6064
EFT	29	332.3448	37.3365	333.5172	29.1285	-0.1575
Not EFT	35	318.9142	37.6769	319.0857	35.6192	-0.0236
QEC-Yes	36	322.2777	43.1460	330.6666	31.9437	-1.2471
QEC-No	27	329.2222	30.3813	317.6666	34.3869	1.4927
QJT-Yes	8	319.2500	25.8111	319.2500	16.0156	0.0000
QJT-No	52	323.8461	38.9456	327.9615	35.8476	-0.7275
QPAJ-Yes	29	321.4137	39.8573	333.2758	30.0248	-1.4978
QPAJ-No	33	325.4848	35.8740	319.6969	35.3610	0.9185

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 20. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Identity Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
			Participants			
White	74	121.6891	11.6194	121.7702	10.6841	-0.0689
Black	205	121.0146	12.9896	120.2487	15.0421	0.7038
Male	127	121.9448	15.5939	119.4645	13.1298	2.1486
Female	152	120.5657	12.6557	121.6447	14.6858	-0.8759
EFT[a]	191	121.2774	12.7155	120.6806	13.9701	0.6185
Not EFT	88	121.0113	12.4922	120.5909	14.1970	0.2413
QEC-Yes[b]	243	121.7983	12.5660	120.7860	13.7277	1.1029
QEC-No	34	116.7352	12.6594	119.9411	16.4702	-1.2963
QJT-Yes[c]	69	121.7681	12.7914	120.2753	12.8084	0.9747
QJT-No	185	120.8162	12.5511	120.4864	14.8034	0.2993
QPAJ-Yes[d]	151	121.0860	12.2081	121.0066	13.4191	0.0748
QPAJ-No	107	121.2056	12.8677	120.1560	15.0745	0.7547
			Nonparticipants			
White	10	117.2000	15.7042	114.3000	16.9052	0.7610
Black	54	118.1666	16.5070	120.2037	13.1527	-0.7643
Male	15	117.0666	16.4337	114.0000	16.4837	0.5931
Female	49	118.3061	16.3747	120.8979	12.6528	-0.9980
EFT	29	121.2068	17.5852	122.1379	11.3600	-0.2521
Not EFT	35	115.3714	14.8226	116.9142	15.3285	-0.5129
QEC-Yes	36	116.9722	18.3107	121.2777	13.3963	-1.3754
QEC-No	27	119.8148	13.4251	116.9142	15.3285	-0.0751
QJT-Yes	8	121.7500	10.6871	122.3750	11.0316	-0.1051
QJT-No	52	117.0000	17.3521	119.0192	14.5217	-0.7549
QPAJ-Yes	29	116.2758	15.8765	123.1034	11.4559	-2.0678
QPAJ-No	33	119.2121	17.0985	116.1212	15.1487	0.9468

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[b]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 21. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants Self Satisfaction

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	96.0675	10.5185	97.9189	10.5086	-1.5926
Black	205	99.1512	11.4968	100.3219	14.4904	-1.3037
Male	127	96.5354	9.9233	97.9212	10.1798	-1.6054
Female	152	99.8355	12.1788	101.1578	15.7438	-1.1739
EFT[a]	191	97.5235	10.9692	97.7539	11.9770	-0.2941
Not EFT	88	100.0909	11.8899	103.8750	15.7923	-2.4659
QEC-Yes[b]	243	98.5267	11.1955	99.9341	13.5006	-1.7838
QEC-No	34	96.8529	11.9902	98.0000	14.2446	-0.5785
QJT-Yes[c]	69	96.9130	11.2716	98.9710	11.6983	-1.7771
QJT-No	185	98.8216	11.2961	99.3675	14.0621	-0.5781
QPAJ-Yes[d]	151	97.5430	11.7857	98.6423	12.9950	-1.2219
QPAJ-No	107	99.2242	10.7108	100.2616	13.8648	-0.8075
Nonparticipants						
White	10	90.1000	8.1982	94.4000	14.4775	-0.8615
Black	54	100.1666	15.7033	100.2037	12.8553	-0.0165
Male	15	99.3333	13.6521	98.0000	12.7110	0.4380
Female	49	98.3673	15.7515	99.6938	13.4120	-0.5299
EFT	29	99.6551	16.5276	101.8965	12.0069	-0.7995
Not EFT	35	97.7142	14.1641	97.1428	13.8630	0.1945
QEC-Yes	36	98.7500	18.0085	101.5833	14.5373	-0.9722
QEC-No	27	98.4814	11.0431	96.0000	10.7524	0.8835
QJT-Yes	8	92.3750	17.3364	90.3750	8.8952	0.3879
QPAJ-Yes	52	98.2500	13.7667	101.2115	13.4723	-1.4633
QPAJ-No	33	98.2727	12.6867	97.3030	11.9778	0.4144

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 22. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Behavior

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	108.4189	10.0301	108.3108	12.2518	0.0930
Black	205	108.5317	12.4240	107.6780	14.1113	1.0162
Male	127	107.7480	10.8144	107.2519	11.5929	0.5437
Female	152	109.1315	12.5980	108.3421	14.8988	0.7800
EFT[a]	191	108.0157	11.6196	106.8429	12.7459	1.6054
Not EFT	88	109.5568	12.2416	110.0227	15.2096	-0.3098
QEC-Yes[b]	243	109.0781	11.7535	108.1358	13.4993	1.2657
QEC-No	34	104.1764	11.8436	106.2647	14.6438	-1.1621
QJT-Yes[c]	69	107.9130	11.2036	107.2318	11.0748	0.7788
QJT-No	185	108.5783	12.1380	107.4054	14.1817	1.2806
QPAJ-Yes[d]	151	108.9337	12.4406	106.9668	13.9959	2.1353
QPAJ-No	107	107.9158	10.9769	108.4672	12.9048	-0.4967
Nonparticipants						
White	10	108.3000	13.6630	106.4000	15.6432	0.8288
Black	54	108.4074	13.3254	107.1666	11.2396	0.5725
Male	15	107.5333	15.3011	103.1333	13.4103	0.9281
Female	49	108.6530	12.7468	108.2448	11.2593	0.2084
EFT	29	111.4827	10.0910	109.4827	12.0464	0.7768
Not EFT	35	105.8285	15.0811	105.0285	11.5363	0.2991
QEC-Yes	36	106.5555	13.3040	107.8055	10.0223	-0.6255
QEC-No	27	110.9259	13.2952	105.4814	13.9735	1.6241
QJT-Yes	8	105.1250	5.5145	106.5000	4.5039	-0.7068
QJT-No	52	108.5961	13.7929	107.7307	12.5777	0.4302
QPAJ-Yes	29	107.7931	12.8379	108.7931	10.0049	-0.3962
QPAJ-No	33	108.0000	13.3930	106.2727	12.9476	0.7307

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 23. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Physical Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	65.2297	7.8505	65.1891	7.1398	0.0551
Black	205	66.5853	7.8038	65.4878	9.3324	1.7307
Male	127	66.5905	7.7268	65.2519	7.2385	2.0044
Female	152	65.9210	7.9188	65.5394	9.9288	0.5149
EFT[a]	191	66.6073	7.8242	65.2879	8.4377	2.2703
Not EFT	88	65.3977	7.8073	65.6704	9.5637	-0.2775
QEC-Yes[b]	243	64.4032	7.8156	65.4723	8.8084	1.6840
QEC-No	34	65.0882	8.0316	65.0294	8.9357	0.0459
QJT-Yes[c]	69	66.6956	7.4484	66.3333	7.1899	0.4369
QJT-No	185	66.3027	8.0159	64.9729	9.1713	2.0500
QPAJ-Yes[d]	151	66.5099	7.9698	65.3443	9.0804	1.7071
QPAJ-No	107	65.9906	7.6608	65.4112	8.2861	0.7259
Nonparticipants						
White	10	58.7000	9.4756	61.1000	12.0134	-0.7998
Black	54	64.2407	9.5343	65.4814	8.6607	-0.8004
Male	15	64.7333	9.5578	63.4666	12.6370	0.5210
Female	49	62.9591	9.7573	65.2040	8.1214	-1.3700
EFT	29	64.1379	8.8669	67.0000	9.3312	-1.4532
Not EFT	35	62.7428	10.3649	62.9714	8.9786	-0.1183
QEC-Yes	36	64.1388	10.5726	66.7500	9.8861	-1.5908
QEC-No	27	62.4444	8.5993	61.7407	7.5375	0.2978
QJT-Yes	8	59.8750	3.7961	63.6250	5.0409	-1.5275
QJT-No	52	63.4807	9.8746	64.7307	9.9017	-0.7783
QPAJ-Yes	29	63.8620	9.8659	69.0689	8.4173	-2.8096
QPAJ-No	33	61.9090	8.8295	60.9090	8.5963	0.5261

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 24. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Moral-Ethical Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	66.7702	7.3662	65.7162	8.5295	1.1582
Black	205	68.0878	8.0860	67.7756	10.0038	0.4952
Male	127	66.3937	7.6595	65.4881	8.7920	1.3871
Female	152	68.8618	7.9651	68.6842	10.1351	0.2252
EFT[a]	191	67.0107	7.7940	66.0104	8.8192	1.8295
Not EFT	88	69.3181	7.9734	68.8750	10.8699	-0.4839
QEC-Yes[b]	243	67.9259	7.9311	67.2921	9.7184	1.1050
QEC-No	34	66.4705	7.9857	67.0882	9.5770	-0.5032
QJT-Yes[c]	69	66.8260	8.4817	65.6521	9.2064	1.4161
QJT-No	185	68.0648	7.5689	67.4432	9.6271	0.9065
QPAJ-Yes[d]	151	67.4768	8.0306	66.7072	9.2219	0.8166
QPAJ-No	107	67.9813	7.8331	67.0560	10.0703	1.0673
Nonparticipants						
White	10	66.0000	8.0966	66.1000	9.5271	-0.0367
Black	54	67.0370	10.3175	68.1666	9.6890	-0.7442
Male	15	64.4000	9.9842	64.8666	8.4504	-0.1861
Female	49	67.6326	9.9219	68.7551	9.8478	-0.7001
EFT	29	70.0344	9.0217	70.0689	7.2748	-0.0225
Not EFT	35	64.2571	10.0479	66.0000	10.9598	-0.8237
QEC-Yes	36	65.8333	11.7752	68.3611	9.2401	-1.3637
QEC-No	27	68.3333	7.0383	67.2962	10.3916	0.5250
QJT-Yes	8	66.6250	8.7167	66.0000	7.6531	0.2344
QJT-No	52	66.6153	10.6153	68.7115	9.5061	-1.4871
QPAJ-Yes	29	66.5517	10.9171	68.5517	9.1946	-0.9294
QPAJ-No	33	67.0606	9.5096	67.8484	9.8745	-0.4627

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 25. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Personal Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	61.0540	6.6742	62.6351	7.3121	-1.9653
Black	205	64.1951	8.8023	64.6146	8.6666	-0.6507
Male	127	62.9212	6.9779	63.2992	6.7026	-0.5626
Female	152	63.7302	9.4251	64.7500	9.5016	-1.3199
EFT[a]	191	63.1465	8.0091	63.1570	7.4145	-0.0183
Not EFT	88	63.8295	9.2092	66.1136	9.8651	-2.1266
QEC-Yes[b]	243	63.5473	8.5961	64.2551	8.3858	-1.2553
QEC-No	34	62.0586	6.8787	63.0588	8.4421	-0.7141
QJT-Yes[c]	69	63.5362	7.8620	64.2318	7.8985	-0.8924
QJT-No	185	63.0810	8.6009	63.7351	8.6702	-0.9360
QPAJ-Yes[d]	151	63.7019	9.0625	63.6953	8.3394	0.0096
QPAJ-No	107	62.7102	7.5110	64.1401	8.5090	-1.5773
Nonparticipants						
White	10	62.7000	7.5432	58.7000	9.0437	1.9215
Black	54	64.1296	8.4139	63.2222	7.9471	0.6903
Male	15	62.2666	7.4877	58.8000	8.4193	1.3849
Female	49	64.4081	8.4703	63.6530	7.8966	0.3779
EFT	29	65.2413	7.7995	62.6896	7.0665	1.4367
Not EFT	35	62.8000	8.5467	62.3714	9.1654	0.2802
QEC-Yes	36	63.9166	8.1077	63.0555	7.5590	0.6057
QEC-No	27	64.2222	8.5455	61.4074	8.9925	1.5135
QJT-Yes	8	61.3750	6.3681	60.0000	5.0990	0.4194
QJT-No	52	63.6730	8.4196	63.0000	8.7783	0.5255
QPAJ-Yes	29	62.7931	8.5246	62.5862	7.7021	0.1208
QPAJ-No	33	64.4848	8.1245	62.7878	8.8626	1.0666

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 26. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Family Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	68.4054	7.5596	68.2837	7.1778	0.1607
Black	205	65.6146	7.6017	66.1219	8.1022	-0.8857
Male	127	66.2913	7.3895	66.7165	7.5455	-0.7118
Female	152	66.4078	7.9329	66.6776	8.2322	-0.3874
EFT[a]	191	65.9738	7.8226	66.4938	7.6913	-1.0002
Not EFT[b]	88	67.1818	7.3258	67.1250	8.4033	0.0599
QEC-Yes	243	66.8065	7.6357	66.8683	7.8581	-0.1241
QEC-No	34	62.9411	7.1007	65.5294	8.3384	-1.9128
QJT-Yes[c]	69	65.3043	7.7900	66.4927	7.4134	-1.9280
QJT-No	185	66.6162	7.6313	66.3567	8.1355	0.4158
QPAJ-Yes[d]	151	65.7748	7.8495	66.3112	7.6430	-0.9045
QPAJ-No	107	67.0654	7.5751	66.8130	8.2326	0.3100
Nonparticipants						
White	10	64.9000	8.4254	64.9000	9.6315	0.0000
Black	54	66.1851	9.5799	66.3148	8.2823	-0.0867
Male	15	66.0666	9.5428	64.2666	9.6766	0.5974
Female	49	65.9591	9.4007	66.6530	8.0507	-0.4834
EFT	29	66.5517	9.9770	67.7931	7.5799	-0.6261
Not EFT	35	65.5142	8.9323	64.6857	8.9533	0.4788
QEC-Yes	36	65.5000	10.5302	67.5277	8.1292	-1.0728
QEC-No	27	66.7037	7.8682	63.8148	8.4627	1.8017
QJT-Yes	8	64.3750	6.9885	67.0000	3.2513	-1.0297
QJT-No	52	65.7692	9.5396	66.4423	9.0903	-0.4657
QPAJ-Yes	29	64.5862	10.3493	67.7931	7.5846	-1.4122
QPAJ-No	33	66.4545	8.1551	64.3636	8.7743	1.6304

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 27. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Social Self

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
			Participants			
White	74	64.7162	6.5491	66.1756	7.2685	-1.8272
Black	205	64.2146	7.2160	64.2487	8.5612	-0.0623
Male	127	64.0314	6.3307	63.8818	7.0818	0.2475
Female	152	64.6118	7.5879	65.4934	9.1027	-1.3247
EFT[a]	191	64.0785	6.7527	64.3246	7.8337	-0.5018
Not EFT	88	64.9318	7.6260	65.7045	9.1200	-0.7892
QEC-Yes[b]	243	64.7201	6.9063	64.9670	8.1918	-0.5014
QEC-No	34	61.2058	7.2227	63.5000	8.9552	-2.0633
QJT-Yes[c]	69	64.2318	6.4788	63.7681	6.8837	0.6543
QJT-No	185	64.1513	7.2087	64.7513	8.8963	-1.0280
QPAJ-Yes[d]	151	64.0993	7.1365	64.3576	8.0650	-0.4491
QPAJ-No	107	64.5981	6.7472	65.3644	8.8396	-1.0189
			Nonparticipants			
White	10	63.3000	10.5730	64.3000	11.8607	-0.6993
Black	54	65.1481	9.5372	64.3888	6.4557	0.5107
Male	15	66.4666	10.8091	63.7333	7.7962	0.9930
Female	49	64.3673	9.3199	64.5714	7.3824	-0.1422
EFT	29	66.3793	10.0832	65.9655	6.8320	0.2159
Not EFT	35	63.6000	9.2138	63.0571	7.7343	0.3141
QEC-Yes	36	62.8888	9.8206	64.9722	6.3447	-1.2592
QEC-No	27	67.5185	9.0908	63.4074	8.7848	2.1949
QJT-Yes	8	67.0000	5.9521	62.6250	3.9977	1.9855
QJT-No	52	64.3076	10.1451	65.0769	7.7733	-0.5433
QPAJ-Yes	29	63.6206	7.9075	64.2758	6.8499	-0.8890
QPAJ-No	33	65.5757	10.9545	63.7878	8.0457	1.0500

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 28. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Defensive Positive

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	56.2162	10.8795	57.0945	12.0673	-0.7417
Black	205	63.3219	12.1769	61.8097	14.0411	1.5416
Male	127	59.6614	11.0462	58.8110	11.9388	0.8269
Female	152	62.9210	13.0015	62.0197	14.8696	0.7730
EFT[a]	191	60.2827	12.0675	58.6335	12.1755	1.8736
Not EFT	88	63.9431	12.2983	64.7386	15.7739	-0.4965
QEC-Yes[b]	243	61.5267	12.3064	60.5555	13.5567	1.1244
QEC-No	34	61.1176	12.1200	61.0294	14.9067	0.0455
QJT-Yes[c]	69	60.1884	10.5485	60.3043	11.0137	-0.1226
QJT-No	185	61.7297	12.8444	60.0810	14.2725	1.5099
QPAJ-Yes[d]	151	61.3178	13.1738	59.2847	13.1840	1.9208
QPAJ-No	107	61.5327	11.1442	61.6168	14.2343	-0.0640
Inc <200[e]	84	65.5952	12.4814	65.2738	14.4775	0.2071
Inc 200+	195	59.6461	11.7153	58.5282	12.8413	1.2289
SPS <18[f]	151	58.8476	11.5883	57.7218	12.6760	1.0749
SPS 18_	128	64.4921	12.3224	63.9062	14.1161	0.4898
Nonparticipants						
White	10	58.6000	11.4231	58.8000	11.9796	-0.0877
Black	54	61.1481	14.8697	59.9629	12.5712	0.5568
Male	15	59.6666	14.1151	56.0666	13.2636	0.9065
Female	49	61.0816	14.5313	60.9183	12.0291	0.0791
EFT	29	63.2068	13.5419	59.8965	10.5469	1.2020
Not EFT	35	58.7142	14.8454	59.6857	13.8940	-0.4005
QEC-Yes	36	59.3333	15.8438	60.8055	12.3191	-0.6815
QEC-No	27	62.9259	12.2503	57.6296	12.0164	1.8101
QJT-Yes	8	61.1250	14.2170	55.7500	9.6916	1.3606
QJT-No	52	60.0384	14.3129	60.3461	12.9658	-0.1563
QPAJ-Yes	29	59.0000	15.2151	60.5517	12.4973	-0.6238
QPAJ-No	33	61.6969	13.8258	59.3636	12.7299	0.8706
Inc <200	37	59.4594	14.9955	60.1621	11.9664	-0.3142
Inc 201+	27	62.5185	13.4546	59.2592	13.1722	1.0677
SPS <18	38	60.6578	16.2285	58.3421	13.5910	0.8630
SPS 18+	26	60.8846	11.3183	61.8846	10.2969	-0.4538

(Continued)

Appendix Table 28, continued

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

[e]Inc--Reported monthly income.

[f]SPS--Social participation scores.

Appendix Table 29. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: General Maladjustment

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	88.8648	8.0466	89.4054	8.3172	-0.6437
Black	205	86.5512	10.4695	87.3317	11.5247	-1.1298
Male	127	86.6850	9.4253	87.6692	9.4020	0.0204
Female	152	86.7302	10.3320	88.0592	11.8574	-1.6898
EFT[a]	191	87.1780	9.4138	87.6282	10.3853	-0.7511
Not EFT	88	87.1363	11.0069	88.4318	11.6695	-1.0965
QEC-Yes[b]	243	87.5555	9.8004	88.2098	10.6006	-1.1147
QEC-No	34	83.9117	10.3933	85.6764	12.1822	-1.0355
QJT-Yes[c]	69	87.5652	8.7841	87.8985	10.0471	-0.3792
QJT-No	185	86.7297	10.4440	87.2756	11.1664	-0.7593
QPAJ-Yes[d]	151	87.2052	10.0679	87.7682	10.9348	-0.7409
QPAJ-No	107	86.6261	9.8368	87.4953	10.7934	-0.9665
Nonparticipants						
White	10	86.5000	13.9383	83.7000	15.1441	1.1932
Black	54	83.3703	12.4222	86.5925	9.7371	-0.6591
Male	15	83.3333	11.4746	83.1333	13.4741	0.3703
Female	49	85.9183	12.9628	87.0612	9.6185	-0.6118
EFT	29	87.5862	12.2868	89.4413	9.3604	-0.6556
Not EFT	35	83.8571	12.7074	85.0714	11.1098	0.1361
QEC-Yes	36	84.0555	13.6903	86.5833	10.5353	-1.1591
QEC-No	27	87.7407	10.9845	87.0740	10.3695	1.1618
QJT-Yes	8	84.7500	9.0672	88.1250	7.6239	-1.1553
QJT-No	52	85.1346	13.0939	86.4230	11.0920	-0.7185
QPAJ-Yes	29	84.7586	12.1703	88.5517	7.8539	-1.4147
QPAJ-No	33	85.4545	12.8988	84.2121	12.4492	0.7175

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 30. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Psychosis

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	54.2567	7.7460	52.7972	7.8965	1.5602
Black	205	58.1414	6.9214	57.5414	7.6462	1.0726
Male	127	56.4803	7.3364	56.0314	7.2132	0.6915
Female	152	57.6381	7.3236	56.4934	8.6307	1.6476
EFT[a]	191	56.7748	7.2740	55.6178	7.4470	2.1086
Not EFT	88	57.8409	7.4677	57.7272	8.9785	0.1200
QEC-Yes[b]	243	56.9465	7.3721	56.1111	9.1240	1.6359
QEC-No	34	58.9411	6.6329	57.7058	7.2685	0.8467
QJT-Yes[c]	69	56.6521	7.3020	56.1304	7.5555	0.6574
QJT-No	185	57.2918	7.1976	56.2486	7.9893	1.7011
QPAJ-Yes[d]	151	57.1721	7.1905	56.0728	8.1052	1.7363
QPAJ-No	107	56.8317	7.4965	56.1869	7.0820	0.7977
Nonparticipants						
White	10	57.2000	7.4951	54.1000	11.6375	1.6167
Black	54	57.3888	7.3649	56.4074	7.0484	0.8685
Male	15	56.0666	9.8739	56.2666	7.9952	-0.0788
Female	49	57.7551	6.4275	55.9795	7.9069	1.6795
EFT	29	57.3103	8.7427	54.5517	7.8539	1.6633
Not EFT	35	57.4000	6.0400	57.2857	7.7670	0.0961
QEC-Yes	36	57.0833	7.1489	55.7777	7.3915	0.9796
QEC-No	27	57.6666	7.8053	56.1111	8.5903	0.9867
QJT-Yes	8	55.5000	6.1411	54.0000	6.9487	1.2247
QJT-No	52	57.5384	7.6503	56.0769	8.1813	1.2295
QPAJ-Yes	29	57.4137	7.1789	55.2758	7.3187	1.4000
QPAJ-No	33	57.5757	7.7015	46.9696	8.4538	0.4337

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 31. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Personality Disorder

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	69.2162	9.5949	69.5949	11.2480	-0.3374
Black	205	69.5902	10.5276	70.6829	12.0115	-1.4073
Male	127	67.6062	9.7412	68.3622	10.8149	-0.8610
Female	152	71.0657	10.4701	72.0921	12.3504	-1.1080
EFT[a]	191	68.6125	9.9285	69.0157	10.6965	-0.6111
Not EFT	88	71.3977	10.7964	73.3863	13.4945	-1.3718
QEC-Yes[b]	248	69.8559	10.2723	70.6913	11.7223	-1.1671
QEC-No	34	66.7058	10.2736	68.4117	12.6278	-1.0792
QJT-Yes[c]	69	67.6521	10.7002	68.3768	10.9371	-0.6924
QJT-No	185	70.0432	10.0367	70.5189	11.7270	-0.5724
QPAJ-Yes[d]	151	68.9403	10.1896	69.4370	11.6810	-0.5803
QPAJ-No	107	70.3457	10.6532	70.8130	11.6652	-0.4508
Nonparticipants						
White	10	66.7000	10.1767	67.3000	13.4911	-0.1298
Black	54	69.3703	11.2941	71.3333	11.5038	-1.2174
Male	15	66.9333	12.5269	68.0666	9.3767	-0.4402
Female	49	69.5714	10.6509	71.5102	12.4350	-1.0542
EFT	29	72.1724	10.5087	73.5517	9.6309	-0.7213
Not EFT	35	66.2857	10.9961	68.3428	13.0179	-0.8885
QEC-Yes	36	67.8888	12.4894	71.8055	11.9995	-1.9023
QEC-No	27	70.4814	9.1583	69.1851	11.8355	0.5743
QJT-Yes	8	68.8750	9.4178	68.8750	7.0191	0.0000
QJT-No	52	68.5769	11.6507	71.5769	12.3500	-1.7877
QPAJ-Yes	29	66.6551	10.9813	71.8620	11.2304	-2.1490
QPAJ-No	33	70.5757	11.2500	69.5757	12.6368	0.5206

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 32. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Neurosis

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
Participants						
White	74	78.6216	10.1180	78.5945	9.3953	0.0279
Black	205	79.1804	9.9563	78.9414	11.4466	0.2921
Male	127	79.5826	9.2368	78.5905	9.2610	1.1448
Female	152	78.5723	10.5401	79.0657	12.1680	-0.5173
EFT[a]	191	79.3089	9.7944	78.3141	10.2071	1.4075
Not EFT	88	78.4318	10.4163	80.0113	12.3227	-1.1469
QEC-Yes[b]	243	79.5720	9.9618	79.1769	10.9418	0.5551
QEC-No	34	75.0294	9.5805	76.5294	10.9716	-0.8965
QJT-Yes[c]	69	79.5217	9.1965	78.9130	8.6733	0.6275
QJT-No	185	78.7675	10.3747	78.4378	11.5107	0.3802
QPAJ-Yes[d]	151	79.0794	10.3373	78.1788	10.8247	1.0729
QPAJ-No	107	79.0186	9.6758	79.6168	79.6168	-0.5266
Nonparticipants						
White	10	72.2000	9.6815	70.6000	14.3387	0.5806
Black	54	78.8703	12.2043	78.7037	10.0294	0.0888
Male	15	78.2666	11.2152	73.8666	12.4949	1.1290
Female	49	77.6938	12.3730	78.5306	10.5081	-0.4766
EFT	29	79.3103	12.0833	79.4482	11.1213	-0.0556
Not EFT	35	76.6000	12.0151	75.7714	10.9251	0.3769
QEC-Yes	36	78.3055	12.4850	79.8611	10.2905	-0.7850
QEC-No	27	77.4074	11.1320	73.6666	11.1320	1.4085
QJT-Yes	8	76.8750	7.0799	76.6250	7.7632	0.0703
QJT-No	52	77.0769	12.2807	77.7307	11.6872	-0.3625
QPAJ-Yes	29	77.3448	12.7874	80.5172	10.5985	-1.5847
QPAJ-No	33	77.1515	10.9004	75.0000	11.1551	0.9245

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 33. Related T tests between pretest scores and posttest scores for selected dichotomous variables for participants and nonparticipants: Personality Integration

Variable	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	T Value
			Participants			
White	74	7.0675	3.8404	7.2837	4.3242	-0.4907
Black	205	5.4243	3.3505	5.7853	3.3669	-1.3873
Male	127	6.5039	3.7562	6.9606	3.7169	-1.4013
Female	152	5.3223	3.2947	5.5328	3.5638	-0.6835
EFT[a]	191	6.1570	3.5550	6.6544	3.4922	-1.9844
Not EFT	88	5.2159	3.4887	5.1590	3.9359	0.1249
QEC-Yes[b]	243	5.9629	3.5212	6.2757	3.6784	-1.2859
QEC-No	34	4.8823	3.6328	5.2058	3.5229	-0.5449
QJT-Yes[c]	69	5.9130	3.3595	6.8985	3.5568	-2.1708
QJT-No	185	5.8324	3.7487	5.9027	3.7389	-0.2657
QPAJ-Yes[d]	151	5.8211	3.3666	6.3973	3.6643	-1.8679
QPAJ-No	107	5.9532	3.9772	5.8317	3.7979	0.3720
			Nonparticipants			
White	10	3.7000	3.5605	2.4000	1.7763	1.8164
Black	54	5.2407	3.0894	6.1296	3.5291	-1.8408
Male	15	5.7333	3.3904	7.1333	4.1380	-1.7049
Female	49	4.7755	3.1242	5.0612	3.2813	-0.5666
EFT	29	4.9655	3.4793	6.4482	3.6506	-2.1639
Not EFT	35	5.0285	2.9752	4.8000	3.3850	0.4365
QEC-Yes	36	4.8055	3.4543	5.9166	4.1773	-1.6497
QEC-No	27	5.0000	2.5720	5.0000	2.6311	0.0000
QJT-Yes	8	4.8750	3.4408	6.3750	2.5599	-1.8209
QJT-No	52	4.9615	3.1867	5.5192	3.7126	-1.0942
QPAJ-Yes	29	5.4827	3.5719	6.1034	3.8017	-0.7633
QPAJ-No	33	4.4848	2.8627	4.8787	3.3331	-0.8965

[a]EFT--Employed full time.

[b]QEC--Do you have any plans for continuing your own education? Yes - No.

[c]QJT--Do you plan to receive more training for the job you now have? Yes - No.

[d]QPAJ--Do you plan to prepare for another job? Yes - No.

Appendix Table 34. One-way analysis of variance of pretest attribute scores

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
X_1, I-E	1	48.45	48.45	4.72**
	341	3502.79	10.27	
TOTAL	342	3551.24		
X_2, WBA	1	.11	.11	.05
	341	698.98	2.05	
TOTAL	342	699.10		
X_3, WBB	1	8.11	8.11	3.70
	341	746.64	2.19	
TOTAL	342	754.75		
X_4, WBC	1	6.28	6.28	4.32**
	341	495.22	1.45	
TOTAL	342	501.50		
X_5, WBD	1	.65	.65	.30
	341	730.44	2.14	
TOTAL	342	731.09		
X_6, WBE	1	.22	.22	.10
	341	777.15	2.28	
TOTAL	342	777.38		
X_7, WBF	1	1.15	1.15	.84
	341	468.80	1.37	
TOTAL	342	469.95		
X_8, LAW	1	260.29	260.29	3.29***
	341	27002.18	79.12	
TOTAL	342	27262.47		
X_9, EDU	1	44.85	44.85	.45
	341	33351.91	97.81	
TOTAL	342	33396.76		
X_{10}, ECON	1	4.20	4.20	.08
	341	17093.43	50.13	
TOTAL	342	17097.43		

Appendix Table 34, continued

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
X_{11}, MMA	1	.93	.93	.36
	341	872.73	2.56	
TOTAL	342	873.66		
X_{12}, MSB	1	1.37	1.37	.41
	341	1139.07	3.34	
TOTAL	342	1140.44		
X_{13}, S-CRIT	1	30.31	30.31	.85
	341	12215.54	35.82	
TOTAL	342	12245.85		
X_{14}, T-P	1	477.52	477.52	.49
	341	33375.77	33853.29	
TOTAL	342	33853.29		
X_{15}, IDEN-S	1	525.75	525.75	2.94
	341	60970.53	178.80	
TOTAL	342	61496.28		
X_{16}, S-SAT	1	3.53	3.53	.02
	341	50087.44	146.88	
TOTAL	342	50090.97		
X_{17}, BEH-S	1	.64	.64	.004
	341	49924.98	146.41	
TOTAL	342	49925.62		
X_{18}, PHY-S	1	423.08	423.08	6.30*
	341	22907.77	67.18	
TOTAL	342	23330.85		
X_{19}, M-E-S	1	38.80	38.80	.56
	341	23634.90	69.31	
TOTAL	342	23673.70		
X_{20}, PER-S	1	15.42	15.42	.22
	341	23875.87	70.02	
TOTAL	342	23891.29		
X_{21}, FAM-S	1	7.14	7.14	.11
	341	21900.86	64.22	
TOTAL	342	21908.00		

Appendix Table 34, continued

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
X_{22}, SOC-S	1	13.63	13.63	.24
	341	19623.01	57.54	
TOTAL	342	19636.64		
X_{23}, DP	1	24.59	24.59	.15
	341	54582.65	160.07	
TOTAL	342	54607.24		
X_{24}, GM	1	136.28	136.28	1.24
	341	37316.28	109.43	
TOTAL	342	37452.56		
X_{25}, PSY	1	3.21	3.21	.06
	341	18354.29	53.82	
TOTAL	342	18357.50		
X_{26}, PD	1	15.06	15.06	.13
	341	37090.59	108.77	
TOTAL	342	37105.65		
X_{27}, N	1	75.48	75.48	.70
	341	36825.82	107.99	
TOTAL	342	36901.30		
X_{28}, PI	1	38.52	38.52	3.16**
	341	4153.5[illegible]	12.18	
TOTAL	342	4192.0[illegible]		

*P < .001, **P < .05, ***P < .10.

Appendix Table 35. One-way analysis of variance of post-test attribute scores

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
X_1, I-E	1	3.83	3.83	.32
	341	4067.03	11.93	
TOTAL	342	4070.86		
X_2, WBA	1	1.37	1.37	.76
	341	616.89	1.81	
TOTAL	342	618.26		
X_3, WBB	1	.02	.02	.01
	341	905.38	2.65	
TOTAL	342	905.40		
X_4, WBC	1	.53	.53	.36
	341	498.41	1.46	
TOTAL	342	498.94		
X_5, WBD	1	3.29	3.29	1.71
	341	656.46	1.92	
TOTAL	342	659.75		
X_6, WBE	1	2.35	2.35	.93
	341	860.30	2.52	
TOTAL	342	862.65		
X_7, WBF	1	3.86	3.86	2.48
	341	530.30	1.56	
TOTAL	342	534.16		
X_8, LAW	1	57.52	57.52	0.73
	341	26971.04	79.09	
TOTAL	342	27028.56		
X_9, EDU	1	7.84	7.84	.09
	341	30116.50	88.32	
TOTAL	342	30124.34		
X_{10}, ECON	1	45.58	45.59	1.07
	341	14510.42	42.55	
TOTAL	342	14556.00		
X_{11}, MMA	1	9.56	9.56	3.38**
	341	964.96	2.83	
TOTAL	342	974.52		

Appendix Table 35, continued

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
X_{12}, MSB	1	4.13	4.13	1.04
	341	1348.23	3.95	
TOTAL	342	1352.36		
X_{13}, S-CRIT	1	37.57	37.57	.90
	341	14230.14	41.73	
TOTAL	342	14267.71		
X_{14}, T-P	1	340.58	340.58	.29
	341	407208.68	1194.16	
TOTAL	342	407549.26		
X_{15}, IDEN-S	1	97.86	97.86	.50
	341	66652.21	195.46	
TOTAL	342	66750.07		
X_{16}, S-SAT	1	7.83	7.83	.04
	341	62139.60	182.23	
TOTAL	342	62147.43		
X_{17}, BEH-S	1	33.23	33.23	.19
	341	60505.23	177.43	
TOTAL	342	60538.46		
X_{18}, PHY-S	1	19.48	19.48	.25
	341	26929.78	78.97	
TOTAL	342	26949.26		
X_{19}, M-E-S	1	19.65	19.65	.21
	341	31785.76	93.21	
TOTAL	342	31805.41		
X_{20}, PER-S	1	128.97	128.97	1.86
	341	23694.74	69.49	
TOTAL	342	23823.71		
X_{21}, FAM-S	1	18.84	18.84	.29
	341	21894.54	64.21	
TOTAL	342	21913.38		
X_{22}, SOC-S	1	7.71	7.71	.12
	341	22485.91	65.94	
TOTAL	342	22493.62		

Appendix Table 35, continued

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
X_{23}, DP	1	31.50	31.50	.17
	341	61737.71	181.05	
TOTAL	342	61769.21		
X_{24}, GM	1	157.81	157.81	1.36
	341	39538.83	115.95	
TOTAL	342	39696.64		
X_{25}, PSY	1	2.91	2.91	.05
	341	21715.49	63.68	
TOTAL	342	21718.40		
X_{26}, PD	1	4.97	4.97	.04
	341	47521.99	139.36	
TOTAL	342	47526.96		
X_{27}, N	1	103.78	103.78	.86
	341	40915.43	119.99	
TOTAL	342	41019.21		
X_{28}, PI	1	21.05	21.05	1.56
	341	4605.54	13.51	
TOTAL	342	4626.59		

*P < .10.

Appendix Table 36. Multivariate analysis ranked mean differences for four dichotomous variables for age[a] (N = 343)

Race		Participation[b]		Sex		Employment[c]			MEANS
1	2	1	2	1	2	1	2		
White	Black	P	NP	Male	Female	EFT	Not EFT	N	Age
	X	X		X			X	13	62.538
	X		X	X			X	5	57.600
X		X		X			X	6	56.167
	X	X			X		X	65	48.938
X			X		X		X	4	46.250
	X		X		X		X	24	44.500
	X	X		X		X		52	44.346
	X		X		X	X		17	43.588
	X	X			X	X		75	41.938
X			X	X			X	2	40.500
X		X			X		X	4	38.250
	X		X	X		X		8	37.250
X		X			X	X		8	36.250
X		X		X		X		56	34.696
X			X		X	X		4	31.250

[a]No subjects classified as (1, 2, 1, 1).

[b]P = participant; NP = nonparticipant.

[c]EFT = employed full time.

Appendix Table 37. Multivariate analysis ranked mean differences for four dichotomous variables for BVC[a] (N = 343)

Race		Participation[b]		Sex		Employment[c]			MEANS
1	2	1	2	1	2	1	2		
White	Black	P	NP	Male	Female	EFT	Not EFT	N	BVC
X		X			X		X	4	1.750
X		X			X	X		8	0.875
X			X		X		X	4	0.250
X		X		X		X		56	0.161
	X		X		X	X		17	0.000
	X		X	X		X		8	0.000
X			X	X			X	2	0.000
	X	X		X		X		52	-0.038
	X	X			X	X		75	-0.173
	X	X			X		X	65	-0.215
	X		X		X		X	24	-0.375
	X	X		X			X	13	-0.385
	X		X	X			X	5	-0.400
X		X		X			X	6	-0.500
X			X		X	X		4	-2.250

[a]No subjects classified as (1, 2, 1, 1).

[b]P = participant; NP = nonparticipant.

[c]EFT = employed full time.

Appendix Table 38. Haller Work Beliefs Checklist subscale score correlations[a] for a Mexican-American sample[b]

Sub-Scale	BVA	BVB	BVC	BVC	BVE	BVF	Total
BVA		50	-28	45	23	40	68
BVB			-21	38	19	45	68
BVC				11	03	-11	06
BVD					35	36	72
BVE						43	66
BVF							72

[a]Decimals omitted.

[b]Source: DeHoyos, 1961.

[c]All subscales correlated with the individual scales.

Appendix Table 39. Haller Work Beliefs Checklist subscale score correlations[a] for three different samples[b]

Sub-Scale	BVA	BVB	BVC	BVD	BVE	BVF
			Lenawee Sample (N = 439)			
BVA		26	-14	16	21	18
BVB			-13	12	17	36
BVC				08	16	-01
BVD					22	20
BVE						24
			Turrialba Sample (N = 112)			
BVA		01	09	26	02	23
BVB			-31	10	09	20
BVC				04	-18	-07
BVD					25	30
BVE						21
			Lansing Sample (N = 87)			
BVA		50	-29	44	21	38
BVB			-21	39	20	45
BVC				11	01	-10
BVD					33	36
BVE						43

[a]Decimal points omitted.

[b]Source: Watts, 1962.