ALTERNATIVE YOUTH EMPLOYMENT STRATEGIES PROJECT: AN EVALUATION

SPECIAL SUMMARY

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Acknowledgements

A program evaluation is a complex and sensitive enterprise even when the program is implemented specifically to permit the research. In the case of the Alternative Youth Employment Strategies Project, three different program models had to be implemented in each of three sites. Without the skills, interests and dedication of the literally dozens of staff members who delivered services and managed the programs there would have been nothing to study. We express our admiration and gratitude therefore to the staff and management of the Office of Comprehensive Employment and Training Administration (OCETA) in Albuquerque, the South Florida Employment and Training Consortium (SFETC) in Miami, and the Court Employment Project (CEP) in New York City.

The research was carried out at the behest of the Office of Youth Programs (OYP) within the U.S. Department of Labor. We are especially appreciative of the vision of Robert Taggart, former director of OYP, in designing a vast knowledge-building strategy for that office, and of the confidence he expressed in inviting us to participate in that research. While many officials at DOL worked with us over the course of the project, Herman Scott, Harry Lieberman, and William Showler were especially supportive and helpful.

In this project, Vera was responsible for designing and assisting in the implementation of the program, designing and carrying out the research and managing or overseeing the expenditure of both program and research funds. Within the Vera Institute, the management and coordination of all those efforts became the joint responsibility of two of the Institute's Associate Directors, Claire Haaga, on the program side, and Jerome McElroy, in the research area, and the Treasurer of the agency, Stan Hellman. For their skill and constant support we are sincerely grateful.

Maximo Blake and Hugh Goodheart spent hundreds of hours in the field advising, assisting and learning from local program staffs, while Mike Byrne provided consistent guidance and assistance to the local fiscal units in managing and accounting for the project's six million dollar budget.

The vast quantities of data called for by the project's research design were collected in the field by local research personnel hired by Vera. We are grateful to them for the persistence with which they tracked respondents for follow-up interviews and the care with which they recorded the data. Our thanks go especially to site research directors: Susan Briggs in Albuquerque, Irwin Pascul in Miami and Luis Rolon in New York City.

Although the authors are responsible for the research report itself, the contributions of several other research staff members require special mention. Richard McGahey served as the staff economist for the first several months of the project and was principally responsible for designing, testing and putting into the field the instruments used to collect data on the respondent's employment experiences before and after the project. Barry Reich was the project's research director during its early months and made a major contribution toward creating the structures for data collection at the sites.

The project required the creation and daily management of an enormous data base fed from several sources, using a variety of input documents, arriving on an almost continuous basis over a period of approximately twenty-four months. At the Vera Institute we have often relied on John Best's ability to design a data system and manage it smoothly, whatever its complexity and whatever the level of demand from a research staff that always wants another analysis. In the AYES project

John became an integral part of the entire research process and contributed immensely to our understanding of the data.

Essential to a project of this magnitude is a capable staff of researchers. We were the beneficiaries of the knowledge, insight and dedication of Ellen Riley, who was active in every area of the project, from instrument design to data collection and analysis. June Swerdlin was our indispensable research analyst, taking on the very necessary but not always pleasurable chores required to manage the flow of data, including error checking, data cleaning and tracking down missing pieces of information. June carried out these tasks both meticulously and without complaint. With a large research staff, located in three cities, the administrative responsibilities of the AYES project were substantial. Deanna London very capably kept the project running smoothly for over three years. Among other things, Deanna made travel arrangements for the research staff; prepared documents for data entry; maintained a complex set of budget materials; and typed all research reports. Typing support was also provided by Grace Otero and Scott Sparks, and we sincerely thank them for it.

Finally, we say thank you to the thousands of young people who served as research subjects in this project. We have no way of repaying them for their patience and openness in responding to our inquiries, except by analyzing the information with care. By so doing we might contribute to society's knowledge of what can be done to improve the prospects of those who are hard to employ. It is our hope that this report makes some modest contribution toward that end.

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Introduction

Can the employment experiences and prospects of unemployed, out of school young people be improved through publicly funded employment and training programs? Should such programs provide their participants with work experience, or training and education, or a combination of both? Can programs of this sort actually help young people secure work in the competitive market and, if so, are these jobs of higher quality than those that would have been secured without the program's assistance? Can young people in trouble with the criminal justice system benefit from these programs? Would participation have any impact on subsequent involvement with the criminal justice system?

It was concern about the high jobless rate among teenagers, particularly minority and low-income youth, that led Congress to pass the Youth Employment and Demonstration Projects Act (YEDPA) in 1977. The Act authorized research, evaluation, and demonstration projects to increase understanding of youth employment problems and to develop policies addressing them. Toward that end, Title III of the Comprehensive Employment and Training Act (CETA) of 1973 was amended by YEDPA to add several new programs including the Youth Employment and Training Programs (YETP), which wereintended to improve job prospects and career preparation for 14-21 year old, low-income youths with severe unemployment problems.

Under YEDPA, the Office of Youth Programs (OYP), within the Department of Labor, prepared annual Knowledge Development Plans to improve the coordination, balance, dissemination of results and operationalization of research, demonstration and evaluation projects. Multi-site demonstrations were put into place to test conventional program approaches and to replicate successful demonstrations. By federal fiscal year 1980, 40 such national demonstrations in over 200 sites were operating with YETP discretionary funding. Although the projects utilized a

wide variety of vocational improvement tactics, all of the projects were expected to administer a set of data collection instruments known as the Standard Assessment System (SAS) that had been developed by the Educational Testing Service (ETS) under contract to DOL. The system was designed to provide a uniform data base for a variety of demonstration projects that would measure program effectiveness on such dimensions as work-related attitudes, job attainment, job retention, and job performance. The SAS data were to be maintained and analyzed by ETS and DOL to identify findings that appeared to be generalizable across the nation.

In the spring of 1979 OYP staff were concerned about the fact that none of the demonstration projects begun by that time dealt with young people in trouble with the law. Recognizing the Vera Institute's experience in this area, the Office invited Vera to submit a proposal that would test the impact of three different program models -- work experience, education and training and mixed services -- on "high-risk" young people. Ultimately an award was made to Vera to undertake the Alternative Youth Employment Strategies Project (AYES). Its target population was identified as 16-21 year old, unemployed, YETP-eligible youth, who were out of school, and who evidenced prior involvement with the juvenile or criminal justice system, or a substantial likelihood for such involvement in the future. Being "YETP-eligible" meant that participants came from families who were at or below 85% of the Bureau of Labor Statistics (BLS) "lower living standard income level." To ensure that participants were drawn from criminally-involved groups, program operators were instructed to accept at least 50% of the participants on referral from criminal or juvenile justice agencies in the locality. The demonstration project was implemented in three sites chosen by DOL -- Albuquerque, New Mexico; Miami, Florida; and New York City -- with each site offering all three program models.

Under the terms of the award, Vera served as the Central Research Agent (CRA) and assumed a wide range of responsibilities, including: designing both the research and the program operations; receiving the grant funds from DOL and managing all financial functions pertaining to both program and research; providing technical assistance to and overseeing local program operators regarding program implementation; collecting and analyzing all research data; preparing and transmitting data tapes for inclusion in OYP's national database; and drafting all required research reports and reacting to DOL's comments regarding them.

This report summarizes Vera's final evaluation report which has been submitted to the Department. The nature of the program models, the experience of program implementation, the logic and structure of the experimental design used to measure program impact and the outcomes of the program in terms of subsequent employment experiences and criminal justice involvement are all summarized here. There are, however, many useful details regarding the analyses conducted, relationships between employment outcomes and non-program variables, and obstacles to effective program implementation that cannot be presented in a summary. For a deeper understanding of the program and its effects, the reader is referred to the full research report.

I. Program Design

1. The Program Models

The general program models were determined by OYP, with Vera articulating the details. The three models were Model I -- full-time work experience with counseling and placement services; Model II -- basic education or vocational or prevocational training with counseling and placement services; and Model III -- a "mixed" model which offered part-time work, part-time training, counseling and placement.

CETA work experience typically involved placement of participants in entry-level jobs in non-profit or government agencies, and such placements were provided for many AYES Model I participants. Vera, however, was already operating a work program (Neighborhood Work Project in New York City) which allowed for closer supervision of the workers and provided a different type of experience for the participants. Therefore, the AYES Model I also permitted participants to work together in crews under the direct supervision of AYES work site supervisors. The type of work done by these crews included renovation, interior and exterior painting, landscaping, and clean-up jobs for community organizations.

Participants in full-time educational or vocational training (Model II) were placed in a variety of programs. These included classes in Basic Education, preparation for a high school equivalency diploma, English as a Second Language, and vocational courses in word processing, woodworking, welding, etc. The participants, in consultation with their AYES counselors, identified the type of education or training that was most consistent with their desires and abilities. If that kind of placement was feasible, it was provided. Some of these classes were located at the AYES site; others were at vocational schools, community colleges, or other CETA programs.

Model III participants were expected to spend half of their AYES time in work experience and the other half in classroom training. Whenever possible the two

components of Model III participation were related; for example, an individual might take a plumbing class in the morning and spend afternoons at a worksite involving plumbing work. In reality, Model III proved extremely difficult to implement. It was often impossible to arrange for complementary work and training or to schedule half-day assignments to each. Instead, the program operators attempted to arrange alternating periods of work and training, with no period exceeding two weeks. They were reasonably successful in this regard in only one of the three sites (Miami). Thus, in all sites, an imbalance between the amount of work and training or education was the rule.

Participants in all three models were exposed to two counseling tools: the Adkins Life Skills Training and the Vocational Interest, Temperament and Aptitude System (VITAS). The Adkins system was used by counselors in group sessions designed to focus on how to find, get, and keep jobs. VITAS was used to determine types of jobs in which the participant was interested and demonstrated aptitude. Counselors were also available to assist participants with short-term medical, family, housing, and personal problems.

Each participant was entitled to 26 weeks of program participation. Model I participants worked 35 hours per week; Model II and III participants spent 30 hours per week in the program. All participants were paid the minimum wage ($3.10 per hour in 1980 and $3.35 per hour in 1981). Model I participants spent more hours per week in the program because they received <u>wages</u> which were subject to federal and local taxes; Model II participants were paid nontaxable <u>stipends</u> for time spent in classroom training (and Model III participants received wages and stipends as appropriate). When designing the AYES program and research, Vera staff believed it was important to the research that take-home pay be approximately equal for all three models, and 35 hours of taxable income was equal to 30 hours of nontaxed income.

Job placement assistance was part of the program design for participants in all three models. Job developers met with the participants and used information from program counselors and work supervisors in attempting to place participants in unsubsidized employment upon leaving the program. In fact, for the reasons explained in the pages that follow, the job development and placement function was not performed effectively in two of the three sites (New York and Albuquerque) until rather late in the program. Therefore, many participants in these two sites left the program without the benefit of serious job placement assistance from program staff.

The program models in all the sites were implemented in pursuit of the following objectives: to increase the participants' employment and earnings, as well as their ability to secure and retain employment in the future; and to reduce the participants' subsequent involvement with the juvenile and criminal justice systems through improving their vocational experience.

The process by which participants were taken into the project and assigned to model will be described in the section dealing with the research design. The table below gives the number of participants actually admitted into each model at each site and the number of control group members in each site.

Number of Program Participants in Each Model and Control Group Members by Site

	New York	Miami	Albuquerque	Total
Model I	139	127	91	357
Model II	139	113	103	355
Model III	133	136	101	370
SUB-TOTAL	411	376	295	1082
Control Group	421	393	323	1137
TOTAL	832	769	618	2219

2. The Implementing Agencies

Vera program staff selected the sites and the implementing agencies in concert with the staff of OYP and the local CETA prime sponsors. Vera's program personnel then negotiated with the local implementing agencies in specifying the program design, hiring staff and developing operational procedures that would be consistent with the demands of the research. Once the program had been designed, primary responsibility for operations rested in the sites, and Vera provided technical assistance through its two Program Officers.

In New York, the Court Employment Project (CEP) was selected as the implementing agency by the local CETA prime sponsor, the NYC Department of Employment (DOE). CEP is a non-profit agency which has, since the late 1960s, provided court diversion and employment-related services to people brought before the criminal courts of the City. At the time CEP was selected to implement the AYES project, the agency was operating a program providing alternatives to incarceration for people awaiting sentence in Supreme Court. In addition, CEP had operated summer youth employment programs for several years, as well as a YETP classroom training and work experience program, and still had some young people under supervision who had been diverted from criminal adjudication to the program.

In Miami, the program was implemented by the South Florida Employment and Training Consortium (SFETC). That agency served as the CETA prime sponsor, and general employment planning agency for five municipalities -- the City of Miami, the City of Miami Beach, the City of Hialeah, Monroe County and Dade County. AYES was set up as a program of the Consortium located in separate quarters in the Liberty City section of Miami. The project had its own staff and director who reported to the Executive Director of SFETC. The prime sponsor was responsible to Vera for the project financial operations.

In Albuquerque, the project was implemented by the prime sponsor, the City's Office of Comprehensive Employment and Training Administration (OCETA). Although the agency did not normally assume direct responsibility for program implementation, it did so in this case because of the size and complexity of the program. As in Miami, AYES was located in separate quarters and had its own staff and director. The latter person was hired by OCETA and reported directly to the Deputy Director of that agency.

In all cases the implementing agencies operated through a subcontract with Vera and were responsible for implementing the program and managing their finances in accordance with procedures and guidelines specified by Vera. They were also responsible for cooperating fully with the demands of the research. With some variations, the organization of the staff of the three AYES programs was essentially the same. Each site had a Project Director, a Field Operations Director, a Director of Education and Training (E&T), Deputy Directors of E&T and Field Operations, vocational counselors, work site supervisors, and field representatives. The Miami and New York AYES projects also had job developers on their staff. The local staffs were hired by the sponsoring agencies, with assistance from Vera Program Officers.

3. Difficulties in Implementation

In their haste to measure outcomes, program evaluations often give inadequate attention to the process of program implementation. Vera's experience in both evaluation and program operation indicated that large differences often exist between the design of a program and services actually delivered. Since the program is actually the major independent variable in the evaluation, it is important that the researcher assess the extent to which the training and placement services were actually offered. Toward that end, Vera research personnel carried out an extensive process analysis in each of the three program

sites. The results of the effort are reported at length in an appendix to the final research report. The discrepancies between program design and actual operations cannot be reported in detail here. However, there are several general observations about the implementation process and its results which the reader should understand as a context within which to consider the findings of the impact evaluation.

a) The AYES experiment was large and complex, involving 300 to 400 individuals in each site participating in three rather different program models, and required a complicated screening and assignment procedure that necessitated the processing through intake of two of three times the number of program participants. An extended planning period involving clear decisions made in timely fashion was needed to enable the implementing agencies to prepare for the program. However, OYP's need to move rapidly to implementation and its occasional indecisiveness about budgets resulted in an abbreviated and somewhat uncertain planning period in all sites. As a result, the intake process took a good deal longer than expected and thus hampered the timely implementation of program operations for the first wave of participants.

b) The time frame for program operations was extremely compressed. The entire group of participants in each site had to be introduced into the program, provided service and processed out within 12 to 14 months from the beginning of intake. Therefore, prolongation of the intake process disrupted the program schedule in a variety of ways. Moreover, no provision was made for continuation of the program beyond the end of the data collection period. This fact led to several negative consequences.

In the first place, the research period began with the first day of program intake, thereby providing no time for the program staff to make adjustments and stabilize operations. Therefore, those admitted to the program during the first

couple of months of program operation did not experience the same quality of services during their early weeks of participation as did those admitted later. When evaluation begins with the first day of a program, the program is likely to be penalized by a period of uncertainty and adjustment that is inevitable.

Second, the implementation schedule required that intake and program services be conducted simultaneously. Since implementation funding was always tight and often uncertain, the two functions had to be performed essentially by the same staff members. This strain was exacerbated by the length and complexity of the intake process. Something had to suffer and, in most instances, it was the frequency and intensity of counseling and job preparation. Moreover, in a program requiring so many research subjects (both participants and controls), the need to conduct both intake and service delivery at the same time helped to create a tense atmosphere during the early phase of the program.

Third, the limited operational period had a particularly negative effect on the implementation of Model III. Participants in that model were to experience a mixture of education and training along with work experience of some sort. It was hoped that there would be a complementary relationship between the training and the work experience and that the participant would experience both within essentially the same time period. The program design called for a half-day at each or, failing that arrangement, alternate periods of training and work experience with no single period exceeding two weeks.

If the programs could have operated for longer than the 12 to 14 months provided, and if the research demands of the experiment did not require the program operators to fill all three program models at approximately the same rate, Model III might have been implemented more effectively. These conditions would have permitted the scheduling of participant intake to coincide more closely with the educational and training cycles followed by other agencies in the sites.

Moreover, the program counselors would have had more time to arrange complementary training and work experience placements and reasonably short alternate periods of participation in each.

In fact, however, intake had to be completed as quickly as possible, and the models had to be filled at approximately the same rate. As a result, efforts to find educational or training slots were being made well after particular training cycles had begun. A complementary relationship between training and work experience was the exception in all sites and often a coincidence when it did occur. It is likely that many Model III participants, especially those in New York and Albuquerque who left the program after several weeks, received uneven amounts of training and work experience. The net result of all of this was that the features that distinguished Model III from the other two models in program design were not fully realized in program implementation.

The limited period of program implementation had at least one other negative effect on the program. Since no provision was made for assuring program staff of employment beyond the end of the data collection period, they became anxious about and began searching for future employment months before the programs actually ended. In some instances, this resulted in the premature leaving of an important and effective staff member. In all instances, it heightened the level of anxiety and lowered morale among program staff. Moreover, there is evidence that an atmosphere of imminent doom developed in the last few months. This may have adversely affected both the quality of service offered by the staff and the enthusiasm of the participants' response during that time.

The budget commitment of the Department of Labor to this demonstration was uncertain throughout the life of the project. This had a negative impact on the substance of the program and the morale of the program staff in all sites. It also diverted some of the resources of the Vera program staff. When the

implementation budgets were finally approved, they were for less money than was anticipated during the planning period. Thus, not all of the positions that were originally thought necessary could be created. Moreover, operating budgets were reduced during the life of the program. As a result, some positions were filled later than was desirable (job developer positions, for example) and program directors never had a clear understanding of the resources that would be available to them.

Skimping on the job development and placement functions is obviously counter-productive in a program of this kind. Nevertheless, this is what happened in all three sites, and especially in New York and Albuquerque. Because the program was of limited duration and had uncertain resources, and because so many other components of the program had to be organized before the job development and placement service, this function bore the brunt of the program's budgetary problems.

II. The Research Design

1. Research Staffing Structure and Responsibilities

The research was designed and directed by staff members of the Vera Research Department in New York. Vera staff were responsible for all phases of the research except the actual collection of data and the random assignment of eligible candidates to experimental or control status. Local research personnel were responsible for carrying out the random assignment process; ensuring that research instruments were properly administered to all research subjects; developing subject tracking systems and maintaining contact with research subjects; conducting follow-up interviews; collecting juvenile and criminal justice system data; and transmitting data to Vera.

In Miami and New York, the research staff were employees of Vera and reported to the AYES Reserch Director at Vera. In Albuquerque, the local research tasks were subconstracted to the Albuquerque Urban Observatory (of the University of New Mexico), but continued to be monitored by Vera to ensure compliance with the research design and comparability with the other two sites. Having the local researchers employed by Vera rather than by the local AYES projects was a conscious attempt to maintain the integrity of the experimental design. Vera believed that local researchers who were Vera employees would be less susceptible to any pressures that might compromise the random assignment of individuals to the research groups.

2. The Experimental Nature of the Design

As a demonstration project, an essential part of the AYES program was measuring its impact on the labor market experiences and criminal justice involvement of participating youth and determining whether the impacts varied for the different program models. To determine whether changes observed in participants could be attributed to the program, Vera constructed an experimental design. Admission to the program was randomly withheld from approximately half the eligible applicants. This procedure, which is described further below, provided confidence that the experimental and control groups would not be significantly different from each other at the beginning of the program.

Experimental group members were then assigned to a particular program model by one of two methods. The first 225 experimentals in each site were assigned to model by the "guided choice" method, that is, based on the participant's wishes and the program counselor's assessment of his or her needs. It was believed that this method would reduce the volume of early program dropouts. OYP, however, insisted on the use of some random assignment to model. Therefore, after the first 225 experimentals were assigned, additional participants in each site were

randomly assigned to model. In fact, premature dropout was fairly substantial under both assignment procedures and appeared to vary by model. Therefore, the analytic strategy used to compare outcomes for different models involved an analysis of the three groups of participants in terms of the differences, if any, that existed among them at intake. Those differences were then used as covariates in regression analyses of various outcome measures.

The basic design was replicated in each of the three sites: each site had as its goal the random assignment of approximately equal numbers of eligible individuals to the experimental and control groups. The experimental group consisted of those individuals randomly assigned to participate in the program, and the control group consisted of those eligible individuals for whom participation was randomly denied. The maximum length of program participation for any individual was six months (26 weeks), and the intake period was originally designed to last seven months so that at any one time, there would not be more than 225 active participants per site. The numbers of experimentals (by program model) and controls who were part of the research sample are presented in the earlier table.

When a group of applicants had completed the research intake instruments, the local researcher used a table of random numbers to assign the applicants to research groups. Great care was taken to explain the necessity for random assignment, first to potential referral agencies and second, to those eligible individuals denied AYES services. (It is worth noting that some people at the referral agencies resented the fact that their referrals were subjected to random selection and resisted sending people to AYES.) The site researcher was also responsible for the random assignment to model when that method went into effect in a site.

With site and treatment (experimental or control) as the independent variables of primary interest, the AYES research was designed to measure program

impacts on employment and criminal justice system involvement. In addition, the Standard Assessment System (SAS) developed by ETS contained instruments to measure participants' (and controls') acquisition of various skills, perceptions, and attitudes that might enhance their employability. Major outcome measures included the ability of participating youth (as compared to that of controls) to acquire work upon program completion; post-program earnings; short-term (up to 8 months) post-program job retention; and the involvement of research subjects with the criminal justice system both during the program and for a short time thereafter.

3. General Hypotheses and the Logic of the Analysis

A large number of specific hypotheses were tested by the research and these analyses are reported on in the sections that follow. For the most part, those specific questions and hypotheses were derived from a set of more general ones with which the research was begun. These included:

a. Individuals with higher levels of human capital (e.g., formal training and general experience in the labor market) would have better labor market outcomes.

b. The program would add to the participants' level of human capital and, therefore, experimentals would have better labor market outcomes than controls.

c. To the extent that individuals' labor market experience was in the secondary market, there would be no systematic relationship between levels of human capital and labor market outcomes. In this regard, program participation would be considered another secondary market experience. This hypothesis was actually an alternative to that presented as (a) above.

d. Older individuals within the truncated age distribution of the sample (16-21) would evidence better labor market outcomes than younger persons.

e. In-program and post-program contacts with the criminal justice system would be fewer for experimentals than for controls.

Because the literature pertaining to inter-model comparisons was scarce, hypotheses were not specified for them, but provision was made for analyzing the differences among the models for each of the outcome variables. In fact, the analyses of all outcomes variables were conducted in the following sequence: comparisons between experimentals and controls; inter-model comparisons; and analyses of factors outside the experimental design. Thus, the primary analyses sought to measure differences between experimentals and controls on variables measuring post-program employment and arrests. The analysis then shifted to identifying differences among the models with respect to these outcome measures. Finally, regardless of differences, or lack thereof, between experimentals and controls or among the models, a third level of analysis was used to identify those variables that predict employment, earnings, arrests and success in the program.

4. The Nature of the Research Data

Data were collected using standardized intruments developed by the Vera Institute and by the Educational Testing Service (ETS) under contract to DOL. Additional data were obtained from official criminal and juvenile justice system records. Data were collected from subjects (both experimentals and controls) on four separate occasions over a period of up to fourteen months. The points of data collection were at program intake (prior to assignment to experimental and control groups); at program exit for experimentals and at six months after intake for controls; at three months after exit; and at eight months after exit.* This schedule of data collection was designed by ETS/DOL and was implemented in each of the projects using the Standard Assessment System (SAS), so that the time periods covered by the research data for each of the projects would be comparable. At

* Throughout this report, "Exit" refers to the arbitrary date six months after intake for controls and to the actual program termination date for experimentals.

each of these points, data were collected on instruments developed by the Vera Institute and on instruments developed by ETS for the Department of Labor.

At each of the four points of data collection, a Vera interview was administered to both experimentals and controls. In the Vera intake interview, data for the year prior to program intake were collected on employment, periods of unemployment, education, training, social/marital status, and self-reported illegal activities. An additional section contained items tapping characteristics of the respondents' family life when they were between the ages of ten and sixteen. The exit interview for controls contained questions about employment, unemployment, school, and training during the six months between intake and exit. Experimentals were not asked those questions, but were asked to evaluate their experiences in the AYES program. Both experimentals and controls were interviewed three and eight months after exit. These interviews covered the period since exit and contained questions about periods of employment and unemployment, school, and training activities. Thus, for those people on whom intake, exit, and 8-month* follow-up interviews were conducted, Vera had 12 months of pre-intake and up to 14 months of post-intake data on employment, school, and training activities; demographic characteristics; AYES staff evaluations of participants; and participants' evaluation of AYES.

Official record data were collected from criminal and juvenile justice agencies. Data on all AYES experimentals and controls were collected for the two years prior to AYES intake and fourteen months subsequent to intake. Criminal history data (prior to AYES intake) were collected for descriptive purposes and to

*While follow-ups were conducted at three-months after exit, this period was also covered in the eight-month follow-up. Furthermore the success rate for interview completion was higher on the eight-month than on the three-month follow-up. Therefore, all reported follow-up analyses were computed on eight-month follow up data.

test whether AYES had differential impacts for those participants with prior criminal histories when compared to those who had no prior records. Data were collected from both juvenile and criminal (adult) records, depending upon the individual's age and jurisdiction.

The instruments designed by ETS were intended to measure a series of work-related attitudes and indicators of job knowledge, the program staff members' evaluations of participants' behavior while in the program, and the post-program employment experiences of research subjects. The instruments administered at intake were a reading comprehension test (STEP), an Individual Participant Profile (IPP), and a pre-test battery. The pre-test battery consisted of seven scales: vocational attitudes, job knowledge, job-holding skills, work-related attitudes, job seeking skills, sex stereotypes of adult occupations, and self-esteem. The IPP contained demographic descriptions of the research subjects, including control group members. The SAS materials administereed at exit were a second part of the IPP (for experimentals only) which sought information about program participation; the post-test battery, which was identical in form and content to the pre-test and was administered to both experimentals and controls; and a Program Completion Survey for experimentals and a Control Group Status Survey for controls. These latter two instruments were individually administered interviews containing questions about education, training, and employment experiences since intake. In addition, the program's work site supervisors and counselors completed evaluations of the participants' performance while in the program.

5. Attitude Change as Measured by the SAS Instruments

In this research, the SAS data collected at exit were used primarily to measure short-term program impacts; that is, changes over time on the pre- and post-test measures could be compared for experimentals and controls. Although both the ETS and the Vera instruments contained measures of employment, school,

and training experiences prior to and subsequent to AYES, only the Vera data were used in analyzing these experiences. The Vera data were inclusive of the information collected in the ETS instruments, but were more detailed and more complete. Thus, by using the Vera data, it was possible to conduct more sophisticated and complete analyses than would have been possible with the ETS data. Furthermore, the Vera inteviews contained data that were more directly comparable with data collected by the Bureau of Labor Statistics and data collected by other Vera research projects.

On the other hand, the pre- and post-test data on work-related attitudes and job knowledge were unique to the SAS, and these data were anlayzed according to specifications provided by ETS. In the first place, analyses were conducted to measure the statistical reliability of the scales.

Split-half reliability analyses were computed for each measure. Very simply, split-half reliability indicates the extent to which two halves of the scale are correlated. The split-half reliabilities were generally high (above .60). The lower reliabilities were on those scales with relatively few items (e.g., Job Holding Skills, with 11 items). In general, there was remarkably little variation in reliabilities among the sites, or between experimentals and controls. In fact, the pre-test and post-test reliability scores were quite consistent for the more reliable scales. The reliability scores for the less reliable scales, such as Job Holding and Self Esteem, tended to be higher in the post-test period.

To test for program effects on the attitudes and skills measured by the scales in the SAS, relative change from intake to exit for experimentals was compared to that for controls for each scale. Mean pre- and post-test scores along with the variance associated with those means were computed for each scale in each site. The analyses indicated that there were virtually no changes in the means from intake to exit. Furthermore, for those scales on which there was any

change over time, the magnitude and direction of change was the same for experimentals and controls. For example, the mean on Vocational Attitudes for Albuquerque Experimentals increased from 19.57 to 21.93, and the mean for Albuquerque Controls increased from 19.68 to 21.69. Thus, these analyses suggest that the program had no discernible impact on participant performance with respect to these scales.

The subjects' job aspirations at exit were used as an additional short-term measure of program effect; a positive difference between experimentals and controls in the expected direction could be interpreted to mean the AYES program had a positive effect on participants' job aspirations. Job aspirations were measured using the question, "What kind of full time job would you like best right now?" (This question appeared in the Program Completion Survey and Control Group Status Survey, administered at the time of the exit interview.) The responses to this question were coded on a scale of 1-5 provided by ETS, intended to be a measure of relative status of the job to which the respondent aspired.

A hierarchical regression analysis was run on job aspiration scores, using pre-test Vocational Attitudes and Work-Related Attitudes, gender, ethnicity, educational level, and treatment (experimental/control status) as predictors. The analysis offered no evidence that either of the two attitudinal measures or the AYES program had any effect on the subjects' job aspirations.

The lack of treatment effects on either post-test scores or job aspirations need not be considered a failing of AYES. The AYES program focused on changing behavior (i.e., improving employment and criminal justice outcomes), not on changing attitudes. The huge body of social psychological literature on resistance to attitude change suggests that such change would be unlikely as a result of a six-month job training program. However, the lack of effect on attitude change meant that these scales were not used in our subsequent analyses of employment and criminal justice outcomes.

6. The Effect of Sample Attrition

Although site researchers attempted to track both experimentals and controls for the period from AYES intake through eight months after exit, there was some sample attrition. As is inevitable in a longitudinal study, some sample members were unavailable for exit and/or follow-up interviews. Reasons for sample loss included: the subject's moving out of the area; being incarcerated; having provided incomplete or incorrect contact information at intake; refusing to cooperate with the research; and in a few cases, dying. Despite the problems encountered in maintaining contact with these subjects, the completion rates on exit and follow-up interviews, were relatively high (69% for experimentals and 58% for controls across all sites). As indicated above, analyses of the complete sample showed the experimental and control groups to be equivalent at intake. Inaddition, analyses of the 69% of the experimentals and 58% of the controls who were interviewed at the 8-month follow-up indicated that despite sample loss, the experimentals and controls who remained in the sample were equivalent at intake.

III. Characteristics of the Research Sample

Data describing the research subjects in terms of demographic characteristics, family background, employment experiences prior to intake and criminal and juvenile justice histories for two years before entering AYES were analyzed and revealed that in each site the experimental and control group members were essentially equivalent at intake. However, there were some notable difference between the research populations in the three sites. This section presents a summary description of the research subjects, combining experimental and control groups and identifying significant differences among the sites.

Although the project goal was to attract 50-70% criminal justice (CJ) referrals, difficulties in attracting this population eventuated in a 46% CJ referral rate across the three sites. New York was the only site with a majority

of CJ referrals (56%); Miami attracted 49% CJ referrals and Albuquerque only 29%. The Albuquerque program had particular difficulties in attracting referrals from criminal justice agencies. Eventually, the goal of admitting 50% of the research subjects and referral from such agencies was abandoned in Albuquerque.

Overall almost 63% of the experimentals were assigned to model through the guided choice process. In New York and Miami, slightly over half of the experimentals were assigned through this method, but in Albuquerque, where intake was particularly long, approximately 80% of the participants were assigned through guided choice.

The overall mean age at intake was 18.8, virtually the same at each site. AYES attracted a largely male population -- 66%. New York had the highest percentage of males (74%); the Miami sample was 65% male and Albuquerque was 59% male. Less than one quarter of the AYES sample had a high school diploma or a GED at the time of intake. Albuquerque contained the highest percentage of persons with diplomas (43%), New York the lowest (11%), with 16% in Miami. Referral type was related to both education and gender. One-third of the non-CJ referrals had diplomas, as compared to only 12.9% of the CJ referrals; nevertheless, the relatively high proportion of Albuquerque AYES subjects with diplomas could not be explained by controlling for percent CJ referral. In all three sites the CJ referrals were predominantly male - over 82%. Over 53% of the non-CJ referrals were male with New York slightly higher (59%). Thus, variation in gender, education, and referral source confounded simple inter-site comparisons on outcome measures.

Analyses of the independent effects of ethnicity/race and site were complicated by the specific ethnic compositions of each site. In Albuquerque, the vast majority of the sample were Hispanic (79%) -- overwhelmingly of Mexican descent. Most of the remainder were whites (13%). In Miami and New York, the

samples were mostly Black and Hispanic. In the former, about 75% were Blacks -- but this included a number of Haitians who had recently immigrated to the United States. Of the remaining, 25% were Hispanics (largely Cuban). In New York, about 76% of the sample were Blacks, and most of the rest Hispanics (largely Puerto Rican). The entire sample was 5% whites, 55% Blacks, 39% Hispanics, and less than 1% Native Americans.

This uneven ethnic distribution proved to be a substantial analytic problem. It would be desirable in research on high risk youth to determine whether there were ethnic differences on outcomes, either across sites or in one or another site. Because of the predominance of Hispanics in the Albuquerque program and the virtual absence of whites in the Miami and New York programs, it was not possible to make these distinctions in the AYES data. For example, it was impossible to distinguish an "Hispanic" effect from an "Albuquerque" effect. Therefore, while there are some references to ethnicity in the remainder of this summary, it wasnot possible to isolate the independent effects of ethnicity.

In all three sites at least a majority of the sample members were born in the same metropolitan area in which they resided at intake. This was most true for New York (76.6%) and least true for Miami (50.7%). In fact, almost one-third of the Miami subjects came from outside the continental United State, including 11% from Cuba and 18% from other Latin-Carribbean countries.

Albuquerque was the most geographically stable site in the AYES population. The vast majority of those respondents, as well as their parents, were born in New Mexico. Most of the New York respondents were born in New York City, and most of their parents were born in the United States (but usually outside New York State). The Miami sample was by far the most geographically mobile group. Of the three sites, Miami had the lowest percentage of respondents born in the same metropolitan area; the most foreign-born respondents; the highest mean age of

arrival to the United States; the highest percentage of foreign-born parents; and the highest percentage of parents who had migrated within the United States.

In the intake interview the respondents were asked a number of questions about the composition of their families during the period in which they were age 10 through age 16. Other questions sought information regarding family welfare history and parental work history during the same period.*

The modal category of family composition for the entire AYES population was one-parent family (48%). These were usually female headed household. Thirty-seven percent came from intact families. Albuquerque was the only site with a modal category of intact families (49%); in Miami 37% came from intact families; in New York it was 28%. In the latter two sites, the modal category was one-parent family.

Just under 30% of the total sample indicated that their families had been on welfare all or most of the time, and 59% had been on welfare rarely or never. Welfare history was highly related to both site and family composition. In Albuquerque and Miami, over two-thirds of the respondents stated that their families had rarely or never been on welfare; 20% had been on welfare all or most of the time. In New York, however, 46% of the sample indicated that their family had been on welfare all or most of the time, and 43% rarely or never.

If a father was present while the respondent was between the ages of 10-16, he usually worked all or most of the time (81%); inter-site variation was minimal. However, since many respondents had no father living with them, only 38% of

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* The rationale for the selection of a 10-16 year old time frame was determined by the need for reliability and the composition of the AYES sample. A fixed time period was essential for reliability since it would be confusing for both interviewers and respondents if family items addressed indistinct or variable time frames. The lower limit of ten was selected because in survey research the recollection of events prior to the age of ten is often unreliable; the upper limit of sixteen was based upon the 16-21 year old age range of the AYES sample. In addition, prior research conducted at Vera had utilized the same time frame, and past studies by other researchers had discovered significant linkages between family life and crime, focusing on family life during early to mid-adolesence.

the AYES population had a father who lived with them and worked all or most of the time. As a result, Albuquerque (with the highest proportion of intact families) had the highest rate of respondents living with a father who worked all or most of the time (47%) and New York the lowest (31%). Most AYES respondents lived with their mothers. Fewer than 40% of the mothers in New York and Albuquerque worked all or most of the time; the modal category for these two sites was mother working rarely or never. In Miami, however, over 50% of the mothers worked all or most of the time.

About 43% of the AYES respondents responded "yes" to the question of whether any member(s) of their immediate family had ever been arrested. Not surprisingly, the rates for CJ referrals were higher than those for non-CJ referrals (49% to 38%). The rate for respondents from intact families (41%) was slightly lower than the rates for respondents from one-parent (45%) or reconstituted (52%) families.

The percentage of respondents who reported that a family member had been arrested was lower in New York (37%) than either Albuquerquee (49%) or Miami (46%). Since New York had the highest rate of non-intact families and the highest percentage of CJ referrals, family composition and referral source cannot explain this finding. It seems more likely that it reflects differences among the sites in the respondents' openness about reporting such information and in the aggressiveness with which the local police agencies make arrests for such crimees as possession of marijuana, truancy, vandalism and other relatively minor offenses.

At the time of intake, only 4% of the research subjects were living with spouses and another 5% were cohabiting. A larger percentage of the Albuquerque subjects were either married or cohabiting (15%) than was the case in the other sites. Nineteen percent of the research sample had children of their own. This represented 32% of the female respondents and 14% of the males. There was no variation by site on this variable.

A good deal of information was collected about the subjects' work histories prior to their entering the AYES research sample. Three-quarters of all respondents had worked at sometime prior to intake. The percentage of subjects who had ever had a job varied significantly by site, however, with 83% of the Albuquerque subjects (N=618) reporting that they had worked at some time during their lives, 75% of the New York subjects (N=827) having worked, and 60% of those in Miami having worked. Males were significantly more likely to have worked (79%) than were females (68%). While CJ referrals were more likely than non-CJ referrals to have had a job, this difference was small (78% vs. 73%), and its statistical significance is likely the result of the large number of cases involved in this analysis (N=2214).

AYES subjects spent a relatively small percentage of the year prior to intake in jobs.* The mean percent of the time employed was 18.4%, varying from 15.6% in New York to 21.3% in Albuquerque. Because approximately 28% of the AYES subjects had not worked during the year prior to intake, the percent of the year employed was analyzed also for only those subjects who had worked during that year. On the average, this subsample had worked for a quarter of the preceding year (varying from 22.0% in New York to 27.6% in Miami).

For the sample as a whole, males had spent significantly more of the year prior to intake employed (19.6%) than had females (15.8%). However, among those AYES subjects who had worked during that year, there was no difference between the males and females, with both averaging about 25% of the year employed.

In the year prior to intake, the average AYES subject reported earning (from employment) a total of $879. This varied significantly by site from $750 for New York AYES subjects to $986 for those from Miami. Males, with a mean of $980,

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* Detailed data on employment were collected for jobs of 15 hours and more per week. If the respondent indicated that he/she had worked less than 15 hours per week, he/she was considered not working.

fared better than females, whose average earnings were $679. Among the subpopulation of those who had at least one job during the year prior to intake, total earnings averaged $1383, varying significantly by site, from $1263 in New York to $1574 in Miami. The gender difference was also statistically significant for this subsample: males earned an average of $1464 and females $1193.

Given that the average AYES subject had worked only 25% of the year (if at all), these relatively low earnings are not surprising. Furthermore, among those subjects who had worked (N=1214), the mean duration of the job was short. During the year prior to intake, the average job lasted only about three months (98 days), and this did not vary by site, gender or referral source.

In their most recent job prior to intake, the average weekly wages for AYES subjects was $67 (this includes the $0 earned by subjects who did not work). While weekly wages varied significantly by site ($73 in Albuquerque, $68 in Miami, and $62 in New York) the absolute magnitude of the differences were small. The difference between males' mean weekly wage of $75 and females' of $53, was larger and statistically significant.

Considering only those subjects who had at least one job in the year prior to intake, weekly earnings averaged $106. Differences among the sites were statistically significant, but small. Males, however, had higher mean earnings ($111) than females ($94). While criminal justice referrals had significantly higher mean weekly earnings ($109) than did non-criminal justice referrals ($103), this was probably attributable to the predominance of males among criminal justice referrals.

In summary, then, AYES subjects did not have impressive employment histories. Most had held a job at some time in their lives; however, their experiences in the labor market were not financially well-rewarded. Jobs were of short duration, and did not pay well. Even among those who had worked in the year before intake, only

a quarter of the year was spent employed and total earnings were very low. Most of their jobs were in retail trade or service industries and in service, labor, and clerical occupations.

Official records of arrests and convictions were used to measure the extent of criminal justice involvement. The data collected on self-reported illegal behavior were found to be so unreliable that they were dropped from the analyses. The official records are useful as indicators of relative levels of criminal justice involvement, and for comparing experimentals and controls in a given site with respect to their criminal justice contacts prior to and subsequent to AYES intake. However, cross-site comparisons are hazardous because of the significant statuatory and procedural differences among the jurisdictions. For example, in New York, with some exceptions for very serious offenses, a person is under the jurisdiction of the juvenile justice system (the Family Court) until his/her 16th birthday; individuals 16 and older are considered adults and come under the jurisdiction of the criminal court. In contrast, in New Mexico and Florida, the jurisdiction of the juvenile justice system extends to the 18th birthday.

Because AYES subjects ranged in ages from 16 to 21 (with a median age of 18), a substantial proportion of those in Albuquerque and Miami came under the jurisdiction of the juvenile justice system for part or all of the two years prior to intake. In New York fewer than 25% of the AYES subjects were younger than 16 during the two years prior to intake. This distinction is important because juveniles are generally treated differently than adults; thus, for arrests on equivalent charges, the probability of prosecution, conviction, and incarceration is not likely to be the same for an adult as for a juvenile. In considering the records of AYES subjects in the three sites, therefore, these differences should be kept in mind.

It is important to note also that in all three jurisdictions there are regulations which ensure the confidentiality of juvenile arrests and provide for the sealing of adult arrest records under specific circumstances. For example, in New York, if a criminal case involving a defendant over 16 years of age ends in a disposition favorable to the defendant, such as a decision not to prosecute or an acquittal, the court papers and arrest records are to be sealed, leaving no public record of the arrest ever having been made. Because of these practices, our data can only identify those subjects for whom an official record of an arrest existed at the time of data collection. The number who were actually arrested at some time was certainly larger, but by an indeterminate amount.

The criminal justice data were analyzed in terms of the number of arrests, the number of convictions and the type and severity of charges involved in arrest incidents which occurred during the two years prior to intake. The analyses revealed that although the target population of the AYES program was high-risk youth, the research subjects were by no means "hard core" criminals. Nearly two-thirds of the sample had no official record of arrest in the two years prior to AYES intake, and 75% of the sample had no convictions during that period. In addition, nearly half of those with an arrest record had been arrested only once. Thus, although one of the goals of the AYES project was to reduce criminal justice system involvement, most sample members had little or no prior contact with the system.* This characteristic of the sample limited the potential impact of the AYES program on criminal justice system outcomes.

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*However, the extent of contact is surely greater than that suggested by the prior arrest statistics. For example, in New York, only 36.3% of the sample showed an official record of arrest in the two years prior to intake, but 56% of the sample were referred to the program by criminal justice agencies. It is reasonable to assume that at least those refferals had experienced a prior arrest. We suspect that the discrepancy between these figures is somehow the effect of the case diversion, record sealing and record maintenance practices of the local criminal justice agencies.

IV. The Employment Outcomes

1. The Employment Variables

The AYES program rested on the assumption that the employment experience and future prospects of the participants could be improved by improving their stock of human capital. That is, the AYES program was designed to increase the employability of the participants by increasing skills (including one's knowledge of and commitment to appropriate behavior on a job, as well as the basic reading, math and verbal skills) necessary to obtain and keep a job. Human capital theory views such skills, education, and knowledge as investments which, because they increase the productivity of the worker, will earn a return in terms of increased employment possibilities and higher wages. The basic hypothesis of the AYES research is that participants, because of their increased skills and understanding of the world of work, should have more positive employment outcomes than the control group members.

To measure the program impact on the participants' employment experience, the research used the following major variables: whether the subject obtained employment; the average weekly earnings of AYES subjects in their most recent post-program jobs; the percent of time employed (between exit and the 8-month follow-up); and the total earnings during the period from exit to 8-month follow-up. All of these variables were constructed from data collected on the Vera 8-month follow-up interview and, thus, are available only for those subjects who received an 8-month follow-up.

Analyses were computed on these variables for the entire research sample to determine the effects of the program on participants. In addition, those variables which measure the quality of work experience (weekly earnings, percent of time employed and total earnings) were analyzed also for the subsample of those who had held at least one job after leaving the program. This strategy for

analysis recognizes the possibility that the program could provide more work for participants than they would have secured in the absence of the program, without affecting the quality of the work secured.

2. Experimental and Control Group Comparisons

One measure of the effectiveness of the program in meeting its goals is the proportion of participants who were able to get jobs after leaving the program, as compared to the proportion of controls who obtained employment during a comparable period. For this analysis, data were collected on experimentals for the period between program termination and the eight-month follow-up interview, and for controls, between exit date (six months after intake date) and the eight-month follow-up interview. Overall, experimentals were significantly more likely to have obtained employment since exit than were controls. In response to the question, "Have you worked since (exit date)," 51% of the experimentals answered yes, as compared to 41% of the controls. In all three sites, experimentals were more likely than controls to have worked at some time since exit; however, the likelihood of employment varied by site, as did the magnitude of the difference between experimentals and controls.

In Albuquerque, 64.4% of the experimentals held at least one job since leaving the program, compared with 55.3% of the controls -- a difference of 9.1%. In Miami, the comparable figures were 47.2% of the experimentals and 41.6% of the controls, for a difference of 5.6%. In New York, 43.9% of the experimentals worked after leaving the program compared with only 27.1% of the controls, a difference of 16.8%.

Thus, while in all three sites a higher percentage of experimentals than controls had obtained employment, the difference was largest in the New York site. The very small proportion (27.1%) of New York controls who worked at all during

the follow-up period suggests that there were relatively fewer labor market opportunities for high risk youths, or that those that were available were relatively less attractive in New York than in the other two sites.

Data on wages and hours were used to calculate the weekly earnings for the respondent's most recent job during the follow-up period. Thus, for example, a participant who was paid $3.35 an hour for 20 hours per week had a weekly wage of $67. An analysis of variance was computed on weekly earnings for the most recent job. The independent variables were site, treatment, gender, and referral source.For the sample as a whole, experimentals had significantly higher weekly earnings than did controls (a mean of $63.16 vs. $47.67); there were significant differences in weekly earnings among the sites and there was a significant interaction between site and treatment.

Experimentals earned more per week in every site -- Albuquerque - $68.39 vs. $52.82; Miami - $62.37 vs. 56.12; New York - $59.12 vs. $32.78. The significant site and treatment interaction effect reflects a substantial difference between New York experimentals and controls. It was the New York site in which the difference between experimentals and controls on percent who worked during this period was largest; therefore, it is not surprising that the difference in mean weekly earnings between experimentals and controls would be greatest for New York. (Since a subject who did not work during the follow-up period had weekly earnings of $0, the large proportion of unemployed New York controls depressed the mean.) However, if we consider only those subjects who had worked during the follow-up period, there is no significant treatment effect; the mean weekly earnings for the experimentals who had a job was $138, and the mean for the controls was $134.

Most AYES subjects who worked had only one job during the follow-up period, and only three percent had more than two jobs. The data on post-program jobs were used to calculate the percent of the follow-up period during which the subjects were employed.

An analysis of variance, again using site, treatment, gender and referral source as independent variables, was computed on the percent of the follow-up period spent working. Experimentals, with a mean of 26.2%, were employed for a significantly greater percentage of the time than were controls, whose mean was 19.2%. Although there was a significant site effect, experimentals in all three sites had higher means than controls. The mean percent of time working was highest in Albuquerque (30.1%), followed by Miami (22.9%), and lowest in New York (16.3%). Again, an examination of these data for the subsample who had at least one job reveals no significant difference between experimentals and controls, with an overall mean of 53.0 percent. Thus, even among those AYES subjects (experimentals and controls combined) who worked at some time during the follow-up period, the average subject was employed for about half the period. These youth appear to have relatively short periods of employment followed by periods of unemployment; the mean length of time an AYES youth held a job was 126 days, or approximately four months.

In terms of total earned income after program exit, experimentals earned significantly more than controls during the follow-up period. The mean earnings for experimentals (including non-workers) was $1668 as compared to $1183 for controls. Furthermore, total earnings were highest in Miami, with a mean of $1655, followed by Albuquerque, with a mean of $1474, and lowest in New York ($1148). Again, however, when the analysis was conducted for the subsample who held at least one job during the follow-up period, there was no difference between experimentals and controls on total earnings. The mean earnings for that subsample during the follow-up period was $3,780.

3. Comparisons among the Program Models

For each site, program model was cross-tabulated with the variables that measured whether or not the respondent had worked since program exit. The

analyses revealed that, while participants taken as a group more often had jobs during the follow-up period, the specific model in which the subject participated did not have an effect on whether he/she obtained a job. This implies that the effect is probably due to the interaction of a program factor present in all models with local labor market conditions.

Analyses of variance and multiple comparison tests were conducted to determine whether or not the program model had any effect on the other employment variables (weekly earnings, percent of time employed and total earnings after program exit). These analyses revealed that while the means for the control group were statistically different from those of each of the models, the means for Models I, II, and III were found to be equal. The apparent model effects were really the result of the difference between the experimental group as a whole and the control group.

When research subjects who had not worked at all during the follow-up period were dropped from the analyses, there was only one significant model effect -- total earnings. Model I participants who worked earned an average of $4677 over the post-program period compared to $3801 for Model II, $3449 for Model III and $3555 for controls. Furthermore, the results of the comparison test on the means indicated that the mean total earnings of Model I participants who worked were higher than the means for Model III participants and higher than mean earnings in the control group. While the difference between Model I and Model II was not statistically significant, Model I participants did earn 23% more during the follow-up period.

While there were proportionately more males in Model I than in the other models, the earnings effect cannot be attributed to the differences among models in the proportion of participants who were female. Although males earned significantly more than females, the model effect is present even within gender.

That is, male Model I participants who worked after the program earned an average of $4697 during the follow-up period, while male participants in Model II and III and male controls earned approximately $3650. Furthermore, female Model I participants, with mean total earnings of $4600, had earnings equal to the male Model I participants and higher than female participants in the other two models and female controls.

The higher earnings of Model I participants who worked at least some time during the follow-up period cannot be attributed to differences among the models in the percentage of the period worked. There were no such differences. While the model effect on weekly earnings was not significant, Model I participants did earn more per week than the other subjects. The mean weekly earnings for (working) Model I participants was $147, as compared to $132 for Model II, $135 for Model III and $134 for controls. Thus, it appears that among those subjects who got jobs, the Model I participants tended to get jobs that paid more.

4. The Effects of Time Spent in the Program

There was great variation in the length of program participation among experimentals in all of the sites. Considering all of the sites together, the average number of hours in the program was 497 for Model I participants, 472 for Model II participants and 455 for Model III participants. An analysis of variance was computed on the total number of hours to identify which variables best predicted the length of program participation. The results indicated that females, older participants, Albuquerque participants, and non-criminal justice referrals tended to stay in the program longer than did other participants.

Analyses were then conducted on all experimentals and on the subsample of those experimentals who had at least one job in the follow-up period to determine whether or not the length of time in the program had any effect on post-program employment outcomes. These analyses revealed that while the effect of time spent

in the program was not large, it was significant even after controlling for site, model, gender, age, and referral source. Thus, there was some evidence that staying in AYES had positive effects on percent of the follow-up period spent working. Perhaps if some of the participants who dropped out early could have been induced to remain in the program, they would have experienced more positive employment outcomes. On the other hand, because number of hours spent in the program is clearly not random, there may be outside factors, not tested for in this research, that influenced both length of stay in AYES and percent of time employed after leaving the program.

V. The Criminal Justice Outcomes

1. Assumptions and Variables

One of the goals of the AYES project was to reduce the participants' subsequent involvement with the criminal and juvenile justice system. This reduction was expected to be the result, in part, of increased employment of program participants. Alternatively, the economic model of crime suggests that individuals divide their time between legal and illegal activities so as to maximize their gains. Thus, time spent in the AYES program might be thought of as decreasing the amount of time available for illegal activities.

Analyses were conducted to determine whether there were differences between experimentals and controls in the number of post-intake arrests or convictions, or whether the program had any effect on the severity of arrest charges. Additional analyses were conducted to identify differential model effects on arrests. Finally, an effort was made to identify variables outside the program design which might predict subsequent criminal justice involvement.

The data in all of the above-mentioned analyses were analyzed using information collected from official criminal and juvenile justice system records.

Analyses reported in this section focus on "post-intake" arrests and convictions; these variables were computed from information about the 14 months subsequent to intake. A period of 14 months was used to provide a uniform length of follow-up for all subjects, and to coincide with the six months of program participation and eight months of follow-up.

2. The Experimental and Control Group Comparisons

The total number of arrests in the fourteen months subsequent to AYES intake was counted for each AYES research subject. An analysis of variance was computed on total number of arrests subsequent to intake to determine whether there was a program effect on arrests. The results of this analysis provided no indication that the AYES program had an effect on the number of times an individual was arrested subsequent to intake. The mean number of post-intake arrests for experimentals in all sites was .42 and the mean for controls was .46. These were not significantly different; nor were there significant differences between experimentals and controls in any of the sites. There were significant differences in arrest rates among the three sites, paralleling the results of our analysis of pre-intake arrests. Miami AYES subjects had the highest mean number of arrests (.58), followed by New York (.42), and Albuquerque (.29).

In fact, the vast majority of the research subjects in all three sites avoided arrest during the 14 months following their entry into the program. In Albuquerque, only 21.4% of the subjects (experimentals and controls combined) were arrested at all and only 6.2% were arrested more than once. These figures compared with 29.4% and 14.2%, respectively in Miami and 25.1% and 10.7%, respectively in New York.

An analysis of variance was computed on the number of post-intake convictions. The analysis revealed a significant site effect, but no significant difference between experimentals and controls. Among the arrested subjects, New York

had the highest mean number of convictions (1.14); this was significantly higher than the mean number of convictions in Albuquerque (0.86) or in Miami (0.81). The site difference parallels that found in the analysis on number of convictions prior to AYES intake, and is probably the result of different adjudictatory processes in the three jurisdictions. The lack of a program effect on convictions is not surprising given the lack of program effect on arrests.

Additional analyses indicated that there was no relationship between treatment and type or severity of arrest charge or likelihood of conviction. Thus, considering all the analyses involving treatment, there were no indications that the AYES program reduced the number or attributes of arrests or convictions.

3. Comparisons among the Program Models

An analysis of variance on number of post-intake arrests was computed, with the model variable including the control group as a fourth model; this analysis revealed significant differences among the sites in the mean number of arrests. There was a significant effect for model; Model I participants had a significantly higher mean number of arrests than did Model II or III participants or members of the control group. Furthermore, this held true across sites.

This model effect was also present in the analysis of the number of arrests prior to intake. In fact, it appears that those subjects who had relatively high arrest rates prior to intake continued to have relatively high arrest rates subsequent to entering AYES. Indeed, other analyses identify prior arrest history and gender as the best predictors of arrests. Once these important predictors of post-intake arrest are entered into a regression analysis, the model effect disappears.

In sum, it is clear that, in an analysis using appropriate controls, neither participation in AYES nor the specific model in which one participated is related to post-intake criminal justice involvement.

4. Predictors of Arrest

A regression analysis using gender, age, referral source, number of prior arrests, site, and treatment as predictors explained 19% of the variance in the number of post-intake arrests. While there were significant effects for all predictors except treatment, only gender, referral source, and priors accounted for a meaningful percentage of variance. The best predictor was number of prior arrests; even after controlling for gender, age, and referral source, number of prior arrests accounted for approximately 8% of the variance on number of post-intake arrests. Gender accounted for 7% of the variance in number of post-intake arrests. As would be expected, males were arrested significantly more frequently (mean=.62) than were females (mean=.08). An additional 2% of the variance was accounted for by referral source.

The results of the analyses on post-intake arrests and post-intake convictions are consistent. Throughout these analyses, prior arrests and gender are the primary predictors. There are no treatment effects, even after controlling for the covariates, nor are there any interactions with treatment. Thus, these results provide no support for the hypothesized effect of AYES on criminal justice system involvement subsequent to the program.

5. The Effects of Post-Program Employment on Crime

Research carried out by others on re-arrests among ex-addicts and ex-offenders indicated that arrest rates tend to be lower among subjects who are "more steadily employed." The results of these studies led to the hypothesis that among AYES research subjects, employment would be related to reduction in arrest rates. To test this hypothesis, multiple regression analyses were computed on the

post-intake arrest variable. The predictor variables were age, gender, highest grade completed in school, marital status, number of arrests prior to AYES intake, site, and treatment. In addition, each analysis contained either weekly earnings on the most recent job and percent of the follow-up period spent working or total earnings during the follow-up period. The employment variables were entered last to determine the effect of employment on arrests with all other variables controlled.

The regression equation explained 19% of the variance in post-intake arrests, the results were the same for the equation containing weekly earnings and percent of time worked as for the equation containing total earnings. Furthermore, non-employment variables alone accounted for 19% of the variance. Since the addition of employment variables accounted for no additional variance, the hypothesis that time working would be negatively related to arrests was not supported by the data. When similar analyses were run for experimentals only, adding the number of hours of AYES participation, 21% of the variance was explained. Program hours accounted for 2% of the variance in post-intake arrests; the more time an experimental spent in AYES, the less likely he/she was to be arrested at some time during the 14 months subsequent to intake.

This finding suggests that increasing the length of time participants stayed in the program would result in decreasing the volume of post-intake arrests. It was impossible to tell whether this was a socializing effect of the program or something more indirect. As previously indicated, the length of stay in AYES was a predictor of the percent of the follow-up period employed. It is also a predictor of post-intake arrests. However, since there was no correlation between percent of time working and number of post-intake arrests in the AYES research sample, the reduced arrest rate cannot be attributed to increased time spent working. It is more likely that there are some unmeasured factors that determine how

long a participant stays in a program like AYES and also determine the likelihood of arrest after leaving the program. It could not be determined from the available data whether these factors could be changed, to increase the length of stay in AYES, for example. Thus, while knowing how long a participant stayed in the program provides us with some additional information about the likelihood of arrest during the follow-up period, the reasons for the relationship remain unexplained.

6. The Effects of Education on Employment and Crime Outcomes

When education was measured by the highest grade completed in school, the variable was found to have no impact on employment or crime outcomes. We also recognized, however, that for a truncated sample with a median grade level of 10, having a high school diploma might be a more meaningful measure of education. That is, the difference between 10.0 and 10.5 years of education is likely to be less important for employment opportunities than the difference between having a high school diploma and not having one (regardless of grade level completed).

Therefore, a series of analyses were computed on employment outcomes and arrests subsequent to intake, with having a diploma (at intake) as a measure of education. The employment variables were weekly earnings on the most recent job since exit and percent of the follow-up period spent in employment; these analyses were done on the sample of all those for whom we had 8-month follow-up data and on the working subsample.

Having a high school diploma had a significant effect on weekly earnings and on percent of time employed for the sample as a whole. The 329 high school graduates earned more ($69.31) per week than the 1025 subjects AYES who had not received a diploma prior to intake ($51.30). Similarly, the high school graduates worked a significantly greater percentage of the follow-up period (31.4%) than those without diplomas (20.1%). There was also a significant interaction effect

with treatment on percent of time working. Specifically, experimentals with a diploma worked significantly more than did controls with a diploma (37.7% of the time vs. 23.6%), while experimentals without diplomas did almost as well (22.5% of time vs. 23.6%) as controls who had graduated.

Among the subsample of subjects who had held at least one job in the post-program period, high school graduates worked significantly more (mean=58.9% of the follow-up period; n=175) than did those without diplomas (mean=50.2% n=410).

Together these analyses suggest that having a diploma is of some benefit to members of this popluation. At the very least, the analyses on the sample as a whole suggest that having a diploma makes it easier to get a job. Furthermore, there is some evidence (from the interaction with treatment) that the AYES program enhanced that effect. The percent of the follow-up period worked by controls with diplomas was 23.6 and by those without diplomas was 17.4; these numbers are virtually identical to the percent of the year prior to intake worked by research subjects with diplomas, 23.1 (N=503) and those without diplomas, 16.9 (N=1676). Being in the program, even without a diploma, seemed to have some benefit -- after leaving the program, experimentals with diplomas worked 37.7% of the follow-up period while those without diplomas worked about as much (22.5) as controls with diplomas.

The effect of having a diploma on the number of post-intake arrests was significant across sites; in each site subjects with diplomas had fewer arrests than those without diplomas. Moreover, there was a significant interaction effect of gender and diploma on post-intake arrests. The mean number of post-intake arrests for male high school graduates was .41 (N=261), as compared to a mean of .68 for males without a diploma (N=1169). Female high school graduates had a mean of .05 arrests (N=235) and those without diplomas (N=495) had a mean of .10

arrests. This effect appears weak. However, the effect of possessing a diploma on the number of arrests prior to intake was stronger for both sexes, suggesting that participation in the program does interact with educational credentials to lessen the likelihood of post-intake arrests.

VI. Conclusion

The most consistent and reliable finding of the research on the AYES project was that experimentals were more likely than were control group members to have obtained employment at some time during the follow-up period; 51% of the experimental group as compared to 41% of the control group were employed during this period. As a result of their obtaining more work, the experimentals had higher mean weekly earnings ($63.16) than did controls ($47.67), and worked significantly more, averaging 26.2% of the follow-up period, than controls, who averaged 19.2% of the period working. These effects are important measures of program success, and indicate that the AYES program succeeded in its goal of improving employability and increasing earnings.

Greater employment among experimentals was not a result of pre/post-program changes in work-related attitudes, as measured by the SAS instruments, or the job development and placement services offered by the program. Rather, it seems to have resulted from the participants' exposure to a group of people, both staff and fellow participants, who encouraged them to seek work or at least to accept an opportunity if it came along.

While participation in the program had a statistically significant impact on the probability of securing post-program employment, there were no differences in the relative ability of the three program models to produce that effect. Nor did the program affect the quality of the jobs which participants secured. Analyses on the subsample of subjects who had at least one job in the follow-up period

failed to show any difference between experimentals and controls with respect to weekly earnings, total earnings or the percent of the follow-up period spent working. On the other hand, possession of a high school diploma at intake significantly increased the likelihood of a person's securing employment after leaving the program.

If the participants had been retained in the program for longer periods of time, and if the job development and placement components had been implemented earlier and more effectively, the program's effect on the amount of post-program employment would have been greater. It seems unlikely, however, that short-term interventions, such as those offered in the AYES program, could produce very dramatic increases in the amount or quality of employment for high-risk young people.

The target population faced many barriers to employment based on its youth, its distinct lack of human capital, its involvement with the criminal justice system, and its racial/ethnic minority status. Moreover, the program was carried out during a period of high and rising rates of youth unemployment and underemployment. Taken together, these barriers are not likely to be overcome by a mere six months of employment experience or training. Longer-term services, which permit the participant to make flexible use of work, education and training, and which are linked to effective job placement services, will be required for this population if anything other than modest improvements at the margin are to be realized.

There was no evidence of a program effect on post-intake arrests or convictions among participants. The absence of such evidence does not attest, however, to a lack of relationship between the employment experiences and criminality among high-risk young people. While the program increased post-program employment of participants, 49% of the experimentals did not work at all during the follow-up

period. Furthermore, those who did hold at least one job worked for only 53% of the follow-up period. Thus, the effect of the program did not radically change the employment experience of the experimental group.

It is also important to note that the research sample, while meeting the program's criteria for "high-risk" youth, apparently was not heavily involved with the criminal justice system. Nearly two-thirds of the sample members in each site had no official record of arrest in the two years prior to program intake. Nevertheless, there was evidence that the volume of post-intake arrest was lower among those who stayed in the program longer.

In short, had the sample members been more criminally active and had the program improved their employment experiences more profoundly than it did, there might have been an impact on the post-intake arrests of participants.

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