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CHARACTERISTICS AND PREDICTORS OF SUCCESS
AT TWO COED HALFWAY HOUSES

DISSERTATION

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Robert M. Sperry Jr., M.S.

Denton, Texas

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The present study evaluated offender characteristics associated with completion of halfway house placement by the inclusion of additional offender characteristics for analysis in addition to those studied in previous research, the analysis of a large number of representative cases, and the use of statistics allowing clear conclusions upon which to base decision making. Data analysis was done in three steps. The first step was to identify offender characteristics which were associated with completion in halfway house placement. The second step was to see how accurate the offender characteristics identified were in predicting completion of an offender's halfway house stay. The third step was to identify any possible factors which underlie the offender characteristics identified.

Discriminant analyses identified ten offender characteristics which were associated with completion of halfway house placement for 521 male offenders and four offender characteristics which were associated with halfway house completion for the group of 33 female offenders studied. These offender characteristics resulted in 75.38 percent

correctly classified cases for the male offender group and 96.97 percent correctly classified cases for the group of female offenders. Factor analyses resulted in the identification of four factors for the group of male offenders and two factors for the female offender group. Suggestions for future research included replications of the present study leading to the identification of offender groups based on probabilities of successful halfway house completion, and the establishment of halfway house programs tailored to offenders identified as having high or low probabilities of completion.

TABLE OF CONTENTS

	Page
LIST OF TABLES	iv
CHARACTERISTICS AND PREDICTORS OF SUCCESS AT TWO COED HALFWAY HOUSES	
Introduction	1
Method	17
Subjects	
Materials	
Procedure	
Results	22
Classification	
Factor Analysis	
Discussion	29
Appendix	37
References	38

LIST OF TABLES

Table	Page
1. A Comparison of Characteristics Among Houses and Sexes	18
2. Standard Coefficients for the Male Group	23
3. Standard Coefficients for the Female Group	24
4. Classification Results for Male Group	25
5. Classification Results for Female Group	25
6. Factor Analysis of Male Group Characteristics	26
7. Factor Loadings for Male Group Characteristics	27
8. Factor Analysis of Female Group Characteristics	28
9. Factor Loadings for Female Group Characteristics	28

CHARACTERISTICS AND PREDICTORS OF SUCCESS
AT TWO COED HALFWAY HOUSES

During the early 19th century, Massachusetts, New York and Pennsylvania established halfway houses for the purpose of providing places of shelter, food, clothing, advice and assistance in finding employment for paroled offenders. In the past two decades, the use of halfway houses to relieve prison overcrowding and aid in the reintegration of offenders into the community has greatly increased. A study by the Law Enforcement Assistance administration in 1978 found that approximately 400 halfway houses were in existence nationwide at that time, with resident capacities ranging from six to 140 offenders. Although the number of halfway houses in use has greatly increased in recent years, research concerning halfway houses has not kept pace with this development. Halfway house studies can be divided into two classes based on their objectives: (a) those studies which looked into the post-release adjustment of offenders who had halfway house placement prior to release, to find if differences existed between offenders released through halfway houses and offenders released through traditional parole; and (b) those studies which focused on the adjustment of offenders during their halfway house stay to find what characteristic of offenders were associated with successful completion of halfway house placement.

Studies which looked into the post-release adjustment of offenders who had been released through halfway houses used employment and recidivism as indices of adjustment. A good employment record was seen as reflecting the offender participating in society as a productive citizen, and an absence of re-arrest was viewed as evidence of a positive adjustment. It was found that offenders released through halfway houses had a higher number of days employed and a greater percentage of offenders employed than offenders released directly into the community via parole programs (Beck, 1979; Beck, 1980; Lamb & Goertzel, 1975; McMahon, 1977; Minnesota Governor's Commission on Crime Prevention and Control, 1977). With regard to recidivism, it was found that offenders released through halfway houses committed fewer and less severe crimes than offenders released through traditional parole programs (Le Claire, 1978; McMahon, 1977; Minnesota Governor's Commission on Crime Prevention and Control, 1977; Seiter, Petersilia & Allen, 1975). Studies in this class concluded that differences did exist between offenders released through halfway houses and offenders released through parole programs, and that halfway house programs were beneficial to the post-release adjustment of offenders.

The second class of studies, which focused on the adjustment of offenders during their halfway house stay, were undertaken because it was found that the completion rate of offenders in halfway houses was frequently low (McMahon, 1977)

and better utilization of facilities could be achieved by identifying offenders who were more likely to complete program requirements. Although halfway house programs have demonstrated beneficial results in the adjustment of some offenders, it has also been shown that some offenders profit little from their halfway house experiences (Glaser, 1975; Minnesota Governor's Commission on Crime Prevention and Control, 1977; Pettibone, 1973). Studies which focused on the adjustment of offenders during their halfway house stay selected variables for study which had been found to be related to successful completion of parole programs. It was thought that the characteristics of offenders which had been found to be related to successful adjustment in parole programs might also be related to successful adjustment in halfway house programs.

There appeared to be considerable evidence that low academic achievement correlated highly with failure for parolees and probationers. Berecochea and Spencer (1972) found that female parole violators in California were characterized by low educational levels. Pipkin (1972) found that incarcerated recidivists in Texas tended to have received less than 12 years of formal education. This finding was confirmed by Reed and Woods (1972) in another study of Texas recidivists. Hemple and Webb (1976) found in their study that offenders who completed high school, but who were not hard drug abusers, succeeded in completing their probation status 89 percent of the time. In a study by Knox and Stacey (1978), it was found

that educational level was significantly correlated with employment success at both a five and 30 day follow-up period. This failed to be significant, however, at a 90 day follow-up period.

Several researchers have found that the more convictions an offender had, the more likely he/she was to recidivate (Brookhart, Ruark & Douglas, 1976; Carney, 1969; Griffiths & Ferdun, 1974). Soloman (1976) found that the higher the number of prior convictions an offender had, the higher his/her chances were of failure on parole. Glaser (1969) found that the type of offense committed by an offender was related to post-release outcome, in that offenders who committed offenses involving property or money had higher recidivism rates than other types of offenders. Landis, Mercer and Wolf (1969) found that the specific property crimes of auto theft, check offenses and forgery were associated with higher recidivism rates. Several studies have shown that auto theft offenders have poor post-release records (Elder & Cohen, 1978; Kitchner, Schmidt & Glaser, 1977; Soloman, 1976). Time served in prison has been studied with some interesting results. In a study by Erickson and Gibbs (1976), no significant relationship was found between length of prison confinement and recidivism. Carter, Glaser and Wilkins (1972), however, found that offenders with the shortest or longest length of prison confinement had the lowest recidivism rates. Gottfredson, Gottfredson and Garofalo (1977) found that parole success decreased with incarceration time up to 50 months but increased

somewhat thereafter. When these later researchers controlled for parole risk, however, no significant relationship was found to exist. In summary, research pertaining to length of prison confinement and recidivism have yielded inconsistent results.

Offenders who were alcohol or drug abusers were shown to have higher recidivism rates in a number of studies. Inciardi (1971) found that involvement with drugs at an early age or prior unsuccessful drug treatment were significantly related to parole failure. Hemple and Webb (1976) found, in their study, that opiate use was significantly related to parole failure. In a study by Palmer and Carlson (1976) it was found that a drug or alcohol abuse history increased the probability of an offender's returning to prison. In their study of work release offenders, Elder and Cohen (1978) found a significant relationship between post-release failure and drug or alcohol involvement.

In a study conducted by Soloman (1976) it was found that offenders who were released to live with their spouses succeeded on parole significantly more often than those without family ties. Kitchner, Schmidt and Glaser (1977) found a failure rate of 53 percent for offenders released to live with their wives, compared to a 77 percent failure rate for those released to live with someone else. This study by Kitchner, Schmidt and Glaser followed the records of Federal parolees over an 18 year period. Knox and Stacey (1978) found that post-release adjustment of offenders was significantly related to marital

status and number of dependents. Their study found that married offenders and those with dependent children had better post-release adjustments than offenders without family ties.

Employment success has long been considered an index of stability in correctional work. Kitchner, Schmidt and Glaser (1977) found support for this view. In their study, offenders who had been employed at a single job prior to incarceration had a significantly lower failure rate than those who had not been employed at a single job. This study also found that offenders who had been employed for three-quarters or more of the last two years prior to incarceration had a failure rate of 47 percent compared to a 70 percent failure rate for offenders employed less than three-quarters of the last two years. Hess and Frank (1977) also found that full time employment was significantly related to post-release success in their study of offenders in Michigan.

Several studies have shown that increased age is associated with successful post-release adjustment (Babst, Koval & Neithercutt, 1972; Brown, 1978; Carney, 1969; Glaser, 1969; Griffiths & Ferden, 1974; Hess & Frank, 1977) Carney (1969) found that older offenders in his study had significantly lower recidivism rates than younger offenders. Babst et al. (1972) found that in their study of burglars, older parolees had better completion rates. Age at first arrest was found to be a significant predictor of success for federal offenders in a study done by Elder and Cohen (1978).

Studies investigating race as a factor in post-release adjustment have found conflicting results. Several studies have found no differences in reconviction rates between whites and non-whites (Glaser, 1969; Palmer & Carlson, 1976; Seiter, Petersilia & Allen, 1975). Contrary to these findings, Reed and Woods (1972) found that recidivism in their study was associated with being black. Kitchner, Schmidt and Glaser (1977) found in their 18 year follow-up of federal offenders, that race was significantly related to post-release adjustment. In that study, the recidivism rate for non-whites was 71 percent compared to 60 percent for white offenders.

Psychological tests to discriminate between first offenders and recidivists have produced less than satisfactory results. The Minnesota Multiphasic Personality Inventory (MMPI) has received more attention in the research literature than other tests in this regard. Flanagan and Lewis (1964) studied two groups of adult male offenders who were serving their first adult prison terms. One group did not have a juvenile history of criminal activity. The second group of offenders did have a record of juvenile criminal involvement. Flanagan and Lewis found that the second group scored higher on the F (Fake), Pd (Psychopathic deviant), Pa (Paranoia), Sc (Schizophrenia), and Ma (Mania) scales of the MMPI. The majority of studies, however, have not found the MMPI to be a useful tool in predicting recidivism. Christensen and Le Unes (1974) studied adult first offenders and adult recidivists using the MMPI. Their study found no significant differences between the two groups. This finding is supported by Smith

and Lanyon (1968), Mack (1969), Gendreau, Grant, Leipziger, and Collins (1979), and Gendreau, Madden and Leipziger (1980). Other psychological measures have not been shown to be any more effective than the MMPI in predicting the future behavior of offenders (Hartnett & Schumate, 1980; Pruesse & Quinsey, 1977; Quinsey & Ambtman, 1978).

Drawing from the data base of parole research, Moran, Kass and Munz (1977) studied 205 residents of two halfway houses sponsored by the Magdala Foundation in St. Louis, Missouri to find the extent to which program success of offenders in halfway houses could be predicted from the historical and test information available on the offenders. Both male and female offenders were included in the study. The group was 66 percent black, 34 percent white, typically young (22.2 years of age), single (83%), completed the tenth grade in school but had reading, writing and spelling scores far below that grade level. The demographic data evidenced that 34 percent of the group had prior vocational training and 76 percent of the group had never held a single job for one full year. More than 50 percent of the group had drug abuse histories and over 33 percent evidenced some psychiatric intervention prior to admission. Upon review of the offender criminal histories, the average offender had been arrested at 16 years of age, had an average of 1.6 arrests per year, had been incarcerated at least once and spent approximately 12 months in prison. The Magdala residents' offenses ranged from murder, assault, armed robbery, auto theft, burglary,

and sexual offenses, to misdemeanors such as shoplifting and less serious drug offenses. Probationers made up 45 percent of the group, 20 percent were parolees, 17 percent pre-releases and the remaining 18 percent were on bond or other legal status.

The researchers selected ten variables found to be related to successful adjustment in parole programs: current age, history of drug abuse, longest stay at a single job, psychiatric history, age of first arrest, average arrests per year, number of months incarcerated, legal status (pre- or post-incarceration), psychological deviance as measured by the Goldberg Index using the Minnesota Multiphasic Personality Inventory, and IQ. The researchers later included highest grade completed in school as a variable. These variables were correlated with outcome measures by the use of a stepwise multiple regression. The three outcome measures chosen were highest level reached in the program (this was a program with five levels), number of consecutive weeks worked at a single job (or in training), and a rating by the chief psychologist using a 4 point scale. The total population was divided into four subgroups based on race (black and white) and sex (male and female).

The results of their analysis revealed that the two best predictors of success across all four subgroups were the longest stay at a single job prior to admission, and the highest grade completed in school. For the male subgroup, current age and IQ were additional important predictors. For females, age at first arrest, number of months incarcerated,

current age, and lack of any previous psychiatric history were found to be additional predictors. Lack of psychological deviance and IQ were found to be additional predictors for the white subgroup. For the black subgroup, current age was the only additional predictor.

Schlitt (1979) attempted to study variables associated with successful adjustment in three adult male halfway houses. Success was defined as leaving the halfway house with a "constructive day" (gainful employment) on an approved date. The population in this study consisted of 287 offenders, 62.8 percent of whom were black, 36.2 percent were white and one percent were classified as "other." Married offenders comprised 14.4 percent of the group. The largest percentage of the group (69.7%) were unmarried and 15.9 percent were classified as "other." The typical resident had his first arrest at 16.3 years of age, averaged a total of 10.4 arrests and averaged 2.2 arrests per year. The percentage having juvenile records was 51.2. Almost the entire group (90.9%) had been incarcerated in the past, and the average resident had a total of 2.3 incarcerations for a total of 35.6 months. The highest grade completed by the typical resident was 10.4. The employment histories of the group revealed that 20.9 percent had never been employed. Those who had been employed averaged 2.5 jobs held. The longest stay at a single job for these residents was 17.2 months. Most residents (60.6%) had no prior vocational training. The percentage of residents with identified drug or

alcohol abuse histories was 75.2 and 15.9 respectively, with 44 percent evidencing some psychiatric history. The legal status of the residents were: Federal prisoners, 27.9 percent; Federal probationers, 11.9 percent; state prisoners, 21.7 percent; state parolees, 27.6 percent; "other" legal status, 3.3 percent. Schlitt utilized 74 variables for examination. Demographic information accounted for 38 variables. Test data included IQ scores, Wide Range Achievement Test (WRAT) scores, Minnesota Multiphasic Personality Inventories (MMPI), Sixteen Personality Factors (16PF) tests, and three categories of the Eysenck Personality Inventory (EPI).

Schlitt grouped the halfway house residents into a success group and a non-success group. Discriminant function analysis was employed to derive a prediction equation for each of the three halfway houses. For house one, Schlitt's analysis revealed four variables contributing to the final equation. In order of importance, they are (a) Federal prisoner status, (b) age at first arrest, (c) probationer legal status, and (d) the WRAT arithmetic grade level score. For house two, the six variables that emerged were, in order of importance: (a) the legal status of parolee, (b) the legal status of federal prisoner, (c) the legal status of probationer, (d) the legal status of state work releasee, (e) the WRAT spelling grade level, and (f) average pay per hour on the longest job. Schlitt's study revealed for house three, the following five variables, in order of importance: (a) the MMPI F score,

(b) the highest grade completed in school, (c) the legal status of state work releasee, (d) the legal status of probationer, and (e) the 16PF Q3 (self-discipline) score.

Williams (1980) in a study of Charlotte House, a halfway house for women on pre-release status from the Massachusetts Department of Corrections, examined variables which would distinguish between program completers and non-completers. Williams' subjects consisted of 45 female offenders admitted to and released from Charlotte House during 1977 and 1978. The data examined consisted of 39 variables from residents' criminal histories, background and commitment. The outcome measure for Williams' study was simply completion of the program.

Using a chi square, Williams found 12 variables which distinguished between program completers and non-completers. In rank order of their importance they were (a) time on job of longest duration, (b) age at Charlotte House placement and age at release, (c) age at first arrest, (d) number of prior state or federal incarcerations, (e) time at most skilled position, (f) number of charges for property offenses, (g) number of court appearances, (h) time spent at Charlotte House, (i) age at incarceration, (j) marital status, (k) number of charges for escape offenses, and (l) number of prior incarcerations.

Moczydlowski (1980) studied predictors of successful adjustment at Troy House, a halfway house for youthful and

adult offenders in Durham, North Carolina. This study examined the background, criminal and program variables of 90 residents of Troy House between 1974 and 1978. Referrals to Troy House were from the U.S. Bureau of Prisons (58%), North Carolina State Prison System (29%), Vocational Rehabilitation (7%), and private clients (6%). Residents on pre-parole status accounted for 18 percent and parolees accounted for ten percent of the clients. Probationers, pre-sentence residents and residents listed as unconditional legal status made up 14 percent, seven percent and 14 percent of the population respectively. The average age of Troy House residents was 27 years. The Troy House group was 52 percent black and 48 percent white. The marital status of the residents was 60 percent single, 20 percent married and 20 percent divorced or separated. The average educational level was 10.6 years. Residents who had never held a single job for one full year made up 51 percent of the group. Residents with past or present alcohol abuse problems accounted for 34 percent of the group, while 28 percent reported past or present drug abuse problems. Troy House residents had served an average of 15 months in prison prior to coming to the halfway house and had an average of 5.6 arrests. First time offenders made up 24 percent of the group. Moczydlowski reported that 46 percent of the residents had their first arrest at age 16.

Moczydlowski (1980) divided the variables for consideration in this study into three sets. Under personal history,

he included age, employment record, drug or alcohol use, IQ, educational level, community ties and family life.

The set of criminal history variables included the number of prior arrests, sentence, severity of crime committed, history of assaultive behavior, age at first arrest, referral source, institutional adjustment while confined, and longest time served. Finally, under program variables, Moczydlowski included evaluations of in-program behavior, length of stay at the house, percent of time employed, community treatment, and satisfaction with employment.

Moczydlowski employed multiple regression to correlate the above variables with success at three points in the program. These three points were initial adjustment (Y1), program adjustment (Y2), and release (Y3). The Y1 measurement was a value assigned on a five-point scale on the basis of number of restrictions, length of time to find employment, relations with staff and residents, fulfillment of contract goals and incident reports, occurring within the first two to three weeks of residence. The Y2 measurement was also a value assigned on a five-point scale, however, this value was assigned strictly on the basis of restrictions. Y3 was a measure of program completion assigned on a five-point scale on the basis of whether or not a resident experienced conflict in the program, was released with a residence and was in compliance with parole or probation.

Moczydlowski found that initial success, as measured by Y1, was most directly correlated with alcohol use, prior

arrests, institutional adjustment and IQ. Age, prior employment, sentence and family life were somewhat less highly correlated. Program adjustment as measured by Y2, was most highly correlated with initial adjustment (Y1), alcohol use, severity of crime, age, sentence, satisfaction with job, and family life. Less highly correlated variables were prior arrests, percent employed, prior employment, education, institutional adjustment, and age at first arrest. Adjustment at release, as measured by Y3, correlated highly with initial (Y1) and program (Y2) adjustment, alcohol use, severity of crime, age, percent employed, prior employment, institutional adjustment, length of stay, and referral source. Less highly correlated to Y3 were prior arrests, sentence, community treatment, and age at first arrest. Based on correlations and number of valid cases, Moczydlowski concluded that alcohol use, severity of crime, age, prior arrests, prior employment, and percentage of time employed were most significantly related to program success.

Previous halfway house studies, based on parole data, have shown promise in identifying offender characteristics associated with successful completion of halfway house placement and, each of the previous studies succeeded in identifying characteristics that had statistical value in the prediction of completion. Difficulties remained, however, in identifying characteristics associated with completion which were consistent across studies, in the ability to draw clear conclusions from

studies upon which decisions regarding offender placement could be made, in how well offenders studied represented the general population of offenders placed in halfway houses, and in the accuracy of predictions made using the offender characteristics suggested by the previous research.

The purpose of the present study was to evaluate more completely, offender characteristics associated with completion of halfway house placement. The present study was designed to improve on previous research through the inclusion of additional offender characteristics for analysis, the analysis of a large number of representative cases, and the use of statistics allowing clear conclusions upon which to base decision making.

The characteristics included for analysis in the present study were age at first admission, age at first alcohol use, age at first drug use, number of months incarcerated, number of financially dependent children, number of years at usual occupation, number of jobs held in the last two years prior to incarceration, marital status, alcohol use pattern, drug use pattern, educational level, referral source, type of crime committed, usual occupation, race, with whom the offender planned to live at release and, whether or not the offender had vocational training. Since the primary purpose of halfway house placement was the reintegration of offenders into the community, the present study included only offenders who had been incarcerated in state or Federal prisons and were re-entering the community. The statistics used in the present study were

designed to clear conclusions regarding: (a) those characteristics which best predicted successful completion; (b) the accuracy of prediction using the selected characteristics; and (c) whether, and to what extent, the selected characteristics were grouped together along common factors.

Data analysis was done in three steps. The first step was to identify offender characteristics which were associated with completion in halfway house placement. This was done by submitting the information about offender characteristics and completion information to a discriminant analysis. The second step was to see how accurate the offender characteristics identified by the discriminant analysis were in predicting completion of an offender's halfway house stay. This was done by comparing the actual completion information of each offender with the information predicted using the characteristics identified by the discriminant analysis, resulting in a table of correctly and incorrectly classified cases. The third step was to identify any possible factors which underlied the offender characteristics identified by the discriminant analysis. This step was accomplished by submitting the offender characteristics identified by the discriminant analysis to a factor analysis.

Method

Subjects

The subjects for this study consisted of 554 offenders admitted to halfway houses operated by the Volunteers of

America during 1982. One hundred and two of these offenders were residents at a house located in Dallas, Texas. Five hundred and twenty one of the offenders were male, while 33 of these were female. The offenders ranged in age from 18 to 75 years. All offenders included in the present study were on parole status from either the Texas Department of Corrections or the United States Parole Office. Although the Dallas and Fort Worth houses were designated as coed facilities, no females were residents of the Dallas house during 1982. Table 1 gives offender characteristics among houses.

Table 1

A Comparison of Characteristics Among Houses and Sexes

Characteristics	Dallas Males	Ft. Worth Males	Ft. Worth Females
Number of Offenders	102	419	33
Referral Source: Federal	64 (63%)	79 (19%)	22 (67%)
State	38 (37%)	340 (81%)	11 (33%)
Mean Age in Years	33.3	29.2	32.0
Median Age in Years	25	20	28
Unmarried Offenders	75 (74%)	337 (80%)	24 (73%)
Race: White	50 (49%)	231 (55%)	15 (46%)
Black	45 (44%)	167 (55%)	16 (48%)
Hispanic	7 (7%)	28 (7%)	2 (6%)
Other	0	5 (1%)	0
Average Age First Alcohol Use	16.1	15.7	20.4
Average Age First Drug Use	18.0	16.6	21.9

Table 1--Continued

Characteristics	Dallas Males		Ft. Worth Males		Ft. Worth Females	
Education: Below H.S. Grad	55	(54%)	291	(70%)	16	(49%)
H.S. Grad.	19	(19%)	70	(17%)	5	(15%)
Some College	27	(27%)	50	(12%)	10	(30%)
College Grad.	1	(1%)	7	(2%)	2	(6%)
Usual Occupation: None	1	(1%)	24	(6%)	4	(12%)
Unskilled	83	(81%)	356	(85%)	21	(64%)
Other	18	(18%)	39	(9%)	8	(24%)
Average Years at Occupation	9.9		7.0		6.9	
With Vocational Training	40	(39%)	124	(30%)	12	(36%)
Average No. of Jobs Last 2 Years	1.2		1.3		1.4	
Crime: Property Offense	68	(67%)	287	(69%)	22	(67%)
Drug Offense	16	(16%)	60	(14%)	6	(18%)
Against Person	10	(10%)	42	(10%)	3	(9%)
Other	8	(8%)	30	(7%)	1	(3%)
Average Incarceration in months	24.6		24.2		18.2	
Without Dependent Children	58	(57%)	292	(70%)	15	(46%)
Planned to Live With:						
Self	33	(32%)	77	(18%)	4	(12%)
Friend	3	(3%)	13	(3%)	1	(3%)
Spouse	22	(22%)	57	(14%)	4	(12%)
Relative	35	(34%)	158	(38%)	14	(42%)
Uncertain	10	(10%)	114	(27%)	10	(30%)
Completers	69	(68%)	198	(47%)	27	(82%)
Noncompleters	33	(32%)	221	(53%)	6	(18%)

Materials

Materials for this study consisted of the Data Collection Form which was developed by the experimenter (see Appendix A). All information regarding the offender characteristics under study were gathered from offenders' files maintained at their residences and recorded on individual Data Collection Forms. Data was collected on the following characteristics (for numerical values assigned, see Appendix A):

1. Age at admission
2. Age at first alcohol use
3. Age at first drug use
4. Number of months incarcerated
5. Number of financially dependent children
6. Number of years at usual occupation
7. Number of jobs held in the last 2 years
8. Marital status: married/other
9. Alcohol use pattern: continuously/daily/
weekly/periodically/none
10. Drug use pattern: continuously/daily/
weekly/periodically/none
11. Educational level: below high school
graduate/high school graduate/college
classwork/college graduate
12. Referral source: state/federal
13. Type of crime: property offense/drug
offense/crimes against persons/other

14. Usual occupation: none/unskilled/other
15. Race: white/black/hispanic/other
16. With whom offender will live at release:
self/friend/spouse/relative
17. Vocational training: yes/no

Procedure

The Volunteers of America maintained a structured program for resident offenders consisting of four sequential phases implemented in both the Dallas and Fort Worth houses. Phase one was an initial period of five days designed to provide an opportunity for intake and orientation. During this phase, the offender's needs were assessed and goals were established for the offender's stay. Group meetings and House Government meetings were mandatory for phases one through three. During phase one, the offender was restricted to the assigned facility. Phase two initiated a job seeking program during which the offender was to find a job and establish a savings account. Phase three required the offender to be consistent in his/her employment and savings plan. Phase four was a transition phase during which group and house meetings were optional and furloughs could be granted. Offenders at this point were expected to find permanent residence. Offenders who completed the four phases of the program were given a letter of completion and were considered completers for the purposes of this study. Offenders were terminated from the program during any phase for serious violations of program rules, escape or the

commission of a new offense. Offenders terminated from the program, for whatever reason, were considered noncompleters for the purposes of this study. All offenders included in the present study were on parole status from either the Texas Department of Corrections or the United States Parole Office.

Each offender was assigned an identification number and Data Collection Forms were divided according to sex. Data collected on each sex group was first subjected to a discriminant analysis to determine those characteristics which best discriminated between completers and noncompleters. A prediction equation developed by the results of the discriminant analysis was formulated to classify offenders into groups of probable completers versus noncompleters to determine the percent of correctly classified cases. These characteristics identified by the discriminant analysis as predictors of completion were also subjected to a factor analysis in order to determine if any underlying factors were associated with the selected characteristics by group identification. An varimax rotation was used for the factor analyses.

Results

Discriminant Analyses

For the group of male offenders, a total of ten steps are used in the discriminant analysis. The canonical correlation for the function is .517. Wilks' Lambda is .733. Chi squared is 158.67 with 10 degrees of freedom, $p < .001$. Standardized coefficients are presented in Table 2. The standardized

Table 2
Standardized Coefficients for the Male Group

Age at first drug use	.53543
Alcohol use pattern	-.36857
Referral source	.35214
Drug use pattern	-.22343
Marital status	.21648
Educational level	.20849
Vocational training	.14513
Age at first alcohol use	.13673
Race	.13384
Years at usual occupation	-.10141

coefficient gives the relative importance of a particular characteristic and its contribution or weight to the final equation.

For the group of female offenders, four steps are used in the discriminant analysis. The canonical correlation for the function is .845. Wilks' Lambda is .286. Chi squared is 36.350 with 4 degrees of freedom, $p < .001$. Standardized coefficients are presented in Table 3.

Relative to the noncompleters, program completers in the group of male offenders report an older age at first drug use, less frequent use of alcohol, are more often federal referrals, are more highly educated, use drugs less frequently, are more

Table 3
Standardized Coefficients for the Female Group

Age at first drug use	.96839
Drug use pattern	-.64658
Length of incarceration	.55253
With whom offender plans to live	.24987

often married, have had vocational training, report an older age at first alcohol use, are more often classified racially as "white" or "other," and have spent more years at their usual occupation.

Relative to noncompleters, completers in the group of female offenders report an older age at first drug use, less frequent use of drugs, and a longer period of incarceration. In addition, completers in the female group report planning to live with a spouse or relative after release, or are unsure with whom they plan to live after release, more often than do noncompleters.

Classification

The prediction equation developed by the results of the discriminant analysis for the male group results in 75.38 percent correct classification of completers and noncompleters when compared with the actual outcome data (see Table 4).

Table 4
Classification Results for Male Group

Actual Group	Number of Cases	Predicted Completers	Predicted Noncompleters
Completers	267	195 (73.1%)	72 (26.9%)
Noncompleters	254	56 (22.2%)	198 (77.8%)

Note. Cases correctly classified = 75.38%.

Correct classification based on the discriminant analysis for the female group is 96.97 percent (see Table 5).

Table 5
Classification Results for Female Group

Actual Group	Number of Cases	Predicted Completers	Predicted Noncompleters
Completers	27	26 (96.3%)	1 (3.7%)
Noncompleters	6	0 (0.0%)	6 (100.0%)

Note. Cases correctly classified = 96.97%.

Factor Analysis

The factor analysis on the group of male offenders produces four factors. These factors account for a total of 57.1 percent of the common variance among the characteristics (see Table 6). Factor one is the strongest, accounting for 19.6 percent of common variance. Factor two accounts for 13.3

Table 6
Factor Analysis of Male Group Characteristics

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1	1.96348	19.6	19.6
2	1.32888	13.3	32.9
3	1.22870	12.3	45.2
4	1.18721	11.9	57.1

percent of common variance, whereas factors three and four account for 12.3 percent and 11.9 percent of common variance respectively.

In order to simplify interpretation, only characteristics with loadings of .4 or greater on factors are considered and listings of characteristics loading .4 and above for each factor are included (see Table 7).

Factor I loads on the characteristics of referral source, educational level, marital status and vocational training. The finding of this study that Federal offenders have higher mean educational levels, are more likely than state offenders to be married, and are more likely than state offenders to have vocational training, is in agreement with Moran et al. (1977). Factor II loads on the characteristics of age at first drug use and age at first alcohol use. Factor III loads

Table 7
Factor Loadings for Male Group Characteristics^a

	Factor			
	I	II	III	IV
Age at first drug use		.76361		
Alcohol use pattern			.82713	
Referral source	.69531			
Educational level	.63778			
Drug use pattern			.76338	
Marital Status	.47212			
Vocational training	.53834			
Age at first alcohol use		.80820		
Race				.74850
Years at usual occupation				.73537

^aOnly loadings of .4 and above are included.

Note. I = Referral source

II = Age at first substance use

III = Substance use pattern

IV = Race-employment

on the characteristics of alcohol use pattern and drug use pattern. Factor IV loads on the characteristics of race and number of years at usual occupation. The group of white offenders have the highest mean number of years at a usual

occupation, followed by blacks, hispanics and the group of combined others, respectively.

The factor analysis for the group of female offenders produces two factors. These factors account for 64.5 percent of the common variance (see Table 8).

Table 8
Factor Analysis of Female Group Characteristics

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1	1.48891	37.2	37.2
2	1.08926	27.2	64.5

Factor one accounts for 37.2 percent of common variance, while factor two accounts for 27.2 percent of the common variance (see Table 9).

Table 9
Factor Loadings for Female Group Characteristics

	I	II
Age at first drug use	-.68009	-.51202
Drug use pattern	.83110	
Length of incarceration	.54542	
With whom offender plans to live		.88432

Note. I = Substance use-incarceration

II = Substance use-residence plans

The factor analysis for the group of female offenders produces two factors. Factor I loads on the characteristics of age at first drug use, drug use pattern and length of incarceration. Factor II loads on the characteristics of age at first drug use and with whom the offender plans to live after release.

It was discovered upon later examination of the data that information regarding the characteristic of who the offender planned to live with after release was entered into the factor analysis as interval data rather than nominal data. Therefore, interpretation of that characteristic should be done with great caution.

Discussion

The offender characteristic of age at first drug use is found to be the most consistent predictor of completion. For both males and females, the mean age at first drug use is older for completers than for noncompleters. This finding is in agreement with research in the area of parole failure (Inciardi, 1977; United States Parole Commission Research Unit, 1977), however, previous studies of halfway houses have been unable to support the literature on parole failure (Moran, Kass & Munz, 1977; Schlitt, 1979).

The characteristic of alcohol use pattern is an important predictor of completion for the group of male offenders. Completers are characterized by less frequent alcohol use. This finding supports research on both parole and halfway houses (Elder & Cohen, 1978; Moczydlowski, 1980).

The characteristic of referral source is found to be a significant predictor of completion for the group of male offenders. The finding of the present study is that Federal referrals are more likely to complete their halfway house stay than are state referrals. This finding supports the research done by Schlitt (1979), who found that legal status was an important variable for all three halfway houses examined in his study, and research done by Moczydlowski (1980).

Educational level is identified as an important predictor of completion for the group of male offenders. In this group, completers have higher mean educational levels than noncompleters. This finding is in agreement with a large body of research in both parole success and halfway house success (Berechocea & Spencer, 1972; Hemple & Webb, 1976; Moran et al., 1977; Pipkin, 1972; Schlitt, 1979).

The characteristic of drug use pattern is found to be a consistent predictor of completion for both male and female groups of offenders. Program completers in both groups report a lower frequency of drug use than noncompleters. This finding supports previous research on parole success (Elder & Cohen, 1978; Hemple & Webb, 1976; Palmer & Carlson, 1976).

The characteristic of marital status is identified as an important predictor of completion for the group of male offenders. The data shows that married offenders are more likely to be completers. The finding of this study is

consistent with research in the area of parole success, recidivism and halfway house success (Kitchner, Schmidt & Glaser, 1977; Knox & Stacey, 1978; Solomon, 1976; Williams, 1980).

Vocational training is found to be a predictor of completion for the group of male offenders. Offenders who have vocational training are more likely to complete their halfway house stay than are offenders who do not have vocational training. This finding is consistent with the literature which shows that higher levels of education are reflective of better post-release adjustment (Hemple & Webb, 1976).

Age at first alcohol use is identified as an important predictor of completion for the group of male offenders. Program completers have an older mean age at first alcohol use when compared to noncompleters. This finding is in agreement with previous research in the areas of parole success and halfway house success (Inciardi, 1971; Moczydlowski, 1980).

Another characteristic identified as a predictor of completion for the group of male offenders is race. Completers tended to be white or "other" (American Indian, Jewish, etc.). This finding is consistent with the literature review.

The characteristic of years worked at usual occupation is an important predictor of completion for the group of male offenders. Completers have a higher mean number of years worked at a usual occupation. This finding is in agreement with the literature concerning parole success (Kitchner, Schmidt & Glaser, 1977).

For the group of female offenders, the characteristic of number of months incarcerated is found to be a predictor of completion. Completers are found to have longer periods of incarceration relative to noncompleters. This supports the findings of Moran et al. (1977). As previously noted, research in this area has not yielded consistent results.

Finally, the characteristic of who the offender plans to live with after release is identified as a predictor of completion for the group of female offenders. Completers in this group report planning to live with a spouse or relative after release, or are unsure with whom they plan to live after release. The finding of the present study is in agreement with previous studies of post-release success and family ties (Kitchner, Schmidt & Glaser, 1977; Knox & Stacey, 1978; Solomon, 1976).

The present study achieves its stated purposes, however, there are ways in which this study could have been better and there are directions which should be suggested for future research. An area in which the study could have been improved is the number of female offenders studied. Because of the small number of female offenders in this study, the results of this study, as they pertain to female offenders, must be interpreted with caution. A logical next step in this research would be to replicate the present study using a larger number of female offenders. Another way in which the experimenter would like to have improved the present study is by including

certain offender characteristics for study which were not available for the present subjects. Two offender characteristics which the experimenter would like to have included are, the age of the offender at his or her first arrest and the length of the offender's longest employment. These two characteristics have shown promise in parole studies (Seiter et al., 1976) but were unavailable in the present study because this information is not gathered for files by the Volunteers of America.

The characteristics of offenders studied are comparable to offenders on parole status in previous research. The reader is directed to the United States Department of Justice for comparison data.

Several future steps are suggested by the present study. Since offender characteristics associated with halfway house completion are identified, it is important now to determine how stable these characteristics are. First, it is necessary to replicate the present study to see whether the identified characteristics remain stable in subsequent years and for different geographical locations. By replicating the present study in subsequent years, offender characteristics can be identified which are stable in the face of environmental pressures. Such forces as prevailing economic climate may affect the employment possibilities of offenders resulting in offenders becoming frustrated and perhaps resorting to behaviors which would lead to them being terminated from the

halfway house. Replication of the present study in varying geographical locations is necessary to determine if the characteristics associated with completion in urban centers, such as the present study, are the same as those associated with completion in rural, more agriculturally based areas.

Once stable characteristics associated with completion are identified, research may proceed to the stage of placement of offenders using the identified characteristics as criteria. Studies should then be done to determine the completion rates of offenders in halfway houses using the identified characteristics as placement criteria against the completion rates of offenders in halfway houses not using the identified characteristics as placement criteria. If the identified characteristics are accurate, significant differences would be expected in the completion rates of offenders in halfway houses being studied. If significant differences are not found to exist, the focus of research may return to identifying predictors. If significant differences are found to exist, research should then focus on the development of halfway house programs tailored to offenders identified as having high or low probabilities of completion. The development of treatment based on offenders' needs is a logical next step and is something already in existence within prison systems, where offenders are placed in the minimum, medium or maximum security units based on their assessed need for structure. It may well be that offenders who are high risks of not completing halfway

house placement as they exist at the present time, would benefit from placement in halfway houses which provide more structure and more graduated decrease of structure before releasing offenders into the community.

Finally, once halfway house programs are in place based on offender needs, research should focus on the post-release adjustment of offenders in order to measure the extent to which specific halfway house programs are beneficial to their target offender population.

The present study is also successful in identifying factors underlying offender characteristics associated with halfway house completion. In future research, it will be important to establish whether or not the factors found in the present study are stable, just as it is important to establish the stability of offender characteristics associated with completion. It is therefore recommended that factor analyses be included in future studies.

The present study represents a first attempt to identify characteristics relating to program completion for the groups under study. Many of the characteristics which are important predictors of completion in this study are in agreement with the literature review concerning parole success and recidivism. It must be stressed that the findings of the present study are strictly applicable only to the groups under study. However, a broader implication of the findings of this study are that the characteristics found to be associated with parole

completion and recidivism may be more applicable to halfway house populations than was previously thought. The present study is limited by the use of existing files, as noted earlier. Other limitations are that the information utilized represents data gathered from offenders' files only over a one year period. Still another limitation may be that offenders on parole status from the Texas Department of Corrections may differ in some manner from parolees of other prison systems.

Appendix A

Data Collection Form

Completer/Noncompleter: 0, 1 _____

House: D, FW _____

Referral Source: State 0, Federal 1 _____

Age: _____

Marital Status: M 1, S 0, W 0, D 0 _____

Sex: F, M _____

Race: W 3, B 2, H 1, Other 0 _____

First Alcohol Use: _____ yrs. _____

First Drug Use: _____ yrs. _____

Alcohol Pattern: 4 Continuous, 3 Daily, 2 Weekly,
1 Periodically, 0 None _____

Drug Pattern: 4 Continuous, 3 Daily, 2 Weekly,
1 Periodically, 0 None _____

Educational Level: 0 Below HS Grad., 1 HS Grad.,
2 College Work, 3 College Grad. _____

Usual Occupation: None 0, Unskilled 1, Other 2 _____

Number of Years at Usual Occupation: _____ yrs. _____

Vocational Training: Yes 1, No 0 _____

Number of Jobs Last 2 Years: _____ yrs. _____

Type of Crime: 0 Property, 1 Drug, 2 Person, 3 Other _____

Number of Months Incarcerated: _____ mos. _____

Number of Financially Dependent Children: _____

Who Client Will Live With at Release: Self 0,
Friend 1, Spouse 2, Relative 3,
Unsure 4 _____

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