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City University of New York PH.D. 1984

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THE RELATIONSHIP BETWEEN ADDICTION SEVERITY AND TREATMENT OUTCOME IN A HEROIN DETOXIFICATION PROGRAM

by

EDWARD S. MAYNARD

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1984

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

THE RELATIONSHIP BETWEEN ADDICTION SEVERITY AND TREATMENT OUTCOME IN A HEROIN DETOXIFICATION PROGRAM

by

Edward S. Maynard

Adviser: Professor Anderson J. Franklin

Thirty male drug addicts who presented themselves at a drug rehabilitation center in New York City were tested using the Addiction Severity Index in order to determine successful completion of the orientation phase of the treatment program. The results were analyzed using the Mann-Whitney Test and the Wilkes-lambda and uinvariate F-ratios of the ASI on discriminate functions. There were no significant differences between those who left the program and those who remained. The ASI was unable to predict which of the subjects would complete the orientation phase. Four factors appear to account for the failure of the ASI to prognosticate: First, the ASI had been standardized on an inpatient, veteran population while the group studied was an outpatient, non-veteran population. Second, the ASI does not tap the patient's perception of the program's ability to help him. Third, the instrument attempts to measure pathology and ignores the strengths which the individual brings into the treatment situation. Fourth, the ASI does

not measure the motivation of the patient to be free of drugs.

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After having written and successfully defended a doctoral dissertation some years ago, I did not expect to encounter the difficulties which I experienced in writing this one. Many persons helped and encouraged me along the way and I would like to thank them sincerely for their kind assistance. Dr. Anderson J. Franklin, my advisor, spent long hours of his time above and beyond the call of duty, in teaching me the fine points of research. For this and much more I thank him. Dr. Louis J. Gerstman took time and exhibited extraordinary patience in helping me with the design and statistics. I thank him very much for his generosity. Dr. Harold Wilensky was painstaking in his reading of the materials which I wrote. He made incisive and helpful comments for which I am very grateful. Professor Seymour Slovik and Dr. Laurence Gould very graciously consented to serve as readers. I appreciate their willingness to take time out of their busy schedules to do this. All of the aforementioned professors in the Clinical Psychology program contributed to my growth as a budding psychologist far beyond their participation in my dissertation. They have been faithful and instructive guides from the time I first met them upon entering the program. My lovely, cheerful and vivacious wife, Tina has been an inspiration to me far beyond words to describe. I

love and thank her. Finally to my God, the source of all, I give thanks for "His loving kindness endures forever."

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CHAPTER 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

The problem of the abuse of drugs and alcohol is as old as the American republic. In the 18th and 19th centuries, it was viewed as a moral issue and the offenders were categorized as moral degenerates. The great physician, Benjamin Rush is credited for pioneering the clinical perspective to this problem in the late 18th century (Levine, 1978).

After World War I many men came home from the war addicted to morphine which had been used as an anesthetic in the field to perform surgery. The addiction was treated as a temporary condition. The hospitals which were used to treat these men went out of existence after the war as the problem receded (Jaffe, 1979). One of these hospitals, Riverside, in New York City reopened in 1952 as the drug addiction problem began to re-emerge. A major breakthrough took place in 1964 with the advent of methadone maintenance and narcotic antagonists. Just before this, the therapeutic community for drug treatment was established. Closely connected to the therapeutic community was the religious approach as exemplified in "Teen Challenge" in Brooklyn (Brill, 1981).

Heroin addiction was focused upon when the relationship between heroin abuse and criminal activity became estab-

lished (Jaffe, 1979). At the point that Dole and Nyswander (1965) purported to have reduced criminal activity on the part of their patients by 94 percent with the use of methadone, the demand for treatment greatly increased. There was, after 1965, a great proliferation of treatment centers (Jaffe, 1979).

An insistent problem that each of these programs faced was the inability to predict which of their clients would be successful in treatment and which would not. Predictive studies began with very simple single variable predictors. Later, complex multi-variable studies by McLellan (1981) and his cohorts were carried out.

McLellan et al (1978) began a number of studies in the use of psychiatric severity as a predictor of treatment outcome. They devised and used the Addiction Severity Index. They revised the instrument three times and have had more success than any other researchers in predicting treatment outcome as well as treatment-patient matching (McLellan et al, 1981).

This study is an extension of the McLellan Studies. It will examine the role of potential treatment problems which narcotic addicts present and their use as a predictor of treatment outcome. These problems include: medical, psychological, legal, economic, social-functioning as well as chemical abuse. In addition, this study will test the value of the Addiction Severity Index as an instrument to predict the treatment outcome of heroin addicts and also to conduct an internal analysis to determine the value of individual

items for further analysis. For example, the study will attempt to isolate those variables which are more powerful predictors of outcome than others.

Statement of the Problem

The problem that this study addresses is the possible relationship between the severity of the problems attendant to heroin abuse and their use as predictors of treatment outcome. The problem of the study might be further clarified by asking the following questions:

1. What is the role of the severity of the problems which accompany drug abuse in the prediction of treatment outcome?

2. What is the role of the severity of these problems in the matching of the client with the program which will more suit his needs?

3. What is the role of the program in the treatment of addiction?

The problem this study examines is important for a number of reasons: First, it will examine the relationship of the severity of addict-related problems to treatment outcomes on a different population and a different program than that which has been studied until now. Second, it will attempt a systematic method of assignment of clients to therapeutic modalities which will best suit their needs. Third, it seems to have the potential to isolate those persons for whom there is no program which suits their needs

at the present time, helping to motivate workers in the field of drug abuse treatment to create such a program. Finally, this study will attempt to discover variables which act as predictors which are not included in the ASI.

Rationale of the Study

The rationale for this study is that past research has indicated that, aside from the severity of actual addiction, socio-environmental factors impinge upon the therapeutic outcome. It is reasonable to assume that heroin addiction does not exist *sui genris*, but is a response to environmental circumstances. Heroin, as a derivative of the most powerful chemical pain killer, has a variety of non-medical, legally illegitimate uses, including the killing of psychological pain. (Its pleasurable effects should not be overlooked as well.) Heroin offers its users a pleasurable -- albeit temporary -- escape from the vicissitudes and pain of everyday life. It is therefore logical to conclude that if heroin offers escape from problems, then the severity of those problems is going to influence the success of therapeutic interventions.

Definition of Terms

Drug Addict is an individual who is physically and psychologically dependent on a chemical substance and withdrawal will produce given adverse physical and psychological symptoms.

Treatment Outcome refers to the stated goals of treatment as stated by the particular treatment program.

Symptom Severity is a measure of the addiction related symptoms which the addict presents. These include: medical, psychological, legal, financial, family-social, and chemical dependence problems.

Delimitations of the Study

The scope of the study has been delimited by the writer in a number of ways. First, the study has been restricted geographically to the New York City area. Therefore care should be exercised in extrapolating the results of the study to other geographical areas. Second, the study has been delimited to narcotics addicts only. Finally, the study is of one treatment facility only. Therefore, the claim that the results of the study would be descriptive of clients in other agencies is generalizable only if they include similar programs with a similar population.

Limitations of the Study

The study has been limited by certain conditions beyond the writer's control. The voluntary nature of the sample has limited the results of the study. It is possible that the attitudes of persons not choosing to participate in the study differ significantly from the attitudes of those volunteers.

Overview of Remaining Chapters

Chapter Two will be an analysis of the literature relevant to the dissertation topic. This review of the literature will be divided as follows: the major modalities in the treatment of drug abuse, prediction of treatment outcome, the Addiction Severity Index as a predictor of treatment outcome, and the bearing of the literature on the study at hand.

The third chapter will present the methods and procedures of the study. This chapter will be divided into five sections: 1) A statement of the hypothesis; 2) descriptions of the subjects; 3) design of the study; 4) the research instrumentation; and 5) the treatment procedures.

Chapter four will be a presentation of the results of the statistical analysis of the data which is collected. There will be a discussion of the statistical procedure used to test for significance. There will also be a presentation of the descriptive statistics including the central tendency and variability of the data. Finally, there will be a detailed analysis of the significant findings, concluding with a discussion of implications for treatment programs and further research.

CHAPTER 2

REVIEW OF THE LITERATURE

The literature with respect to the treatment of opiate dependence as we know it had its genesis in Great Britain in 1926 (Jaffe, 1979). The Committee on Morphine and Heroin Addiction of the Ministry of Health of Great Britain enunciated a stance which was a radical departure from the prevailing attitude towards opiate dependence. Up to that time the addict was seen as a moral degenerate (Musto, 1973). Federal hospitals were established in Lexington, Kentucky, and Fort Worth, Texas, after World War II to treat incarcerated addicts (Jaffe, 1979). In the urban centers such as New York and Chicago, the problem of opiate dependence increased after World War II and led to the initiation of pilot programs to deal with it. This was especially true as the relationship between addiction and crime had become established (Chein, 1964).

Ironically, the "British system" which might have reduced the need for large expenditures for drugs by the addict were thwarted by the United States Commissioner of Narcotics Harry J. Anslinger. He stubbornly refused to permit the "British system" which would permit the prescription of heroin to addicted persons. This, of course, does away with the profit motive and would eliminate the criminal

participation in the drug traffic (Brecher, 1972). The criminalization of drug addiction increased drug prices, forcing many addicts into other illegal activities to support their habit. Heroin addicts spend as much as one to two hundred dollars a day on drugs. Most of the money is earned in illegal activities such as gambling, prostitution and the illegal sale of drugs (Regington, 1967).

Two factors led to the treatment of drug abuse as we know it today: congressional legislation of 1966 which allocated funds for voluntary treatment programs and the presidential executive order of 1971 which created the Special Action Office of Drug Abuse Prevention. These two actions altered the attitude toward drug abusers in that they were now viewed as individuals in need of medical attention when previously they had been seen as criminals (Jaffe, 1979).

There are four methods of treatment of addiction at the present time: 1) detoxification; 2) outpatient drug-free treatment; 3) therapeutic community programs and 4) methadone maintenance.

1) One of the main proponents of detoxification as a treatment is Robert C. Newman of Beth Israel Medical Center in New York City. This method he asserts "is highly successful, relatively cheap, applicable on a large scale with virtually no morbidity or mortality and is acceptable to a large proportion of the addict population" (Newman, 1979). He attacks the critics of detoxification by stating that

their criteria of "success" is "holistic." That is that detoxification is seen by them as only one step in the treatment of addiction (Isbell and Vogel, 1948). The holistic view is that the addict is not only living free of the need for drugs by he is gainfully employed, involved in meaningful personal relationships and is not engaged in criminal behavior. In order to demonstrate the effectiveness of detoxification, we must accept much more limited goals for treatment, Newman asserts. Indeed detoxification has only one goal -- detoxification itself without the painful symptoms of acute withdrawal. A further benefit of this treatment modality, Newman argues, is that staff can be more quickly recruited and trained than in other modalities.

To address the issue of "success" with the use of detoxification, one must investigate the population with which it is successful. Newman admits that the addict who does not wish to be in a long term treatment program will prefer detoxification. One of the dangers, to which he admits, is that the addict would like to be detoxified so that he will then be able to get "high" on a lesser amount of heroin. A long term program would not permit him to be out on the street quickly enough to return to drugs. Newman admits that permanent abstinence is not achieved through detoxification. "Success" is therefore defined in very narrow limits which seem self-serving, especially when the addict can actively include health professionals in the maintenance of his own habit. Alternatively, it can be said that detoxification is the program which tacitly accepts

the addict's right to self-determination by treating only the physical symptoms without plumbing motivational patterns.

2) Out-patient drug-free treatment is espoused by Kieber and Slobetz (1979). The National Institute on Drug Abuse defines out-patient drug-free treatment as: "A treatment regimen that does not include any chemical agent or medication" (NIDA, 1977). As far back as 1972 there were grave misgivings about the use of OPDF for opiate dependency. It only worked for the small number of addicts who had sufficient ability to withdraw from heroin without any therapeutic intervention such as methadone (The White House, 1972).

Kieber and Slobertz limit their treatment to individuals who are seeking their first treatment, successful completers of other programs, those who have relapsed following other treatments and those needing treatment after hospital or prison. One can see that their rate of success is influenced by targeting a select population for their treatment. The person seeking his first treatment is more likely to be successful in any treatment modality (Sells, 1977). Successful completers of other programs are by definition already "succeeders." Clients who have relapsed from other programs have largely been drug free by their own admission, for 12-18 months. The likelihood that they can again achieve abstinence is good anyway. The person who has been in prison or hospital is usually drug free and can

benefit from the OPDF program which includes counseling, behavioral therapy and family therapy. These interventions work well for the select population they service. Staton (1977) has documented the effectiveness of the family, for example in treatment of the addict.

Kieber and Slobetz make a plea for the matching of client characteristics and program. This is a critical need in the field of drug abuse rehabilitation. There are certain demographic variables which correlate with success (Sells, 1977) but a more refined method of client-program match is needed.

3) Treatment communities were modeled on the order of Alcoholics Anonymous. The belief was that the best people to treat addicts were those who had themselves been addicted. The addict lives in the therapeutic community and is under the supervision of the staff at all times. There is a rigorous indoctrination which is intended to test the individual's resolve to give up drugs. The therapeutic community is stratified into levels of social privilege, through which addicts pass as they are promoted toward graduation. At the time of release, the addict is "clean" and supposedly has developed an anti-drug orientation and sufficient coping skills to help him or her from redeveloping a drug dependency (Brill, 1981).

4) Methadone maintenance is the most widely used method of treatment at the present time (Lowinson and Millman, 1979). Dole and Nyswander (1965) viewed methadone maintenance as a way of establishing a therapeutic relationship

with its patients. They claim to have been successful in ending the criminal careers of 94 percent of the addicts they treat (Dole and Nyswander, 1968). While these results are impressive, Brill (1981) notes:

> Nevertheless a number of issues have presented themselves, among them the illicit diversion of methadone; the fact that though patients did not continue to abuse heroin, many continued to "chippy" with other drugs, including alcohol; and had more difficulty than anticipated getting off methadone and into an abstinent state. (p. 8)

While the benefits of methadone have been well-documented, there are serious questions to be raised, not the least of which is the fact that methodone is itself addicting. Martin (1972) has pointed to serious signs of stress which follow the attempt to detoxify a person from methadone.

Several crucial issues are raised in the literature on drug abuse. One of the most insistently mentioned problems is prediction of outcome. The treatment of drug abuse is costly, involving many millions of dollars of the taxpayers's money. Thus the need to be able to make some predictions of outcome is crucial. One of the early attempts to research this issue, was conducted by Biase (1971) at the Addiction Services Agency of New York City. The relationship between self reported emotional traits and early termination from the program was studied. The subjects were 30 adolescent addicts who were drug free at the time of testing. The sample consisted of 19 males and 11 females. They were given the Multiple Affect Adjective Check List (MAACL) which purported to measure the subjects self report

in three areas: anxiety, depression and hostility. In addition they were given the Lie Scale from the Eysenck Personality Inventory in order to guard against gross falsification. After six months, the scores of dropouts was compared with those who stayed in the program. The "splits" had a significantly higher depression score than those who remained in treatment ($t=2.18$, $p < .05$). No significant differences were found on the anxiety or hostility scores.

The state of the art of prediction is significantly more sophisticated at the present time as compared with ten years ago. As a pioneering effort, Biase's study has some merit and makes a contribution to the study of prediction of treatment outcome. The glaring weakness is the use of only one variable as a predictor. Depression may be present in any given individual to a greater or lesser degree, whether he/she be an addict or not. In addiciton there is the need for more of a cross-check with other factors which correlate with depression. Finally there is no correlation between the individual scores on the L-scale and the score on the MAACL. This is important to assess the importance of a single variable as a predictor.

Another early study was done by Levine, Levin, Sloan and Chappell (1972) in order to examine personality correlates of success in a methadone maintenance program. Thirty Black male heroin addicts at a methadone treatment center were divided into 3 equal groups: the "stepped-up" group which was the most successful ("clean" for six months), the

re-entry group (they had been dropped out and readmitted) and the dropout group. Each subject was given a psychiatric interview and rated on anxiety, depression, paranoia, object relations and compliance. The severity of psychiatric impairment was the same for all three groups. Depression was highest in the drop-out group and lowest in the stepped up group. Anxiety was highest in the stepped-up group and lowest in the dropout group. The re-entry group scored in the intermediate range on both scales. The most significant score was for compliance; the stepped-up group had the highest and the dropout the lowest. The authors concluded that compliance scores correlated with success in the program as the addict was more easily molded by the program and did what was expected of him. Anxiety was high in this group in that they were concerned that they meet the demands of the program. The dropouts had no such anxiety in that they had left the program and in addition were using drugs to allay anxiety.

This research provides some insights into the issue of prediction. It is somewhat more sophisticated than Biase in that it provided more than a single measure of prediction. Compliance as a measure of success is almost self-evident in that persons who are compliant are more likely to succeed than non-compliant people, since they are less likely to have conflicts with authority. Psychiatric diagnosis tend to be more subjective than test data and this must be taken into account in their evaluation.

MMPI has been used by some researchers with conflicting

results. In a study by McWilliams and Brown (1971), the MMPI was used as an attempt to clarify the contradictions. Three groups of alcoholics were studied (the similarities between the psychodynamics of addicts and alcoholics has been well documented [Stimmel, 1979; Barr, 1976; Kissen, 1973; Stanton, 1977] so that the study is significant to this research): Group I was made up of patients who completed the program, Group II nearly completed and Group III left the program. The MMPI was administered to all of the patients soon after admission to the program. A second administration was done just before the end of the program. Following discharge, they were divided into the three groups mentioned above.

An analysis of variance revealed no significant difference between the groups. All three groups showed peak elevations (above T = 70) on the depression, psychopathic deviate and schizophrenia scales indicating a high level of pychopathology at pretreatment. At a 6-month follow-up, the difference between groups became significant at 12 months ($p < .05$) and 18 months ($p < .05$). Group I had the fewest readmissions for detoxification and Group III had the most with Group II in the middle. The important factor for this research is the fact that the MMPI failed to predict whether a patient would complete the program. It also demonstrates that pre-existing psychological differences do not account for success. However, success in therapy seems to predict subsequent psychological adjustments.

The MMPI apparently fails as a reliable predictor of prognosis in that the same scores can be attained by individuals who may or may not be successful. A high score on the schizophrenia scale indicates the presence of schizophrenia but does not predict whether or not the individual will be successful in alcohol or drug rehabilitation. These findings agree with those of Kish and Hermann (1971) who found that the MMPI did not distinguish between improved and unimproved alcoholics.

Siguel and Spillane (1978) take a very different approach in their attempt to isolate factors which will correlate with successful completion. They use the effect of prior treatment on success, hypothesizing that the likelihood of success decreases with the increase in successive admissions to drug rehabilitation programs. The authors studied 66,000 addicts by getting the data through the Client Oriented Data Acquisition Process (CODA). The subjects were divided into three groups: those who completed treatment, those referred to other agencies for treatment and those who terminated before completion.

The data were analyzed by matching the type of completion of treatment with number of prior treatment experiences. The results showed that the successful completers and those referred to other agencies had fewer prior treatment experiences. For example, 40.4 percent of opiate and 72.6 percent of non-opiate users who had the first treatment experience during the period January to March 1975 completed their programs. Those with four or more treatment experien-

ces had completion rates of 8.7 percent respectively.

The authors discuss the issue of "success" with respect to completion of the program. Some researchers argue (Rogers et al., 1974) that many patients who leave treatment do not return to drugs. Therefore leaving treatment should not be viewed as failure but success. In addition, many who have had several treatment experiences eventually are successful. The number of treatment experiences per se is not a reliable indicator. The individual's strengths and weaknesses must be considered. The treatment modality and the environment in the given clinic must also be considered.

Again there has been an attempt to use a single variable to predict success in drug rehabilitation. This is too complex an issue to be predicted from any single factor. What is emerging from the literature is the fact that there is not set type of individual predictor sensitive enough to act as a reliable predictor of outcome. Neither personality factors nor number of previous treatments are sensitive enough by themselves to act as predictors.

Lubovsky and McLellan (1978) conducted a study to test the ability of the staff at the Coatsville VA Hosptal drug abuse unit to predict "how well the patient will be doing six months from now." The subjects were 50 males with a mean age of 24 and mean education of 11 years. SIxty percent were black and 40 percent were white. Thirteen members of the staff were involved in the study. Interjudge correlations were high (r=.58). Each judge was to predict which

patient would be doing "well, pretty well, not too well, not well at all." Each patient was contacted after 6 months and asked how he was doing. The result yielded a correlation of r=.27. To determine if staff could make predictions the group of subjects was divided into "pretty well or better" and "not too well or worse." The predictions were compared to the actual results yielding the phi coefficient and tested for significance of difference by converting the phi coefficient to a chi square. The mean phi for the 13 staff members was .18. A final attempt was made by asking staff to predict "best" or "worst" prospects. Ten patients were to be rated and placed in each category. The result was a mean phi coefficient of .43

The authors (1978) point to a "severe limit in our ability to prognosticate the outcomes of diverse forms of psychological treatments" (p. 394). This was so even though the judges were from different backgrounds and had ample opportunities to get to know the patients very well. One staff member, whose predictive correlation was quite high (r=.66) stated that he based his prediction on the judgement of patients who, he said, knew who would make it. The best predictor, they concluded, is the patients' pretreatment status. Steady employment, stable living conditions, family support and good educational background are strong predictors of success.

This study, despite its dismal results, points to the direction from which more accurate prediction might come. The view that pretreatment status bodes well for success is

supported by the research of Tmerin and Newman (1971) who found that a good prediction that an addict would not return to drugs is his pretreatment arrest record. The authors have found factors which do not correlate well with the prediction of success; what is needed of course is to find those which will.

Ethnicity as a factor in the prediction of treatment outcome has been reported in the literature for about seventeen years with varied and sometimes conflicting findings.

Ball (1965) studied 3,301 narcotic addicts by dividing them into two groups: minority and middle aged southern whites. He found that the minority group addicts more often abused heroin while the white abused morphine and paregoric. The data were obtained from hospital records as opposed to obtaining them from the subjects themselves. In addition, the study suffers from attempting to study two disparate groups of drug abusers. Those who abuse heroin tend to be more often from low income groups while those who abuse morphine and paregoric are middle class. He found, for example, that the whites obtained their drugs from legal sources such as doctors who would prescribe drugs promiscuously and pharmacists who sold them without prescriptions while the minority group abusers obtained the money for drugs through criminal activity.

Chambers (1969) studied 200 voluntary patients at the federal hospital in Lexington, Kentucky. He found that Black tended to abuse sedatives and barbituates to a greater

degree than Whites. These data also were taken from hospital records and therefore lack reliability of the structured clinical interview.

Collier (1973) conducted an intake questionnaire on 552 patients in a therapeutic community in order to determine the relationship between ethnic group, social class age, drug history and attrition. More Blacks and Puerto Ricans completed the program than Whites. Age was also a factor in that older addicts in all three groups tended to complete the program. Those in the lower socioeconomic groups tended to complete the program as opposed to the middle class patients. The major flaw in this study is the fact that all of the subjects were taken from the same agency. In order to be more useful, data from other agencies would be necessary before generalizations can be made with respect to issue of ethnicity. In addition, the study does not address itself sufficiently to the issue of overlap. That is, Black, Puerto Ricans and Whites who were older and had longer drug histories tended to complete the program successfully irrespective of ethnic group.

Linn, Shane, Webb and Pratt (1979) conducted a study of 106 White subjects and 59 Blacks in order to:

> Present data on the effect of race on attrition from an inpatient unit. The questions posed were whether Black and White subjects differed on characteristics at time of admission and whether these characteristics were related differentially to completion of treatment. (p. 261)

All males with a diagnosis of drug addiction were tested on

admission to an inpatient substance abuse unit at an "urban VA hospital." A 90-item questionnaire was used to measure such variables as symptoms, mood, attitude, motivation and social functioning. Demographic variables such as education, marital status, work, legal and drug histories were also taken. One week after admission, the Ward Atmosphere Scale (Moos, 1969) was given. The rate of attribution for both Blacks and Whites was identical -- 63 percent. None of the demographic variables functioned as predictors of treatment success. Drug history did not act as a predictor for either Blacks or Whites although almost all Blacks were on heroin prior to admission. The psychological data did not differentiate between completers or non-completers except with respect to motivation. The perception of the treatment ward was a powerful predictor of treatment outcome and also differentiated between Blacks and Whites. The Black patients who perceived the ward as spontaneous and autonomous tended to stay in treatment. These factors did not have an influence on Whites. The authors were struck by the fact that the attrition rate for both Black and Whites was identical. A differentiating factor related to living arrangements. Those Blacks who lived alone were less likely to complete the program. Their most powerful psychological finding was that motivation functioned as a predictor for both groups. The predictor of success which was most significant for Blacks was the treatment environment:

> The factors related to the social climate of the treatment ward suggest that the atmosphere of treatment is very important for Black patients. Those who sense and atmosphere of open expression, concern, tend to stay. It also suggests that encouraging independence, self-sufficiency and plans for release from the program are important in keeping Blacks in treatment (Linn et al., 1979, p. 277).

This study is of great importance in that it attempts to isolate variables which predict success along ethnic lines. The attempt to treat all heroin addicts without consideration of subcultural differences has been attempted with negative results (Dreger and Philler, 1968). The psychological development of the Black person in this country as differentiated from Whites has been amply attested to and therefore crucial in his treatment with respect to drug abuse (Willie, Kramer & Brown, 1973). This research emphasizes the program and does not place the onus of treatment success on the patient to the exclusion of those who treat him. One of the variables that the researchers did not measure was the response to rejection. This is implicit in their findings but it should be addressed more directly since it may function as a significant factor in attrition. The Black drug abuser may terminate treatment earlier than Whites if he perceives the atmosphere as unconcerned and therefore rejecting. This research has opened up the issue of ethnicity to a degree that has not been done up to this point.

Another study which focuses on the match between the program and client was done by Krieger, McLellan and Parente (1980). The purpose of the research was to use the Addic-

tion Severity Index Severity Index to predict successful treatment from unsuccessful treatment. Treatment needs were measured at the outset and matched with the value of treatment. The subjects were 531 male veterans admitted to the inpatient substance abuse rehabilitation program at the Veterans Administration Hospital, Coatsville, Pennsylvania, during 1978. The Addiction Severity Index, a structured research interview, was administered at the beginning of treatment. It assesses problem severity, operationally defined as need for additional treatment in six problem areas: substance abuse, medical status, psychological status, legal problems, family/social supports and employment support. For each problem area there are three information sections: 1) Objective, which is the number, intensity and duration of the problem symptoms; 2) subjective, which is the patient's rating of the extent to which he had been troubled by the symptoms during the previous thirty days and the extent to which he feels that treatment for them is important; and 3) interviewer rating, which is the need for treatment based on responses recorded in objective and subjective sections.

There are five substance abuse programs at the facility:

Program 1 - Alcohol Rehabilitation is a sixty day therapeutic community based on the principle of Alcoholics Anonymous. It assumes a satisfactory level of vocational and social skills.

Program 2 - Alcohol Rehabilitation is a variable-length treatment program built around a controlled but self-governing community with total abstinence as a goal. It is designed for older alcoholics with serious medical and psychological problems.

Program 3 - Fixed Interval Drinking Decisions is a program to treat persons in the presence of alcohol. The six-week program consists of nine week alcohol-free period at the beginning and the end of the program and four weeks in between where the patient decided whether or not to drink. Two ounces of 80 proof alcohol are available on the hour from 9 A.M. to 9 P.M. During the sixth week the psychological and behavioral changes as a result of drinking or abstinence are measured.

Program 4 - Combined Treatment is a thirty day program for either alcohol or drug abuse clients who have good external supports, who ar highly motivated and who are capable of responding to rapid, intensive rehabilitation. The goal is rapid re-entry into conventional life better equipped to handle his substance abuse with the help of weekly Alcoholics Anonymous or Narcotics Anonymous meeting.

Program 5 - Drug Rehabilitation is a 90-day therapeutic community treatment program for persons with a long history of antisocial and self-destructive behavior. The goal is to "habilitate" the patient to society.

Subjects were grouped on the basis of "good" (successful) and "bad" (unsuccessful) discharges in order to study the relationship between discharge status and pretreatment

scores on the Addiction Severity Index. There was considerable variation between the programs with regard to severity of treatment problems. An analysis of variance was used to test the differences among the programs in the six severity ratings. The F-ratio was 6.13, p (24, 2066) < .001.

The ASI intake variables did not correlate highly with discharge status except with age in Program 1 (r= .38). In the three alcohol programs older patients had good discharges. White patients had more favorable discharges in Program 1. Black patients had more favorable discharges in Programs 2 and 3. In Program 5 (Drug Rehabilitation) the strongest correlations with discharge status were employment (r= -.25) and substance severity (r= -.22). The discriminant analyses were quite successful in identifying patients in all programs who received unfavorable discharges. The discriminant analyses were not successful in predicting success in Programs 1, 2, 3, 4. Different variables functioned as discriminators for the two groups: age and psychological severity rating for the alcoholics; substance abuse severity and employment/support for the drug addicts.

The ASI did not act as a good predictor of success for within-treatment performance. There were, however, one or more variables which predicted the patients who would drop out. The findings suggest three approaches for successful completion: 1) change the program; 2) change the assignment process; 3) identify the potential dropouts and give them extra attention. A further finding is that the primary

chemical of abuse is not alone sufficient to divide patient into relatively homogenous groups. Factors such as age, race and underlying needs must be considered as superceding chemicals of abuse.

This study represents a significant advancement in the prediction of treatment outcome. Other studies have used selected variables along with discriminant analysis which "attempts to use the information in quantitative variables, considered as independent variables to predict group membership" (Bentler and Lettierie, 1976, p. 9). Despite the modest ability to act as a predictor, the Addiction Severity Index combines the factors associated with addiction and is an important factor in drug research. Moreover it provides the researcher with a tool that has the potential to predict across chemical abuse lines. This opens up a new avenue of research in that the chemical is not the focus but rather the pathology and social location of the individual.

McLellan, Lubovsky, Woody and O'Brien (1980) tested the validity and reliability of the Addiction Severity Index on 524 male veteran alcoholics. They had one technician administer the ASI while being videotaped. Three others rated the videotaped presentation. The inter-rater reliability coefficients were calculated using the Spearman-Brown formula for the first sixteen patients and produced an average coefficient of .90. The procedure was repeated at two and four month intervals and produced mean coefficients of .91 each time. Validity was assessed by correlating the scale scores with other independent items having clear relation-

ships to the particular problem area. This produced an average correlation coefficient of r = .53. The authors admit that while these results are encouraging, they are only indicative of presumptive or face validity and require that scales be compared with other items.

They conclude that the preliminary results suggest that they have produced an instrument which should have the capacity to "analyze the total addition profile into its component treatment problems and to estimate reliably and validly the severity of each of these problems" (McLellan, et al., 1980). They further point to the need to test the instrument on other patient populations.

The Addiction Severity Index apparently fills the need for an instrument in the field of substance abuse which will act as a diagnostic tool so that patients' individual needs will be treated. The importance of diagnosis in the field of mental health has profited immeasurably by the pioneering work of Kraeplin (1883), who was the first mental health worker to offer predictions of the outcome of mental disorders based on diagnosis. Although Kraeplin's work is now considered primitive, it initiated an important procedure in the field of mental health treatment. In order to prognosticate and plan for treatment, an instrument such as the ASI is crucial. There is, of course, the need is apparent to further test this instrument on other populations such as women, nonveterans and adolescents, and the authors admit to this.

La Porte, McLellan, O'Brien and Marshall (1981) used the Addiction Severity Index in order to evaluate the effectiveness of modifying the Therapeutic Community program at the Coatsville Veterans Administration Hospital for treating psychiatrically impaired drug and alcohol abusers. The subjects were 149 substance abusers with a mean age of 35.9 years, a mean education of 11.6 years and a mean of 3.4 previous treatments. The Addiction Severity Index was administered at admission and a modified version of the ADI was given as a post-discharge follow-up. Subjects were divided on the severity rating as measured by the ASI, into three groups: High, Medium and Low (psychiatric severity). In addition, each was given the Maudsley Personality Inventory, The Shipley Institute of Living Scale, to measure cognitive impairment and The Beck Depression Inventory. The High group registered the most severity in personality, intelligence, cognitive functioning and depression; the Low group showed the least.

Two criteria were chosen to compare the performance of each group: length of stay and favorability of discharge. One way of analysis of variance was used to compare the three groups in terms of outcome status. The High group demonstrated the worst outcomes except in money earned and family problems. It was concluded that psychiatric severity and not the chemical of abuse or severity of addiction was a strong predictor of treatment outcome. "Results of several studies from our clinic, as well as a large body of research in treatment outcome prediction by Lubovsky and his col-

leagues confirm that a general measure of psychiatric impairment such as the ASI Severity rating is the most consistent predictor of post-treatment outcome" (LaPorte, et al., pp. 11-12).

This study confirms the previous work by McLellan (1979, 1980) that the ASI functions as a reliable predictor of treatment outcome. An especially significant finding is that the particular chemical of abuse is secondary to that of psychiatric severity. It is further hypothesized that the chemical is often used as an attempt at self-medication to relieve the symptoms of the psychopathology. This line of research must be subjected to study with other populations in order to confirm these findings, as noted earlier.

Craig, Rogalski and Veltri (1982) studied 150 drug addicts at an urban Veterans Administration Hospital to determine what isolated factors contributed to AMA (against medical advise) discharges. It was hypothesized that the ASI isolated variables which would act as predictors of those who will terminate before treatment is completed. The subjects were almost all (98%) opiate abusers and 90% were Black. They were selected randomly and compared on 14 variables. They were divided into 2 groups: 75 who completed treatment and 75 who left AMA. Multivariate and univariate analyses showed that patients were most likely to complete detoxification: if more patients were admitted during their hospitalization ($F=88$, $p < .001$), as number of program staff absences increased ($F=31.52$, $p < ,001$), and if

they were treated with methadone (X^2 = 5.67, $p < .01$). There was no relationship between staying in treatment and chemical of abuse. Variables in the resultant discriminant analysis in order of selection were: number of patients admitted during patient's hospitalization, employment status, number of patients on ward at midnight prior to discharge, marital status, number of days therapist absent, results of first urine test and total number of positive urine tests. The discriminant function analysis yielded 88% accuracy in subject classification.

The authors concluded that the variables which correlated with completion were: prescription of methadone and if treatment staff as less available. The decision to leave is based, they conclude, on situational variables, interacting with patient and staff. They noted that this agrees with Linn (1979) who found (as already noted) that Black clients are more affected by their perception of the ward than Whites. As a predictor, they stated, these variables are not useful in that these decisions are made in vivo and cannot be manipulated as independent variable.

This study provides some confirmation with respect to the role on agency environment on Black patients but does little else to aid in the prediction of outcome. The variables did not cross validate with other groups. The factor of staff absence may be merely a function of the effect of that particular staff on the clients. The authors leave this and too much else to the speculation of the reader. One other contribution of the study is the use of discrimi-

nant analysis which "can allow a program to identify which factors are most salient in their respective programs" (Craig, et al., p. 652).

A further study was done by McLellan, Lubovsky, Woody, O'Brien and Druley (1982) using the Addiction Severity Index to predict effective patient-program matching. Male veteran alcoholics (N=460) and drug addicts (N=282) were evaluated after treatment in six rehabilitation programs. They were divided on the basis of the number, duration and intensity of their psychiatric symptoms. They were then assigned to one of six programs:

Alcoholic Treatment Unit (ATU) is a 60 day therapeutic community.

Fixed Interval Drinking Decisions (FIDD) is a six week program in which the patients had access to a stated amount of alcohol if he wished it.

Combined Treatment (COMB) is a 45 day program of intensive addiction management for both alcoholics and drug addicts.

Drug Abuse Rehabilitation (DAR) is a therapeutic community designed to "habilitate" the drug addict through group psychotherapy, educational and vocational counseling and the social structure of a self-governing therapeutic community.

Alcohol Outpatients (AOP) is a variable length program with total abstinence as a goal. It concentrates on the medical, psychological and social problems of the alcoholic.

Methadone Maintenance (MM) offers methadone maintenance

in conjunction with psychiatric and social work counseling.

Each subject was assigned to one of the treatment modalities upon admission. Predictive analyses on the unstratified sample did not produce any significant findings. The low severity subjects did well in all six modalities while the high severity subjects did poorly regardless of the modality. The findings were then analyzed after dividing the subjects into low, mid, and high based on their admission scores on the Addiction Severity Index. Regression analyses on seven follow-up composites were computed for each of the six groups (alcohol, drug by low, middle, high). Again in the stratified sample, the high psychiatric severity subjects did poorly in all six programs. The mid subjects did show evidence of four significant benefits from patient-program matching. Both alcoholics and drug addicts with serious family and employment problems did better in the inpatient treatment programs.

The major conclusion the authors drew was that psychiatric severity was "the most robust, general predictor of follow-up status across patients, treatments and outcome criteria." They pointed out that there is need to do further research in the use of the Addiction Severity Index: "However, the true worth of these results rests in their replicability in other settings and in prospective studies" (McLellan, et al., p. 20).

This finding is extremely important with respect to the present study as it points to the direction which a predictive study should take. An exhaustive review of the litera-

ture forcibly points up that the attempts to conduct predictive studies in drug rehabilitation in the past have been fraught with flaws. The Addiction Severity Index appears to have the potential to act as a valid and reliable predictor of treatment outcome. What is needed, as McLellan, et al point out, is replication in other settings. For example, their entire sample was drawn from male veterans. The present research will use male non-veterans. In addition, a setting other than the Veterans Administration hospital is necessary, since that was the context of McLellan and his associates' work.

This review of the literature points away from the attempts to prognosticate on the basis of single variables such as depression or the attempts to correlate personality factors with outcome. What the literature points out is that there are given problem areas which correlate with success in the treatment of drug abuse. The Addiction Severity Index covers these areas: chemical abuse, medical history, psychological status, legal problems, family and social supports and employment. Each of the areas is considered an independent evaluation. The severity of each problem is evaluated objectively and subjectively. The ASI thus has the potential to act as a powerful predictor in the research at hand.

CHAPTER 3

METHODS AND PROCEDURES

This chapter will present the methods and procedures of the study. For the purpose of this presentation, the chapter has been divided into five sections: 1) the hypothesis, 2) subjects, 3) instrumentation, 4) procedures and 5) analysis of the data.

The Hypothesis

The hypothesis is stated as follows:

The Addiction Severity Index will be able to descriminate between those who successfully complete the orientation phase of treatment and those who do not, in the following areas:

1. Chemical Abuse
2. Medical Problems
3. Psychological Impairment
4. Legal Problems
5. Family/Social Supports
6. Employment/Support

Subjects

The subjects used in the study were 30 lower class male heroin addicts ranging from 21 to 40 years old who presented themselves at a drug rehabilitation center located in Central Harlem in New York City. The mean age was 26.0 years. All qualified for social welfare. The ethnic back-

ground of the sample was as follows: Black, 56.7 percent, White, 3.3 percent; Hispanic, 40.0 percent.

The subject pool was drawn from all of the patient population who were willing to participate in the study. In collecting the sample, there were eight refusals, resulting in a 21.0 percent refusal rate. Upon giving consent and having their confidentiality guaranteed subjects were interviewed using the Addiction Severity Index to determine the extent of their symptoms. At the end of the orientation phase of treatment the subjects were then divided into two groups: Group I, termed remainers, included those who completed orientation. Group II, called leavers included those who did not successfully complete it. An analysis of the symptom severity was conducted to determine if those who completed the program differed in the severity of their symptoms from those who did not.

The sample size of 30 was used since it was the number which the agency predicted would cooperate in the study in a given month. It was judged that thirty respondents would provide sufficient numbers to make inferences as to the viability of the ASI as a predictor of program completion.

Instrumentation

The Addiction Severity Index was used in the study. This instrument was developed at the Philadelphia Veterans Administration Hospital for use with their substance abuse population. The objective of the ASI is to produce a severity profile of each patient through an analysis of six areas

which usually result in treatment problems for an addict population. These include: a) chemical abuse, b) medical, c) psychological, d) legal, e) family/social, and f) employment/support problems. The operational definition for "severity" is whether the symptom requires additional treatment. The problem areas are assessed through two types of information: 1) objective, as measured by questionnaire items, laboratory reports, physical examinations and psychological interviews. The severity of the symptom is measured according to the number, intensity and duration of a problem. 2) The patient's judgment of severity, which is designed to measure the subjective intensity of problem symptoms and allows him to participate in the evaluation of his treatment needs. The patient is asked to rate on a five-point scale, the extent to which he has been bothered by problems over the past 30 days in each of six areas and the extent to which he feels the need for further treatment as follows:

0 = not at all
1 = slightly
2 = moderately
3 = considerably
4 = extremely

The data from both objective and the patient's judgment of severity are integrated to produce a clinical profile.

The instrument is designed to be administered in an average time of 25-30 minutes. It was developed to be administered for inital use shortly after admission. A brief introduction to the interview in which the interviewer

explains the purpose of the instrument is necessary.

Reliability of the ASI

The reliability of the ASI was assessed by Mclellan, et al. (1980). They had one interviewer test twenty-five subjects while being video-taped. Three other interviewers rated the videotaped interviews on each of the criteria (see Table 3-1, Ss 1-16). To check whether the interviewers, who entered the program without any interviewing experiemce, had developed systematic bias, they viewed tapes and rated interviews with patients Nos. 17-19 two months after the first interview and and interviews with patients Nos. 20-25 four months after the first interview. Table 3-1 indicates that there were no differences in inter-rater reliability. To check whether there were biases in the ratings of various subgroups, the sample of 25 subjects was broken down into alcoholics versus drug users, younger versus older patients and those with high severity versus low severity ratings. Table 3-1 shows no variation in the inter-rater reliabilities between any of those groups. Using the Spearman-Brown formula, the average correlation was .91.

Table 3-1: Inter-Rater Reliability Coefficients on Problem Severity Ratings

	SEVERITY RATINGS						
TEST	DRUG ABUSE	EMPL./ SUPPRT	MEDI- CAL	LEGAL	FAM./ SOC.	PSYCH.	AVE.
(SEPT.) Ss 1-16	.90	.89	.92	.88	.85	.92	.90
(NOV.) Ss 17-19	.89	.90	.92	.89	.86	.91	.91
(JAN.) Ss 20-25	.91	.91	.90	.90	.86	.92	.91
ALL Ss 1-25	.90	.90	.92	.89	.86	.92	.92
ALCOHOLICS (N = 14)	.90	.91	.93	.88	.85	.92	.91
DRUG USERS (N = 11)	.91	.88	.91	.90	.87	.91	.91
AGE <35 (N = 11)	.90	.89	.91	.90	.84	.89	.89
AGE >35 (N = 14)	.91	.91	.91	.88	.87	.93	.91
SEVERITY SCORE >30 (N = 15)	.90	.91	.93	.89	.86	.94	.92
SEVERITY SCORE <30 (N = 10)	.89	.88	.91	.89	.85	.90	.89

Source: McLellan, et al., (1980, p. 29.)

This particular method of assessing reliability is unorthodox and, as McLellan et al. note, artificially inflates the reliability coefficients, since the three raters are not conducting their own interviews, but evaluating a single one. Thus, this form of reliability does not answer questions about the ratings of several interviewers on a single subject. It also does not answer any questions about the internal consistency of the ASI items. Usually, in the construction of such an instrument, the authors run a factor analysis to determine whether the dimensions that the in-

strument proports to measure does in fact measure those constructs. However, in an attempt to assess whether the ASI scores were being unduly influenced by one or two very strong items, the authors conducted a step-wise multiple regression analysis of items within each problem area. Table 3-2 contains the partial results of that regression analysis.

Table 3-2: Item Analysis of ASI Scale Ratings

SCALE	BEST VARIABLES	CUMULATIVE R^2
SUBSTANCE ABUSE	How important to you is treatment for substance abuse?	.30
	Total years regular use of drugs and alcohol?	.37
	Total days use of drugs and alcohol last month?	.42
	Total times treated for substance abuse?	.44
MEDICAL	How important to you is medical Rx	.52
	Do you have physical problems that interfere?	.66
	How many days in past month have you been bothered?	.71
EMPLOYMENT/ SUPPORT	How important to you is employment counseling?	.34
	How many days paid for working past month?	.45
	Usual imployment pattern past 3 years?	.49
LEGAL	How many months incarcerated?	.23
	Are you awaiting trial or sentence	.36
	Total changes in life?	.44
FAMILY/SOCIAL	How many days in past month were you troubled?	.34
	How many close friends?	.46
	Total years in present living situation?	.51
PSYCHOLOGICAL	How many days in past moth were you troubled?	.62
	Total number of psychiatric symptoms in life?	.77
	How important to you is psychiatric Rx?	.83

Source: McLellan, et al., (1980, p. 30)

The results of the multiple regression analysis can be interpreted as follows: Cronbach's (1951) coefficient alpha is the equivalent of the first factor in a factor analysis and is also equivalent to R^2. Coefficient alpha is a highly popular and conservative measure of internal consistency.

Thus, if the last coefficient on each dimension of the ASI is viewed as the equivalent of coefficient alpha on that scale, an approximation to internally consistent reliability can be assessed. Since only the top three or four items are used in Table 3-2, it can be estimated that reliabilities using all items would be substantially higher than reported. The usual criterion for internal consistency is alpha = .50. As can be seen in Table 3-2, the medical and psychological dimensions are far above that criterion. The other four dimensions (substance abuse, employment/support, legal and family/social) all hover around R^2 =.50. This suggests that the ASI has sufficient internal consistency.

The Validity of the ASI

The validity of the ASI was assessed by correlating the scale scores with other independent items having clear relationships to the particular problem areas as shown in Table 3-3.

Table 3-3: Validity of ASI Scales: 524 Male Veterans

SUBSTANCE ABUSE CLIENTS

SCALE	INDEPENDENT VARIABLES	r
ABUSE	Times overdosed, blackout seizure	.72
	Total years of regular use of alcohol/ drugs	.66
	Amount spent on alcohol/drugs per week	.54
MEDICAL	Number of current medical symptoms, VA system review	.69
	Amount of medical disability/pension	.60
	Number of previous hospitalizations	.58
EMPLOYMENT/ SUPPORT	Rate of earned to unearned income, past month	-.64
	Months of continuous full-time work	-.62
	Hollingshead SES rating	-.56
FAMILY/SOCIAL	Proportion of friends with abuse problems	.52
	Proportion of family with abuse problems	.48
	Number of close friends	-.48
LEGAL	Total convictions	.71
	Total months incarcerated	.68
	Proportion of income gained legally	-.62
PSYCHOLOGICAL	Maudsley N Scale	.64
	Beck Depression Inventory	.64
	Hamilton Depression Scale (N = 111)	.58

Source: McLellan, et al. (1980, p. 28).

The strong correlations reported in Table 3-3 indicate that the ASI does seem to measure the putative constructs claimed. The substance abuse measure correlates strongly with overdosing, length of use and money spent on drugs. The ASI measure of medical problems correlates strongly with a VA review of medical symptoms, amount of disability and number of previous hospitalizations. The employment/support variables correlate negatively with ratio of earned to unearned income, months of continuous full-time work and SES. The family and social problems index correlates postively

with friends and family with abuse problems and negatively with number of close friends. The legal dimension correlates positively with convictions, length of incarceration and negatively with proportion of legal income. Finally, the psychological index correlates positively with three other indicators of psychological problems. The authors note that these findings are encouraging, but are insufficient to assess convergent (or construct) validity. To assess such validity would require using the multi-trait, multi-method paradigm of Campbell and Fiske (1959). The authors state that they are moving in that direction.

One last indication of validity is if the scales of the ASI measure distinct constructs and are not highly intercorrelated. Table 3-4 is a matrix of intercorrelations among the six sub-scales:

Table 3-4: ASI Severity Ratings: Correlation Coefficients for 524 Male Veteran Substance Abuse Patients

SCALE	MEDICAL	EMPL./ SUPPORT	LEGAL	FAMILY/ SOCIAL	PSYCOL.
ABUSE	.10	.19	.09	.14	.18
MEDICAL		.16	.06	.16	.24
EMPLOYMENT/SUPPORT			.27	.21	.17
LEGAL				.15	.11
FAMILY/SOCIAL					.41

Source: McLellan, et al. (1980, p. 31).

Table 3-4 indicates that the dimensions of the ASI are

relatively independent. With the exception of the correlation of r=.41 between family and social problems, the relationships are relatively small. Of course, it would make sense that psychological and family problems would be highly interrelated, since the family is often a source of psychological stress. It also indicates that, as the authors note, the "problems presented by addicted patients are not necessarily related to the severity of their chemical abuse." (1980, p. 31)

To conclude, the ASI looks like a very promising instrument in the assessment of the severity of problems encountered by chemical abuse patients. Testing thus far demonstrates that the ASI has achieved adequate reliability and validity as an indicator of problem severity among alcohol and drug abusers. The question remains, can it be used to predict those who will successfully complete a drug treatment program from those who do not?

A copy of the instrument can be found in the Appendix.

Procedures

Each subject was interviewed at the agency just after admission to the program. All of the interviews were done by the researcher. Each subject was told that he was participating in a study to determine the relationship between the needs of the patients and treatment outcome. He was also assured that all information would be kept in strictest confidence. After the interview, the subject was told that the researcher might get back to him in about thirty days.

(The point, of course, was that all of those who completed were again interviewed to determine what variables of the ASI were most pertinent. This was not told to the subjects so as to not contaminate the experiment). The ASI was used in its entirety and all variables were measured. At the second interview only selected variables which appeared to relate to treatment success were used.

The second interview was done at the end of the first phase of treatment which this agency calls the Orientation Phase. This point was chosen since the agency has found that 90 percent of those patients who leave the program without completing it do so at that point.

Permission to interview the subjects was given by the agency director. He placed no stipulations on the research so that the study does not suffer in any way from restrictions imposed by the agency. The staff was instructed to cooperate with the research, which they did by providing space and all of the facilities necessary to conduct the study.

Data Analysis

To assess whether leavers differed from remainers, Mann-Whitney U tests were run across each variable measured by the ASI to see if they differed significantly on any of the measures. Additionally, a discriminant analysis was used to test the hypothesis that the ASI successfully discriminates between remainers and leavers in a drug rehabili-

tation program.

CHAPTER 4

RESULTS

The question to be addressed in this section is, "Does the ASI discriminate between leavers and remainers in drug treatment programs?" As noted in the literature review, there was evidence presented which indicated that the ASI manifested some predictive ability (McLellan, et al., 1981). This study uses the ASI as a potential predictor of eloping from a detoxification program located in Central Harlem in New York City. The advantage of the ASI is that it employs a multivariate approach to the analysis of drug addiction and therapeusis.

Presentation of the Data

Social Context

Table 4-1 shows the results of the comparison between leavers and remainers on the social context variables of the ASI. It is immediately apparent that there are no differences between the two groups on the age, education, IQ rating, and length of employment and marriage variables. However, remainers are less likely than leavers to have spent time in jail and have shorter lengths of residency in the neighborhood and dwelling. It appears that the leavers tend to be

less transient and have more trouble with the legal system. Although the differences are not statistically significant, they do reveal a trend. This suggests that remainers may be more conforming to authority and have fewer community ties than remainers.

Table 4-1: Mann-Whitney U Tests for Leavers and Remainers (N = 30) on Contextual Variables

VARIABLE	LEAVERS MEAN RANK N = 20	REMAINERS MEAN RANK N = 10	U	W	P
AGE	16.13	14.25	87.5	142.5	.58
JAILTIME	14.32	17.85	76.5	178.5	.08
EDUCATION (YRS.)	16.38	13.75	82.5	137.5	.43
IQ RATING	15.27	15.95	95.5	159.5	.82
LENGTH OF RESIDENCY	13.45	19.60	59.0	196.0	.07
LENGTH OF EMPLOYMENT	16.10	14.30	88.0	143.0	.59
LENGTH OF MARRIAGE	15.17	16.15	93.5	161.5	.77
LNGT. IN PRES DWELL.	13.97	18.55	69.5	185.5	.17

Drug Usage

Can leavers be differentiated from remainers on the basis of the kinds of drugs they have abused? To answer this question, the two groups were compared on the length of time they have used each of a number of drugs and alcohol and the toxidity of their drug usage. Table 4-2 contains the results of the analysis.

Table 4-2: Mann-Whitney U Tests for Leavers and Remainers (N = 30) on Drug Usage Variables

VARIABLE	LEAVERS MEAN RANK N = 20	REMAINERS MEAN RANK N = 10	U	W	P
YRS. OF ALCOHOL	15.22	16.05	94.5	160.5	.78
YRS. OF ALC. INTOX.	15.47	15.55	99.5	155.5	.97
YRS. OF HEROIN	15.55	15.40	99.0	154.0	.96
YRS. OF METHADONE	15.55	15.40	99.0	154.0	.96
YRS. OF COCAINE	16.80	12.90	74.0	129.0	.19
YRS. OF MARIJUANA	15.67	15.15	96.5	151.5	.87
DRUG TOXIDITY	14.82	16.85	86.5	168.5	.54

The results in Table 4.2 indicate that, with the possible exception of cocaine use, there are no differences between leavers and remainers in length of drug use. The remainers may be somewhat more likely to use cocaine than the leavers.

Family Relations

Previous research has suggested that a patient's family situation might affect his ability to receive treatment for his drug problems. Table 4-3 compares leavers and remainers on a number of variables related to family functioning.

Table 4-3: Mann-Whitney U Tests for Leavers and Remainers (N = 30) on Family Variables

VARIABLE	LEAVERS MEAN RANK N = 20	REMAINERS MEAN RANK N = 10	U	W	P
MARITAL STATUS	14.75	17.00	85.0	170.0	.47
LIVING ARRANGEMENTS	14.90	16.70	88.0	167.0	.56
FREE TIME USE	14.67	17.15	83.5	171.5	.30
NUMBER OF FRIENDS	15.97	14.55	90.5	145.5	.67
FAM. PROBS. 30 DAYS	14.77	16.95	85.5	169.5	.36
PROBLEMS: MOTHER	14.45	17.60	79.0	176.0	.30
PROBLEMS: FATHER	14.90	16.70	88.0	167.0	.48
PROBLEMS: SIBLINGS	15.47	15.55	99.5	155.5	.97
PROBLEMS: PARTNER	15.60	15.30	98.0	153.0	.91
FAMILY STRESS	15.95	14.60	91.0	146.0	.67
TREAT FAM. PROBS.	16.15	14.20	87.0	142.0	.52

As can be seen in Table 4-3, there are no significant differences between leavers and remainers on any of the family variables. There seems to be a slight tendency on the part of remainers to report less family problems than leavers. Of the 11 indicators of family relations, leavers rank higher than remainers on seven.

Psychological Status

The ASI measures several indicators of psychological problems. It has been hypothesized that the nature and severity of psychological problems may affect a patient's

ability to participate in drug detoxification programs. Table 4-4 compares leavers and remainers on psychological symptoms.

Table 4-4: Mann-Whitney U Tests for Leavers and Remainers (N = 30) on Psychological Status Variables

VARIABLE	LEAVERS MEAN RANK N = 20	REMAINERS MEAN RANK N = 10	U	W	P
DEPRESSION	16.15	14.20	87.0	142.0	.55
ANXIETY-TENSION	15.65	15.20	97.0	152.0	.86
HALLUCINATIONS	16.07	14.35	88.5	143.5	.44
COGNITIVE PROBLEMS	16.25	14.00	85.0	140.0	.21
CONTROL OF VIOLENCE	15.55	15.40	99.0	154.0	.93
SUICIDE THOUGHTS	15.45	15.60	99.0	156.0	.93
PSY. PROBS. 30 DAYS	14.88	16.75	87.5	167.5	.54
PSY. STRESS 30 DAYS	15.50	15.50	100.0	155.0	1.00
TREAT. PSY. PROBS.	14.85	16.80	87.0	168.0	.54
SEVERITY RATING	14.95	16.60	89.0	166.0	.62

Table 4-4 indicates that there is no consistent criterion of differentiation between the two groups on the manifestation of psychological symptoms. There is a slight tendency for remainers to report higher levels of depression, anxiety and tension, hallucinations, cognitive problems and lack of control over personal violence. However, the differences are quite small and within the bounds of random variation. It is interesting that while remainers are slightly more likely to complain of psychological prob-

lems, the severity rating is lower than that of the leavers. This suggests that there may be a tendency on the part of the administrator to view potential leavers as more disturbed than remainers, while remainers tend to evaluate their problems more critically than potential leavers.

Symptom Severity

The ASI contains a subjective evaluation index on which each respondent rates his problems in several areas on a scale of 5. The areas he is asked to rate are: medical, employment, alcohol, drug, legal and psychological problems. Each assessment is done globally without any reference to specifics. Table 4-5 contains the results of the self-reports of symptom severity.

Table 4-5: Mann-Whitney U Tests for Leavers and Remainers (N = 30) on Self-Report of Severity of Symptom Variables

VARIABLE	LEAVERS MEAN RANK N = 20	REMAINERS MEAN RANK N = 10	U	W	P
MEDICAL PROBLEMS	15.85	14.80	93.0	148.0	.72
EMPLOYMENT PROBLEMS	16.42	13.65	81.5	136.5	.40
ALCOHOL PROBLEMS	15.30	15.90	96.0	159.0	.84
DRUG PROBLEMS	15.00	16.50	90.0	165.0	.65
LEGAL PROBLEMS	14.40	17.70	78.0	177.0	.30
PSYCH. PROBLEMS	15.25	16.00	95.0	160.0	.82

There are no significant differences between the two

groups on the self-perception of problems. There are tendencies for remainers to report more employment problems and fewer legal problems than the leavers. The latter indicator fits with the fact that leavers are more likely to have been incarcerated than remainers.

Discriminant Analysis

The preliminary analysis of the data indicates that there are only minimal differences between remainers and leavers on the ASI. However, since the hypothesis is that the ASI can successfully discriminate between remainers and leavers in a drug rehabilitation program, a discriminant analysis was run to test the hypothesis. Table 4-6 shows the results of the discriminant analysis:

Table 4-6: Means, Standard Deviations, Wilkes Lambda and Univariate F-Ratios of ASI Subscales on Discriminant Functions (N = 30) of Symptom Severity

	LEAVERS		REMAINERS				
SEVERITY	M	SD	M	SD	LAMBDA	F (1,28)	SIG.
MEDICAL	1.4	1.9	0.9	1.3	.98	0.45	.51
EMPLOYMENT	6.2	2.1	5.8	2.4	.99	0.27	.60
ALCOHOL	2.3	3.5	2.3	3.5	.99	0.14	.97
DRUG	6.8	2.0	7.0	2.2	.99	0.64	.80
LEGAL	2.2	3.1	3.2	2.8	.97	0.73	.40
FAMILY	4.9	3.1	5.1	2.8	.99	0.29	.87
PSYCHOLOGICAL	6.6	1.4	6.5	1.7	.99	0.64	.80

The lambda statistic in Table 4-6 indicates the amount

of variance unaccounted for after the variable has been entered into the discriminant analysis. The F-ratio is the ratio of between group compared to within group variance on the discriminant function, as can be seen from Table 4-6, the seven severity measures do not discriminate between groups. Discriminant analysis cannot be run without F-ratios above 1.00. Table 4-6 shows that none of the F-ratios are above 1.00. Therefore, it must be concluded that the ASI was unable to discriminate between leavers and remainers in this population.

Discussion

The ASI was a resounding failure not only to predict differences between leavers and remainers in a drug detoxification program, but also to discriminate between them on any basis. This finding raises serious questions about the viability of the ASI to predict success in drug detoxification on the basis of pre-existing problem severity. It is necessary now to speculate on the reasons for the lack of predictive viability of the ASI. A number of issues must be raised. First, the issue of populations; second, the issue of programs; third, the issue of the limitations of the ASI; and fourth, the motivations of the client population. Each issue will be discussed in the above noted order.

The Population Problem

The population used in this study differed significantly from that used in the McLellan studies. McLellan used a population which were attached to a VA center, as did Craig,

Rogalski and Veltri (1982). By definition, VA personnel have already demonstrated institutional conformity and dependence. They have all done a stint in the Armed Forces, which subjects them to rigorous discipline. The sample studied herein were not veterans and were, for the most part, outside conventional institutional control. They were street-wise and independent. Thus, it is fair to say that these drug addicts come from a different population than those used in other studies.

In a dependent, socialized population such as exists in a VA center, situational variables would not be as important as with street people. Thus, one hypothesis to account for the lack of discriminatory power of the ASI among this group is that the ability of the addict to stay in the program may well depend upon situational factors to a much greater degree than among a VA population.

The author conducted a follow-up study of the 10 clients who successfully completed the orientation phase of the detoxification program. Eight cited improvement in their employment/support systems since entering the program. Three had become employed while five had been assisted by the program social worker to receive welfare. They noted that by receiving money through legal means kept them from fraternizing with their old drug associates, avoiding a reversion into the drug subculture.

Veterans are more likely to have stable, legal incomes -- including government benefits and disability. They are

less likely to come from the street, which is perilous. Happenstance accidents are less likely to occur in their lives. This would make their success much more easy to predict on the basis of pre-existing life conditions than street people.

The Program

The Craig, Rogalski and Veltri study offers some insights into the prediction of program success. In their analysis comparing leavers to remainers, they found that

> patients were more likely to complete detox: (1) when more patients were admitted during their hospitalization ($F=88$, $p < .0001$), (2) as therapists' absences increased ($F=10.09$, $p < .001$), (3) as number of program staff absences increased ($F=31.52$, $p < .001$)... (1982, p. 645)

While it looks as though they may have made a serious mistake in coding their variables (Why would fewer personnel result in greater program success? This is not adequately explained by the authors.), what is important to this discussion is that program variables were found to be much more important than contextual and characterological variables.

As noted above, five of the 10 remainers in this study were able to receive welfare payments because the social worker was successful in enrolling them in a program. All of the subjects in the follow-up mentioned various aspects of the program as instrumental to their success. Eight mentioned that the counselors were instrumental in their completion of the program. The counselors helped by assisting them in attending group therapy sessions, classes, medical appointments and other activities; reassured them

when they felt like giving up; showed genuine concern for them; assisted in family matters; and helped them in financial matters.

Additionally, the therapy groups were perceived by nine of the 10 remainers as important to their success. They could releive themselves of pent-up feelings. It provided a basis of social support to them in their effort to overcome drug dependency.

Finally, all the remainers saw the methadone which was administered by the program as vital to their success. It helped them become heroin-free with a minimum of pain.

Limitations of the ASI

The ASI has been constructed for the purposes of determining the severity of "addiction-related" problems among persons entering rehabilitation programs. To the extent that prior conditions influence proclivities to drop out, it might work as a predictor. However, it is now apparent that the severity of problems prior to entry into a drug rehab program is not predictive of program outcome. What this research demonstrates is that the success of a drug treatment program has little to do with the prior problems of its client population. Thus, it is a bogus exuse to blame the quality of clients for the program's failure.

Since program variables are (unsurprisingly) critical to its success, and the ASI does not assess program variables, it is not a good instrument for the prediction of

program success in retaining its clients.

The ASI is an instrument which is oriented toward pathology. It seeks to assess problems in the various areas of the addict's life. It does not assess positive forces. For example, it queries the subject on problems and conflicts the client has had with significant members of his family. Yet, when the remainers were asked about their family and social relations in an open question upon their completion of the orientation phase of the program, nine out of the 10 indicated that the support of the family, spouse, lover or friend was crucial to their success. Of those nine men, eight mentioned their wife or girlfriend as crucial. Some mentioned peers as well as loved ones.

This raises a critical question concerning the ASI. It seems to successfully assess the severity of problems of the incoming addict. It does not adequately assess the potential resources, physical and social, that the addict can draw on. Its pathological orientation focuses on the negative aspects of the addict's life without any consideration of the positive sources. If the ASI is not predictive of program success and is only good at codifying the problems, then its utility is highly limited. What good is it to know what the problems are if there is no attempt at assessing the potential resources for solutions? With all its reliability and validity checks, the ASI may be nothing more than a scientistic elaboration of what is already obvious to an intake interviewer.

The follow-up interviews reveal that, at least among

the remainers, the human resources are the most necessary in helping them kick drug and alcohol habits: loved ones, counselors and social workers. Secondary considerations would be given to employment and material supports available.

Motivations of the Client Population

There are a multitude of reasons for drug addicts to enter a drug rehabilitation program: some are legally compelled, others are compelled by an ultimatum by the family or spouse, still others become "fed up" with the life of a junkie and tire of the degradation of their lives, others have no desire to stop their habits, but return regularly to "dry out" when their tolerance level gets high enough so they can no longer afford the habit, and so forth, ad infinitum. It would seem that prior motivation would be critical to the successful outcome of a drug rehabilitation program. Yet the ASI has no way of assessing such a factor. As a matter of fact, such motivations are perhaps impossible to tap, given that a junkie learns to lie with such elegance and precision, he often is able to convince himself his own lies are true. It would, indeed, be unusual for a prospective client in a drug rehabilitation program to openly admit that he had no intention of giving up drugs; that he was there to reduce his tolerance level so he could keep on taking drugs. Besides, it would be counter-productive. He would be denied entrance to the program. Therefore, drug addicts, upon presenting themselves to a drug program often

will protest the purity of their motives for joining even when they have been compelled to participate by the court!

Because drug addicts and alcoholics a) finely develop skills of lying and psychological manipulation of others, and b) evolve elaborate systems of denial and rationalization, all self-reports on these populations are suspect until grounded with an external phenomenon. With that caveat, there are a number of psychological changes former addicts report as they successfully pursue a program. One is that they become weary of the drug world. Five of the 10 remainers surveyed in this study claimed that they had become tired of hustling for drugs, that they did not like living in fear of being arrested and that they did not think they could physically keep up with the demands of the drug life.

A second factor is that they experience an increase in motivation to stay off drugs. All 10 remainers claimed they were "determined," even though many had attempted detoxification before without success. An addiction is a form of unfreedom. It is subjectively experienced as a compulsion. The removal of that compulsion, especially when it determines one's activity in all one's waking hours, is experienced as a form of liberation. All 10 respondents felt that becoming drug-free was crucial to their success in the program.

In the American system of social categorization, a "junkie" is one of the lowest statuses in existence. While

there are plenty of drug addicts who lead "normal," respectable lives (e.g., heroin addicted nurses and doctors, methadrene and cocaine addicted stockbrokers, etc.), the stereotype of the junkie is the lowest of the low. The "junkie" is stigmatized as predatory, untrustworthy, manipulative, greedy, dirty, parasitic, inhuman, and so forth. It is a degraded status. When drug addicts "clean up," they experience a rise in self-esteem. All the remainers in the program testified to that increase. Some typical comments were:

> I feel better about myself now.
>
> I can't see myself nodding out any more.
>
> My life is totally changed.
>
> I feel as though I have been reborn.
>
> I don't want to have anything to do with junkies any more.
>
> I can deal with my proglems without getting high to forget them.

The remainers became concerned about their health and the potential dangers of heroin addiction: overdose, infection from dirty needles, veins collapsing from continual use. They seemed to become more concerned about the welfare of themselves and others around them.

To summarize, the ASI failed to predict leavers from remainers because of its limitations which limit its utility. It was not constructed to assess program quality, which is a strong predictor of program success. It was not constructed to assess the social resources of an individual -- only his pathology. This limitation further reduced the

ability of the ASI to differentiate leavers from remainers. It made no attempt to assess motivation for entering the program, which may have further limited its ability to predict success. Fundamentally, since prior pathology is not a predictor of whether an addict stays or leaves a program, and since the ASI is a measure of prior pathology, the ASI is a poor predictor of the success of a program in keeping its clients through the orientation phase.

CHAPTER 5

CONCLUSION

The purpose of this study was to develop further applications of the Addiction Severity Index by testing it to see whether it could assess pre-existing differences between leavers and remainers in a methadone treatment program and thus be used for the purposes of predicting future success of clients in the program. Thirty males who entered the program during a single month were administered the ASI upon entry. With the exception of a single white subject, the sample was nearly evenly devided between Blacks and Hispanics. It was deemed that all those clients who completed the orientation phase, which lasted a month, would be classified as successful remainers. Those who left the program prior to the end of the orientation phase were deemed leavers.

The ASI had been developed by McLellan and his associates at a Veterans Administration hospital in Philadelphia. The authors had conducted studies on it which suggested that it was a valuable diagnostic tool. At the time this study was done, work had been done on the ASI which suggested that it might be useful as a predictive device by separating the client population into high and low risk groups on the basis of the severity of their addiction-

related problems. Concomitantly investigations were being conducted which were assessing the validity. The research up to this point was positive in its results and suggested that the ASI might be predictive as well as diagnostic. It was with this assurance that the present investigation was conducted.

However, it was found that with a population outside the VA, the ASI was completely unable to distinguish between the 20 leavers and the 10 remainers in the study. No single variable achieved significance at the relatively liberal .05 level. The severity ratings were entered into a discriminant analysis. No variable achieved an F-ratio of above 1.00. Therefore, no variables could be entered into the discriminant analysis.

The findings of this study raise serious questions as to the utility of the ASI as a diagnostic as well as a predictive instrument. While it may be a valid assessor of symptom severity of drug-related problems, the question arises as to whether the information elicited cannot be achieved by simpler means or is obvious in the first place. The ASI is apparently limited in its scope for statistical reasons (reliability, validity). However, questions must be raised as to its usefulness, especially outside the context of a VA hospital. It is not predictive of an individual's success in the program since program and motivation variables seem to assume importance in dividing leavers from remainers. Outside social support also seems to be critical. The ASI, by focusing upon the pathology of the drug

addict, fails to assess those things which can operate in his favor. There is no attempt to assess social resources, although there is some attempt to assess material resources. However, that is even assessed negatively.

One serious question raised by this research which has not been addressed in the literature is, "What use does the ASI have?" It obviously codifies responses and turns them into numerical indices. Are these indices important in the evaluation of a patient? If so, how? Are they important in designing a program for a patient? If so, how? Are they important for developing a prognosis for a patient? If so, how?

The research herein raises disturbing questions about the ASI and its use. If it is not predictive, then its diagnostic capabilities are called into question. If the indices it measures have no relationship to outcome, why measure them in the first place? Is it more important to know whether a client has legal problems of 4 on a scale of 1 to 5 or that he has been remanded to drug treatment by the court? What good is the assessment of symptom severity if there is no attempt to assess the social, psychological, economic and cultural resources the client has? The ASI seems, after analysis, less aimed at diagnosis for problem solving and more directed at negatively labelling a person who is already suffering from social stigma. These are serious questions which should be addressed by McLellan and his associates.

Implications for Further Research

On the basis of this research, it can be asserted that if a drug addict or an alcoholic is to be helped by a rehabilitation program, it may be wiser to assess his resources as well as his liabilities. This is true for several reasons. First, the assessment of resources is a positive step. Second, it is apparently extremely important in helping to solve the problem of drug addiction. Third, and this is especially true in the assessment of human resources, it allows for the inclusion of members of the patient's primary group in the problem solving process. The evidence indicates that drug addicts do not kick the habit alone. They need love, care, support and aid. They need a social system that will help them along a difficult course. The strength of that system, including within-program and extra-program factors is most likely much more important than a numerical assessment of his problems in predicting future success. If there are weaknesses in that social net, the job of the program is to shore up those weaknesses.

It would seem, then, that research in the field of drug addiction rehabilitation should be directed at resource assessment. If the purpose of research is ultimately to help the patient, then it should be directed at evaluating those sources of support which are avaiable to him in his effort to "come clean."

It is also important to note that drug addicts form a heterogeneous population. People go to rehabilitation for a

number of reasons. Some are sincere in their desire to live a drug-free life, some are not. Some are street people, some are professionals. Although it is extremely difficult, the demographics of the drug addict population should be assessed. All too often, the addict is stereotyped as the street-wise junkie who would mug his grandmother for a nickel bag. Cocaine and heroin are fashinable among the jet set. The intelligencia use methadrene and marijuana. Junior high school kids smoke pot and drink beer. Housewives and executives regulate their lives with alcohol and pills. So it goes.

America is a society in which one can turn on a television and watch as someone takes a pill and is shown feeling better. Television itself is addictive. Given that the United States is a drug oriented society which allows certain socially acceptable drugs to be pushed onto the populace (It's Miller time!), while others, perhaps less pharmacologically destructive are suppressed, the definition and treatment of addiction is, at best, a haphazard and irrational process.

A person does not show up at a drug rehabilitation program unless either he, someone close to him or the state has reached a point of desperation. The issue for those in drug rehabilitation is how to turn that desperation into positive problem solving. It is hard to see what role the ASI has in that process.

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APPENDIX:

SPECIMEN QUESTIONNAIRE

ADDICTION SEVERITY INDEX

Third Edition

INSTRUCTIONS

1. Leave No Blanks – Where appropriate code items: X = question not answered
   N = question not applicable
   Use only one character per item.
2. Item numbers printed in red are to be asked at follow-up. Items with a red asterisk are cumulative and should be rephrased at follow-up (see Manual).
3. Space is provided after sections for additional pertinent information.

SEVERITY RATINGS

The severity ratings are interviewer estimates of the patient's need for additional treatment in each area. The scales range from 0 (no treatment necessary) to 9 (treatment needed to intervene in life-threatening situation). Each rating is based upon the patient's history of problem symptoms, present condition and subjective assessment of his treatment needs in a given area. For a detailed description of severity ratings' derivation procedures and conventions, see manual.

SUMMARY OF PATIENT'S RATING SCALE

0 - Not at all
1 - Slightly
2 - Moderately
3 - Considerably
4 - Extremely

I.D. NUMBER

LAST 4 DIGITS OF SSN

DATE OF ADMISSION

DATE OF INTERVIEW

TIME BEGUN :

TIME ENDED :

CLASS:
1 – Intake
2 – Follow-up

CONTACT CODE:
1 – In Person
2 – Phone
3 – Mail

ORIGIN:
1 – PVAMC – DDTS
2 – Carrier Foundation
3 – Eagleville

TREATMENT EPISODE NUMBER

INTERVIEWER CODE NUMBER

SPECIAL:
1 – Patient terminated
2 – Patient refused
3 – Patient unable to respond

GENERAL INFORMATION

NAME _____

CURRENT ADDRESS _____

GEOGRAPHIC CODE

1. How long have you lived at this address? YRS. MOS.
2. Is this residence owned by you or your family?
   0 – No 1 – Yes
3. DATE OF BIRTH
4. RACE
   1 – White (Not of Hispanic Origin)
   2 – Black (Not of Hispanic Origin)
   3 – American Indian
   4 – Alaskan Native
   5 – Asian or Pacific Islander
   6 – Hispanic – Mexican
   7 – Hispanic – Puerto Rican
   8 – Hispanic – Cuban
   9 – Other Hispanic
5. RELIGIOUS PREFERENCE
   1 – Protestant 4 – Islamic
   2 – Catholic 5 – Other
   3 – Jewish 6 – None
6. Have you been in a controlled environment in the past 30 days?
   1 – No
   2 – Jail
   3 – Alcohol or Drug Treatment
   4 – Medical Treatment
   5 – Psychiatric Treatment
   6 – Other _____
7. How many days?

TEST RESULTS

Shipley

C.Q.

I.Q.

Beck

Total Score

62

CARD 1 80

SEVERITY PROFILE

	PROBLEMS	MEDICAL	EMP/SUP	ALCOHOL	DRUG	LEGAL	FAM/SOC	PSYCH
9								
8								
7								
6								
5								
4								
3								
2								
1								
0								

I.D. [1] [ ][ ][ ][ ]

*1. How many times in your life have you been hospitalized for medical problems? *(Include o.d.'s, d.t.'s, exclude detox.)* [5] [ ][ ]

2. How long ago was your last hospitalization for a physical problem? [ ][ ] YRS. [ ][ ] MOS.

3. Do you have any chronic medical problems which continue to interfere with your life? [ ]
0 – No 1 – Yes

4. Are you taking any prescribed medication on a regular basis for a physical problem? [ ]
0 – No 1 – Yes

MEDICAL STATUS

5. Do you receive a pension for a physical disability? *(Exclude psychiatric disability.)* [ ]
0 – No
1 – Yes_____
Specify

6. How many days have you experienced medical problems in the past 30? [ ][ ]

FOR QUESTIONS 7 & 8 PLEASE ASK PATIENT TO USE THE PATIENT'S RATING SCALE.

7. How troubled or bothered have you been by these medical problems in the past 30 days? [ ]

8. How important to you *now* is treatment for these medical problems? [ ]

INTERVIEWER SEVERITY RATING

9. How would you rate the patient's need for medical treatment? [ ]

CONFIDENCE RATINGS

Is the above information significantly distorted by:

10. Patient's misrepresentation? [ ]
0 – No 1 – Yes

11. Patient's inability to understand? [ ] [20]
0 – No 1 – Yes

COMMENTS

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*1. Education completed *(GED = 12 years)* [21] [ ][ ] YRS. [ ][ ] MOS.

*2. Training or technical education completed [ ][ ] MOS.

3. Do you have a profession, trade or skill? [ ]
0 – No
1 – Yes_____
Specify

4. Do you have a valid driver's license? [ ]
0 – No 1 – Yes

5. Do you have an automobile available for your use? *(Answer No if no valid driver's license.)* [ ]
0 – No 1 – Yes

6. How long was your longest full-time job? [ ][ ] YRS. [ ][ ] MOS.

*7. Usual (or last) occupation. [ ]
_____
(Specify in detail)

8. Does someone contribute to your support in any way? [ ]
0 – No 1 – Yes

9 (ONLY IF ITEM 8 IS YES)
Does this constitute the majority of your support? [ ]
0 – No 1 – Yes

EMPLOYMENT/SUPPORT STATUS

10. Usual employment pattern, past 3 years. [ ]
1 – full time (40 hrs/wk)
2 – part time (reg. hrs)
3 – part time (irreg., daywork)
4 – student
5 – service
6 – retired/disability
7 – unemployed
8 – in controlled environment

11. How many days were you paid for working in the past 30? *(Include "under the table" work.)* [ ][ ]

How much money did *you* receive from the following sources in the past 30 days?

12. Employment *(net income)* [ ][ ][ ][ ]

13. Unemployment compensation [ ][ ][ ][ ]

14. DPA [ ][ ][ ][ ]

15. Pension, benefits or social security [ ][ ][ ][ ]

16. Mate, family or friends *(Money for personal expenses).* [ ][ ][ ][ ]

17. Illegal [ ][ ][ ][ ]

18. How many people depend on you for the majority of their food, shelter, etc.? [ ]

19. How many days have you experienced employment problems in the past 30? [ ][ ]

FOR QUESTIONS 19 & 20 PLEASE ASK PATIENT TO USE THE PATIENT'S RATING SCALE

20. How troubled or bothered have you been by these employment problems in the past 30 days? [ ]

21. How important to you *now* is counseling for these employment problems? [ ]

INTERVIEWER SEVERITY RATING

22. How would you rate the patient's need for employment counseling? [ ]

CONFIDENCE RATINGS

Is the above information significantly distorted by:

23. Patient's misrepresentation? [ ]
0 – No 1 – Yes

24. Patient's inability to understand? [ ] [71]
0 – No 1 – Yes

CARD 2 [8]

COMMENTS

I.D. 1 [ ][ ][ ][ ]

CODE #

		PAST 30 DAYS	LIFETIME USE YRS.	LIFETIME USE MOS.
*01	- Alcohol - Any use at all	[ ][ ]	[ ][ ]	[ ][ ]
*02	- Alcohol - To intoxication	[ ][ ]	[ ][ ]	[ ][ ]
*03	- Heroin	[ ][ ]	[ ][ ]	[ ][ ]
*04	- Methadone	[ ][ ]	[ ][ ]	[ ][ ]
*05	- Other opiates/ analgesics	[ ][ ]	[ ][ ]	[ ][ ]
*06	- Barbiturates	[ ][ ]	[ ][ ]	[ ][ ]
*07	- Other sed/ hyp/tranq.	[ ][ ]	[ ][ ]	[ ][ ]
*08	- Cocaine	[ ][ ]	[ ][ ]	[ ][ ]
*09	- Amphetamines	[ ][ ]	[ ][ ]	[ ][ ]
*10	- Cannabis	[ ][ ]	[ ][ ]	[ ][ ]
*11	- Hallucinogens	[ ][ ]	[ ][ ]	[ ][ ]
*12	- Inhalants	[ ][ ]	[ ][ ]	[ ][ ] 78

CARD 3 80

Note: See manual for representative examples for each drug class.

*13 - More than one substance per day *(Incl. alcohol).* 5 [ ][ ] DAYS [ ][ ] YRS. [ ][ ] MOS.

DRUG/ALCOHOL USE

14. Which substance is the major problem? *(Please code as above or 00-No problem; 15-Alcohol & Drug [Dual addiction]; 16-Polydrug; when not clear, ask patient).* [ ][ ]

15. How long was your last period of voluntary abstinence from this major substance? *(00 - never abstinent).* [ ][ ] MOS.

16. How many months ago did this abstinence end? *(00 - still abstinent).* [ ][ ]

*17. How many times have you:

Had alcohol d.t.'s [ ][ ]

Overdosed on drugs [ ][ ]

*18. How many times in your life have you been treated for:

Alcohol Abuse [ ][ ]

Drug Abuse [ ][ ]

*19. How many of these were detox only?

Alcohol [ ][ ]

Drug [ ][ ]

20. How much would you say you spent during the past 30 days on:

Alcohol [ ][ ][ ][ ]

Drugs [ ][ ][ ][ ]

21. How many days have you been treated in an outpatient setting for alcohol or drugs in the past 30 days? *(Include NA, AA).* [ ][ ]

22. How many days in the past 30 have you experienced:

Alcohol Problems [ ][ ]

Drug Problems [ ][ ]

FOR QUESTIONS 23 & 24 PLEASE ASK PATIENT TO USE THE PATIENT'S RATING SCALE

23. How troubled or bothered have you been in the past 30 days by these:

Alcohol Problems [ ]

Drug Problems [ ]

24. How important to you *now* is treatment for these:

Alcohol Problems [ ]

Drug Problems [ ]

INTERVIEWER SEVERITY RATING

25. How would you rate the patient's need for treatment for:

Alcohol Abuse [ ]

Drug Abuse [ ]

CONFIDENCE RATINGS

Is the above information significantly distorted by:

26. Patient's misrepresentation? [ ]

0 – No 1 – Yes

27. Patient's inability to understand? [ ] 50

0 – No 1 – Yes

CARD 4 80

COMMENTS

I.C. [1] [ ][ ][ ][ ]

1. Was this admission prompted or suggested by the criminal justice system (judge, probation/parole officer, etc.)? [ ]
   0 – No 1 – Yes

2. Are you on probation or parole? [ ]
   0 – No 1 – Yes

How many times in your life have you been arrested and charged with the following criminal offenses:

CODE #

*03 – shoplifting/vandalism	[ ][ ]
*04 – parole/probation violations	[ ][ ]
*05 – drug charges	[ ][ ]
*06 – forgery	[ ][ ]
*07 – weapons offense	[ ][ ]
*08 – burglary, larceny, B & E	[ ][ ]
*09 – robbery	[ ][ ]
*10 – assault	[ ][ ]
*11 – arson	[ ][ ]
*12 – rape	[ ][ ]
*13 – homicide, manslaughter	[ ][ ]
*14 – other	[ ][ ]

LEGAL STATUS

*15. How many of these charges resulted in convictions? [ ][ ]

How many times in your life have you been charged with the following:

*16. Disorderly conduct, vagrancy, public intoxication [ ][ ]

*17. Driving while intoxicated [ ][ ]

*18. Major driving violations (reckless driving, speeding, no license, etc.). [ ][ ]

*19. How many months were you incarcerated in your life? [ ][ ]

20. How long was your last incarceration? [ ][ ] MOS.

21. What was it for? *(Use code 3-14, 16-18. If multiple charges, code most severe)* [ ][ ]

22. Are you presently awaiting charges, trial or sentence? [ ]
    0 – No 1 – Yes

23. What for? *(if multiple choice, use most severe).* [ ][ ]

24. How many days in the past 30 were you detained or incarcerated? [ ][ ]

25. How many days in the past 30 have you engaged in illegal activities for profit? [ ][ ]

FOR QUESTIONS 26 & 27 PLEASE ASK PATIENT TO USE THE PATIENT'S RATING SCALE

26. How serious do you feel your present legal problems are? *(Exclude civil problems)* [ ]

27. How important to you *now* is counseling or referral for these legal problems? [ ]

INTERVIEWER SEVERITY RATING

28. How would you rate the patient's need for legal services or counseling? [ ]

CONFIDENCE RATINGS

Is the above information significantly distorted by:

29. Patient's misrepresentation? [ ]
    0 – No 1 – Yes

30. Patient's inability to understand? [ ]
    0 – No 1 – Yes 56

CARD 5 80

COMMENTS

I.D. 1 [ ][ ][ ][ ]

1. Marital Status
   1 – Married 4 – Separated 5 [ ]
   2 – Remarried 5 – Divorced
   3 – Widowed 6 – Never Married

2. How long have you been in this marital status? [ ][ ] YRS. [ ][ ] MOS.
   (If never married, since age 18).

3. Are you satisfied with this situation? [ ]
   0 – No
   1 – Indifferent
   2 – Yes

4. Usual living arrangements (past 3 yr.) [ ]
   1 – With sexual partner and children
   2 – With sexual partner alone
   3 – With parents
   4 – With family
   5 – With friends
   6 – Alone
   7 – Controlled environment
   8 – No stable arrangements

5. How long have you lived in these arrangements. [ ][ ] YRS. [ ][ ] MOS.
   (If with parents or family, since age 18).

6. Are you satisfied with these living arrangements? [ ]
   0 – No
   1 – Indifferent
   2 – Yes

FAMILY/SOCIAL RELATIONSHIPS

7. With whom do you spend most of your free time: [ ]
   1 – Family 3 – Alone
   2 – Friends

8. Are you satisfied with spending your free time this way? [ ]
   0 – No 2 – Yes
   1 – Indifferent

9. How many *close* friends do you have? [ ][ ]

10. How many days in the past 30 have you had serious conflicts:
    A. with your family? [ ][ ]
    B. with other people? (excluding family). [ ][ ]

Have you had significant periods in which you have experienced serious problems with:

0 – No 1 – Yes

	PAST 30 DAYS	IN YOUR LIFE
*11. Mother	[ ]	[ ]
*12. Father	[ ]	[ ]
*13. Brothers/Sisters	[ ]	[ ]
*14. Sexual partner/spouse	[ ]	[ ]
*15. Children	[ ]	[ ]
*16. Other significant family _____	[ ]	[ ]
*17. Close friends	[ ]	[ ]
*18. Neighbors	[ ]	[ ]
*19. Co-workers	[ ]	[ ]

FOR QUESTIONS 20-23 PLEASE ASK PATIENT TO USE THE PATIENT'S RATING SCALE

How troubled or bothered have you been in the past 30 days by these:

20. Family problems? [ ]
21. Social problems? [ ]

How important to you now is treatment or counseling for these:

22. Family problems? [ ]
23. Social problems? [ ]

INTERVIEWER SEVERITY RATING

24. How would you rate the patient's need for family and/or social counseling? [ ]

CONFIDENCE RATINGS

Is the above information significantly distorted by:

25. Patient's misrepresentation [ ]
26. Patient's inability to understand [ ] 49
    0 – No 1 – Yes

CARD [6] 80

COMMENTS

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*1. How many times have you been treated for any psychological or emotional problems?

In a hospital 5 [ ][ ]

As an Opt. or Priv. patient [ ][ ]

2. Do you receive a pension for a psychiatric disability? [ ]
   0 – No 1 – Yes

Have you had a significant period, (that was not a direct result of drug/alcohol use), in which you have:

0 – No 1 – Yes

	PAST 30 DAYS	IN YOUR LIFE
*3. Experienced serious depression	[ ]	[ ]
*4. Experienced serious anxiety or tension	[ ]	[ ]
*5. Experienced hallucinations	[ ]	[ ]
*6. Experienced trouble understanding, concentrating or remembering	[ ]	[ ]
*7. Experienced trouble controlling violent behavior	[ ]	[ ]
*8. Experienced serious thoughts of suicide	[ ]	[ ]
*9 Attempted suicide	[ ]	[ ]
*10 [illegible]	[ ]	[ ]

PSYCHOLOGICAL STATUS

11. How many days in the past 30 have you experienced these psychological or emotional problems? [ ][ ]

FOR QUESTIONS 12 & 13 PLEASE ASK PATIENT TO USE THE PATIENT'S RATING SCALE

12. How much have you been troubled or bothered by these psychological or emotional problems in the past 30 days? [ ]

13. How important to you *now* is treatment for these psychological problems? [ ]

THE FOLLOWING ITEMS ARE TO BE COMPLETED BY THE INTERVIEWER

At the time of this interview, is patient:

0 – No 1 – Yes

14. Obviously depressed/withdrawn [ ]
15. Obviously hostile [ ]
16. Obviously anxious/nervous [ ]
17. Having trouble with reality testing, thought disorders, paranoid thinking [ ]
18. Having trouble comprehending, concentrating, remembering [ ]
19. Have suicidal thoughts [ ]

INTERVIEWER SEVERITY RATING

20. How would you rate the patient's need for psychiatric/psychological treatment? [ ]

CONFIDENCE RATINGS

Is the above information significantly distorted by:

21. Patient's misrepresentation? [ ]
    0 – No 1 – Yes
22. Patient's inability to understand? [ ] 38
    0 – No 1 – Yes

CARD [7] 80

COMMENTS