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SPECIFYING A MODEL FOR DECISION-MAKING

IN A POPULATION OF MISDEMEANOR DRUG OFFENDERS

by

Barbara Hoffmann

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

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Abstract

Specifying a Model for Decision-Making

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by

Barbara Hoffmann

Advisor: Professor Charles Winick

This study sought to determine whether an intervention, delivered to first time misdemeanor drug offenders, would result in a decision to attempt to stop using drugs and consider entering a drug or alcohol treatment program. A variety of theoretical models were explored (Rational Choice, Social Learning Theory and elements of Planned Change) and a model for decision-making was developed. This model was then tested to see whether the variables would remain predictive of a decision to seek treatment when they were all entered, simultaneously, into a logistic regression equation. Second, there was a goal to isolate the variables that might be particularly predictive of a decision to seek treatment and introduce these variables, in the form of a checklist, to Criminal Court judges, to help guide the sentencing process for these low level offenders

The results of this study indicates that: a) there is a portion of first time misdemeanor drug offenders who are amenable to the idea of resolving their drug-using problems and who will opt for treatment when it is presented to them as a viable option; b) in this population of low level offenders there is a multiplicity of drugs used and a wide range of years that the individuals have been using drugs; c) individuals in this population

have a range of perceptions regarding their drug or alcohol use; and d) six variables in particular, drawn from the various theories of change that were employed, are predictive of a decision to seek treatment.

In addition, marginal work was done to develop an index of debilitation from drugs, based on drug of choice, years of use, frequency of use, and feelings of dependency. This index needs to be validated. Second, a brief comparison was made between this population, participants in the Drug Use Forecast study, and respondents to the NIDA Household Survey, on demographics and several drug-using measures.

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Chapter 1. Introduction

In the 1930's, society as a whole decided that a humanistic approach toward treating the alcoholic would accomplish more than a punitive approach (Fillmore and Kelso, 1987). However, those addicted to cocaine and heroin have always doubly suffered, first from the effects of the illness of addiction itself and then from the concomitant effects of the criminality inherent in the use of illicit drugs. "Whereas alcohol abuse is seen as a health problem...drug abusers are seen as criminals...making them prime candidates for prison time" (Raspberry, 1993). As the addict progresses in his/her drug use, the courts and the entire criminal justice system become a revolving door -- arresting, adjudicating, and re-arresting seemingly without affecting any change in the subject individual.

The problem is extensive. According to the National Institute of Justice's Drug Use Forecast, in 1992 75% of the people arrested in Manhattan tested positive for illegal drug use, primarily cocaine and heroin. The Office of Court Administration reports that 63% of all misdemeanor arrests in Manhattan are for drug charges (1992). This population of drug offenders is comprised largely of repeat offenders who are arrested frequently for the same offenses (Belenko, 1992). This is especially the case with misdemeanants who often receive a sentence of time served (credit for the time the person was incarcerated between arrest and arraignment) or community service simply

because there has not been much else to offer them. In fact, there is not much agreement concerning how to address this population. One school of thought is to increase the criminal sanctions for first time drug offenders -- to "up the ante". An alternative approach is to attempt to change this population's behavior, providing treatment or rehabilitation. This later approach raises the question of how to achieve the desired behavior change.

In 1991, funds were obtained from the Ryan White Comprehensive AIDS Resource Emergency Act, Title I, utilizing federal monies, to provide an intervention to first time misdemeanor drug offenders arrested in the Borough of Manhattan. Offenders were offered, on-site at the courthouse for the Manhattan Criminal Court, the opportunity to receive access to drug or alcohol treatment and information on HIV/AIDS. The Treatment Readiness Program ("TRP") is categorized as a community service sentence, conducted under the auspices of the Manhattan District Attorney's Office. The TRP is given as an alternative sentence. Successful completion leads to expunging the individuals' criminal record.

The majority of TRP participants were those arrested for drug charges (possession of a controlled substance (220.03)), possession of marijuana (221.15), or criminal trespassing (140.15). Candidates for the TRP were selected by the Manhattan Criminal Court judges based on their presenting problem (i.e. the nature of the arresting charge) and the judge's review of the attendant facts.

Purpose of Study

The TRP was developed and implemented because previous sentencing practices for misdemeanor drug offenders did not address the offenders' need for drug treatment services. It was believed that by introducing an intervention that addresses the offenders' drug (including alcohol) use the cycle of drug use and criminality could be broken. It was thought that if TRP participants developed some concern about their drug use, particularly in terms of their risk of contracting HIV/AIDS, and a base line understanding of the disease concept of addiction, including the signs and symptoms, they might be able to identify their substance use as a problem. Then, by providing the TRP participants with an experiential view of drug treatment, at a treatment facility, the participants might consider doing something about their drug problem by deciding to enter treatment.

Consistently, a portion of the TRP population has opted for treatment upon completion of their TRP sentence. Conducting this study of the TRP population, it is anticipated that some difference will be found between those TRP participants who request a referral for treatment and those who complete the TRP but do not enter treatment. This dissertation will: (i) identify and seek to explain factors that appear to account for this difference; and (ii) identify and discuss those factors that appear to predict the likelihood that a low level drug offender will voluntarily decide to seek drug treatment.

Patterns of criminal behavior and drug abuse are strongly inter-related (Chaiken

and Chaiken, 1990). It is thus important to offer early intervention to provide the greatest likelihood of derailing the escalation of drug use and the attendant criminality. With respect to low level drug offenders, as with drunk drivers, "it has not been scientifically demonstrated that general deterrence-based policies have been successful" (Ross, 1982). A more effective policy focuses on specific deterrence (i.e. deter the drinking not the driving; the drug using not the purchasing). In addition, because individuals seeking voluntary admission to treatment have been found to share similar background characteristics, overall pre-treatment criminal behavior patterns, and behavior patterns during and post-treatment with those individuals undergoing mandatory treatment, (Brecht, Anglin, and Wang 1993), yet are significantly less costly to monitor, it is also cost effective to facilitate voluntary entry into treatment.

This dissertation adds to the knowledge base in two ways. First, it will advance theoretical knowledge by beginning to identify elements producing self-directed change. Second, it will describe an intervention model that has demonstrated effectiveness with misdemeanor drug offenders, a group presently under-represented in the literature. Efforts at intervention for substance use/abuse usually focus on preventing initiation of use, neglecting the population that has already begun using. Effectiveness studies usually focus on those incarcerated or on probation (generally more serious offenders) and neglect the first time misdemeanant. In fact, "there has been no empirical evaluation of the effectiveness of criminal sanctions on persons convicted of general misdemeanor

crimes except for a few studies on drunk driving recidivism" (Wheeler and Hisong, 1988). This study will begin to address these shortcomings, pursuing a decision-making model applied toward treatment seeking for a population of misdemeanor drug offenders. The assumption is that making a decision to enter treatment is the first step towards changing drug using behavior and the concomitant criminality.

Chapter 2. Literature Review

A. Theories of Change

There are at least three interlocking "change" theories that will be considered here. One is based on the assumption that a person is motivated by rational self interest. An essential component of this "rational choice" theory is that a person makes a conscious decision to engage (or not to engage) in a behavior and that the decision-making process is on-going (Paternoster, 1989). Implicit in this model is the belief that the person is seeking some level of reward or other benefit, that there is a rational basis for the person's choice and that that same rational response can be re-directed. The second "change" or decision-making theory considered here is "social learning theory." This theory presents the "how to's" of social learning that can be applied to behavioral change or the learning of new behavior. Social learning theory posits that the learning of a given behavior is a process comprised of various decision-making points. Decisions to change a behavior are made based on both one's level of awareness that a problem exists, and the belief that change is possible. The third theory presented here is "planned change"--that change is accomplished by the introduction and adoption of new norms in the presence of the "modeling" of the new, desired, behavior. Planned change challenges the individuals' ideas and beliefs and encompasses an analysis of the person's social milieu. The core of this theory is that successful change must encompass the internalizing of new norms.

1. Rational Choice

In the 1970's, sociologists and criminologists, bolstered by advances in computer technology, began using econometric models to examine complex social issues. An example was applying the labor/leisure model to criminal behavior. Manski stated that at any given point an individual is presented with crime opportunities. A "decision rule" operates, governing the individual's choice. A choice is made and the result either has, or lacks, utility. Rational behavior assumes that the "social actors behave as if they were maximizing their own expected utility" (Piliavan, 1986). If the result has some utility (and this can be either objective or subjective), the original choice or decision is reinforced and gets incorporated into the next decision point which impels the individual further along in the process. The utility of the result may also be intended or unintended. For example, in the case of drug use, the individual might initially use drugs to acquire group membership or to satisfy curiosity. S/he receives the attendant (and perhaps unanticipated) "reward" of a "high" or euphoria. This then becomes the prime motivation for continued drug use, even after the initial group has disbanded and the initial curiosity has been sated. According to Manski, criminal behavior is actually modeled over time, involving sets of decisions, moving the individual deeper into criminal activity. Manski concluded that anyone can commit a crime and, thus, the unit of analysis should be an entire population not just the criminal sub-set.

The structuring of a decision to commit a crime depends upon available

information about the offense and an evaluation of whether the outcome will be beneficial or profitable. Presumably, the decision not to offend is tied to viewing the outcome as not beneficial or not profitable. This is why the rational choice model has become associated with deterrence theory. "Individualism assumes people are free to exercise their abilities" (Hall, 1983). This is an essential component of the idea of rational choice -- a person makes a conscious decision to offend or not to offend. By providing sure, swift and certain punishment, the theory goes, potential offenders will choose not to offend.

Taking the view that criminal behavior is a construct, crime is not as much a single irrevocable act but, rather, a series of acts occurring on a continuum. People actually move in and out of criminal behavior, the implication being that a criminal event is a result of "choice structuring" (Paternoster, 1989). Becker raised this point in 1967 -- that crime, at least in part, may be a phenomenon arising from rational behavior. According to Becker, "[p]otential offenders assign probabilities and values to outcome events and act on the basis of their overall calculated evaluation of each criminal and non-criminal action" (Becker, 1967). First, a decision is made to participate in an offense (also called "prevalence of involvement"). Second, a decision is made to re-offend or continue offending. The decision to offend is on-going, requiring new decisions to be made as the person progresses in their criminal career. Criminal involvement refers to the process through which the individual "chooses to become initially involved in particular

forms of crime, to continue, and to desist" in criminal behavior (Paternoster, 1989).

The rational choice model allows for assessment and re-assessment at different points. Paternoster, in his study of delinquency, added variables from Hirschi's social control theory (attachment and commitment to peers, family, and school), and incorporated Becker's idea of opportunity and the presence or absence of sanctions (or consequences) for the given act. He also included demographics (social environment, age, and gender). These elements became part of his "choice structuring" model. According to Paternoster, these properties for deciding whether or not to commit a crime are factored into both the initial and future decisions to offend. Paternoster's study was performed with high school students from the inner-city, in the south east part of the United States. The dependent variables were respondents' involvement in: marijuana use, underage consumption of alcohol, petty theft, and vandalism. The survey instrument was administered annually for three years. Paternoster found that the decision to offend was unrelated to the usual deterrence features: certainty and severity of punishment. The factors that he found to be important were: "moral beliefs", parental supervision, and participation in social activities i.e. Paternoster found that weaker conventional bonds (Hirschi's theory of control) leaves a person free to "drift" into (i.e. choose) delinquency (Matza's theory).

The restraining influences that Paternoster identified were logical, but he neglected to discuss the benefit that was perceived to be associated with the particular

delinquent events. This factor is especially important when the offenses in question are linked i.e. underage drinking and smoking "pot" often occur together and can lead to petty theft and vandalism. Paternoster did find that changes in offending, abstaining from drinking for example, were linked to having friends/peers that abstained, and abstainers who became drug users had drug using friends.

The rational choice model was proposed by economists and provides a general explanation of criminal behavior and how formal sanctions might deter. The formula is simple. If the expected utility of the criminal event is greater than the expected utility (including punishments) of other alternatives (including not offending) the person will engage in illegal acts. The three requisites of the model explaining the decision to engage in crime are: it must include expected rewards; it must include consideration of expected costs; it must consider each of these from the subjective view of the social actor (Piliavan, 1986). The last factor is critical. The reward or "return" on a choice to commit or not to commit a crime is based on the perception of the social actor and the perception of the cost or reward of the act is directly related to subsequent criminal activity. Therefore, a change in criminal activity has to start with change in the actor's perception of either the reward or the cost.

Piliavin et al. conducted a two wave panel study to determine the perceived reward or cost of criminal behavior to particular groups of people. He used three populations of offenders, each having a high probability of engaging in serious, patterned

forms of crime: adult offenders who had been incarcerated; adults known to be drug users; and adolescents aged 17 to 20 who had dropped out of school. In all there were 5,005 subjects randomly assigned to experimental and control groups. The participants were nearly all male, black, with less than a high school education and were unemployed. Those who were drug users were primarily heroin addicts. The variables for perceived reward for criminal behavior were money, much opportunity to commit crime, and respect accorded those with illegal, as opposed to legal, jobs. Perceived risk of criminal behavior was slight as participants considered the likelihood of apprehension low. This is interesting in light of the fact that 90% of the addicts had at least one arrest (compared to 54% of the adolescents) and the mean number of arrests for the adults was between eight and nine. Piliavin concluded that the meaning imputed to a sanction is as important in producing the effect as the sanction itself.

2. Social Learning Theory

Social learning theory is a powerful criminological theory because it can be extended to many different cultural groups and be applied to a variety of circumstances. The basic learning mechanisms for social behavior is operant conditioning -- behavior is learned through reinforcement and sustained by the removal or neutralization of aversive stimuli. Future behavior is shaped by stimuli that are consequences of the behavior (Akers, Krohn, Kadduce and Rodosevich, 1979). According to Akers, et al., social behavior is acquired through imitation or modeling of others' behavior and is

strengthened by rewards (positive reinforcement) and avoidance of punishment (negative reinforcement). The behavior is weakened by aversion stimuli (positive punishment) and/or loss of reward (negative punishment). The development of either deviant behavior or conforming behavior depends on past and present rewards or punishments and the rewards or punishments for alternate behavior (i.e. differential reinforcement) (Winfree, Sellers and Classon, 1993).

Social learning theory may be particularly useful in analyzing drug taking behavior. Akers specified that drug taking behavior "is a composite of: drug effect; availability; personal background qualities (biological, social, psychological); and societal definitions for or against use" (Akers, 1973). Addiction then, can be viewed as a learning process, originating either from a social context that supports or encourages drug use (i.e. a sub-culture theory) or from a "conventional" view (i.e. that the addict is self-medicating a pain or problem). Akers would attribute drug use to social phenomenon. In his view, an inner-city population that is deprived of opportunity, failing to acquire conventional behavior (i.e. lacking conventional bonds), is exposed to drugs and drug users (availability), sees or experiences rewards (reinforcement) from using and, in fact, develop "special attitudes and definitions of use and addiction" that reinforce use and addiction (Akers, 1979).

First use of a substance tends to be casual or recreational. Continued use is facilitated by "definitions favorable to use" -- the perception that: "Drugs are cool"; "It

feels good" (Akers, 1973). If these positive definitions are not "neutralized" by negative definitions ("You'll get in trouble"; "You'll get hooked") drug use will continue. The neutralizing effect of negative definitions is mitigated by the reinforcing effect of the drug itself. The physiological response from drug use supplies a very positive definition for continuing the behavior even if there might be "negative definitions". In fact, progression into more frequent and substantial abuse is determined by the pattern of the "reinforcing effects of the substance with social reinforcement" (Akers, et al., 1979), or with the absence of negative or deterring sanctions supplied by peers, parents or the law. Whatever the reason for starting however, continued use is tied to social reinforcement.

It has also been recognized that increased drug use will lead to a need for criminal activity, exposure to criminal patterns, likelihood of arrest, and eventual incarceration so that criminality and substance abuse become paired behaviors. The same forces propelling the substance use also support the attendant criminality. "Crime and drug use can be viewed as learned responses to a configuration of social reinforcers and definitions provided by individuals with whom one associates" (Winfree, Sellers, and Classon, 1993). As such, addictive behavior and criminality can be unlearned. According to Akers, a person uses drugs to get approval, recognition, acceptance, and social rewards, which are the same stimuli that prompt the learning of other social habits. Cresey and Sutherland believed criminal behavior in general is derived from the same social processes as other social behavior i.e. it is learned behavior (Wilson, 1975).

Undesirable behavior can also be the result of conforming to deviant models as in the "cycle of violence" where the abused child becomes an abuser. There may be a similar "cycle of criminality" or "cycle of drug use/addiction" because people learn in interaction with significant others or significant groups. Within these significant relationships they learn definitions (i.e. norms, attitudes, orientations) of a given behavior as good or bad. These definitions act as stimuli or "cues" for future behavior (Akers, et al., 1979). The more a behavior is defined as good (or at least justified i.e. negative responses are neutralized), the more likely it is for a person to engage in the behavior. Definitions are conducive to deviant behavior when the positive or neutralizing definitions of the (deviant) behavior offset the negative ones. Definitions can be social or non-social (like the direct, physiological effect of drugs) but the behavior effects come from the interaction with, or influence of, those groups who control and/or influence the major sources of reinforcement. Primary groups influencing behavior are peers and family. The secondary influences are schools and churches.

Applying these elements to changing behavior, there are several antecedent conditions necessary to produce a decision to change a behavior. First, is the defining of a situation as a problem. A problem can be defined as a situation, a barrier, that is impeding one from achieving desired goals. The barrier can be psychological, interpersonal, social, or physical. There is also some degree of uncertainty as to whether the barrier can be overcome (Tallman, Leik, and Staford, 1993). It is usual that the social actor may resist

defining a situation as problematic to avoid the necessity of taking action, particularly if there is a perceived cost associated with the action. Second, there is perceived availability of: (i) information about or concerning the problem; and (ii) access to the means for the solution of the problem. This is particularly true for those addicted to drugs -- both treatment availability and the effectiveness of treatment are perceived as a problem.

Expediency is a third factor in introducing behavior change. How immediate is the problem for the social actor? Is s/he experiencing negative consequences as a result of the problem? Consequences play a role in both the initiation and continuation of a given behavior, so an application of social learning theory applied, particularly to drug using behavior, must focus on re-conceptualizing the addicts' situation. Problem solving requires at least a rudimentary awareness of the existence of the situation (the barrier), a realistic view of the parameters of the problem or situation, and possible courses of action. It is a process whereby the social actor: (i) perceives there's a problem; (ii) searches for information relevant to problem solving; (iii) actively engages in problem solving; and (iv) evaluates the outcome of the action taken; which feeds back into (v) a new perception, a new search, and new action (Tallman, et al., 1993). It has been suggested that an activity such as drug-taking remains habitual until interrupted or blocked (Hall, 1983). The "blockage" can be called the problem or the first step in finding a solution. In fact, how a problem is defined is a crucial part of the process.

Bandura, when conceptualizing social learning theory, later included the notion of

"perceived self-efficacy" as a key factor in the social learning process -- the belief that one can accomplish a goal or objective. "Change may be mediated through cognitive processes but cognitive events are induced and altered most readily by experiences of mastery arising from successful performance" (Bandura, 1987). Self-efficacy depends on personal accomplishments (setting goals and achieving them), but can also be achieved through vicarious experience and verbal persuasion. This helps to explain why voluntary self-help groups are so useful in terms of alcohol and drug recovery. They "validate one's deviant reactions, recognizing the normative inappropriateness and thus help reduce self-disapproval or the tendency to continue self-labeling as a deviant or undesirable or hopeless" (Thoits, 1985). Self-help groups such as Alcoholics Anonymous or Narcotics Anonymous also provide a "reference standard", demonstrating the possibility of change. People are not motivated to change in a vacuum. Observed consequences of behavior, can alter behavior by providing reference standards. As a general rule, seeing behavior succeed for others increases the tendency to behave in similar ways. Social support - or new, generalized others - is particularly important when there is a need to take on new behavior i.e. make a role transition, since "self-conceptions emerge and are sustained in social relationships" (Thoits, 1985). Social support can also furnish the "modeling" of the new or desired behavior. "Modeling is a powerful means for establishing and maintaining behavior" (Bandura, 1977).

This desire for "new" behavior however, may only emerge once a discrepancy

has been established between "one's present state and the desired or ideal state" resulting in patient dissatisfaction (Miller, 1985). Using exercise behavior as an example, Bandura and Cervone (1983) found that "self-dissatisfaction is predictive of the subsequent effort expanded to reduce discrepancy, but only in the presence of feedback and with a goal provided." Change, then, is a process beginning with the development of new definitions of behavior and exposure to new models, new patterns of behavior to imitate, and new definitions to act as reinforcers (Akers, et al., 1979). It is accomplished through a series of decisions, in the presence of the desire for new behavior. Implicit is the belief that the person is seeking some level of reward or other benefit, that there is a rational basis for the choice, and that that same rational response can be re-directed to making a different choice.

3. Planned Change

"Planned change" is a change strategy that attempts to assist "self-directed change" by employing a "normative re-educative" method and targeting the individual's rational self-interest (Chin, Benne, 1976). The aim of planned change is to refute those: "ideas and beliefs that may be keeping the person entrenched in the negative, self-defeating behavior" (Chin, Benne, 1976). For: "when we directly or indirectly induce people to change their beliefs or philosophies about something, their emotions and behaviors will significantly change" (Wilson and Mandelbrote, 1978).

Planned change, the third theory of change to be considered, comes from the field

of social psychology. Kurt Lewin stated that a basic task of re-education (change) was to change the individual's social perception, which in turn would lead to a change in social action (Lewin, 1948). He also stated that information alone cannot produce change. There was a need to alter the individuals' cognitive structure (the way s/he sees his physical and social worlds) and a need to modify his (or her) values. Lewin believed that group involvement was critical and that a crucial element in the process was to identify the factors working for or against the change. In Lewin's view, "change amounts to peeling away the layers of social influence to get to the core personality, targeting rational self interest" (Lewin, 1948). Lewin expressed the "push/pull" of social change as "force field analysis" and, he said: "factors for change must equal the factors against change" (Lewin, 1947).

Lewin was applying his idea of change to a broad social context. More recently, Palmer explicated the factors related to an individual's ability to change. The factors included: a) support or approval (or disapproval) from one's (social) environment (external factors); b) the individual's own (perceived) abilities; c) internal (psychological) difficulties (obstacles or barriers) that have corresponding social or behavioral components or manifestations (Palmer, 1992). These obstacles include the (perceived) difficulty of the task and the individual's perception of opportunities. Added to this is the effect of a sudden trauma or overwhelming event (i.e. a "trigger"). It is the combination(s) of these factors, according to Palmer, that promotes or impedes personal growth and

feeds into the individual's view of personal power (i.e. self-efficacy). From this perspective, "planned change" entails helping the individual change (him)self, through positive incentives or rewards; or changing or modifying the individual's life circumstances and thus improving "social opportunity" (Palmer, 1992). Implicit in this is changing the individual's value structure which, in turn, changes one's life circumstances. In fact, patients in treatment cite changed life circumstances as the most important factor in their recovery.

An intervention, then, should focus on methods that utilize, develop or redirect the individuals' own innate abilities to enhance their ability to make a decision to change. Palmer is an advocate of "growth centered intervention", using a "mixed model" of external control and personal growth or change to promote a "person-society linkage." This is akin to the goal of changing self-defeating ideas and beliefs. Planned change particularly focuses on the internalization of new values and beliefs. External controls alone are not enough to effect the change necessary for a person to remain, for example, crime free since the variables predicting or leading to criminality are both complex and inter-related. Therefore efforts geared toward the problem of criminality and recidivism must be equally complex and must work at several levels simultaneously. According to Palmer, criminality consists of: (i) a skills or capacity deficit, i.e. developmental issues; (ii) external pressure or disadvantages i.e. environmental factors; and (iii) internal difficulties i.e. feelings and attitudes. The habilitation/developmental (H/D) perspective

outlined by Palmer recognizes that all three factors are inter-related. Therefore, program models dealing with the problem of criminality need to take a dynamic versus static approach. All three factors (skills, environment and feelings or attitudes) need to be focused on simultaneously, not piecemeal, if the criminality is to change. A rehabilitation program can increase the offenders' skills, but if the person is released to the old environment, the same feelings and attitudes return, eventually resulting in recidivism. Or an intervention can change the offenders' feelings and/or attitudes, but if it does not address the offenders' skills deficits and the person remains in the same environment, there will eventually be a repeat of the criminal event.

In the H/D approach specified by Palmer, feelings and attitudes are crucial components. In Palmer's view, any cognitive skill development which will impact on the person's feelings and attitudes will have the greatest impact on behavior changes. Palmer's view of behavior change is as a "trickle down" effect, or the "branches of a tree". Substance abuse, for example, may be the underpinning (the trunk of the tree); criminality is the branch of the tree. Ergo, the initial use of drugs may stem from self-esteem issues, which led in turn to poor school performance, dropping out, and a resultant lack of vocational skills. This leads to enhanced opportunity to commit crime.

Whether framing the solution as a planned change, like Palmer's habilitation/development model, or as a social learning (re-learning) experience, it is clear that the results will be directly effected by the individual's perception of his/her ability (or

power) to change. It is the combination(s) of these factors that promotes or impedes personal growth and feeds into the individual's view of personal power that Bandura phrased as "perceived self-efficacy" (Bandura, 1983). This can be restated as targeting the individual's rational self-interest, which Wilson stated was based on "things which effect one the most and over which the person feels (s/he) can exert some control" (Wilson, 1975) . "Treatment" then, should focus on methods that utilize, develop or redirect the individuals' innate abilities. This includes working on the person's skills and abilities to cope, as "rehabilitation begins with insuring that the individual has the skills to provide an alternative to criminal behavior" (Ayllon and Roberts, 1973).

Palmer believes that in the 1990's there is new attention being given to rehabilitation. This new willingness to consider rehabilitation is due in part because evidence has shown that treatment sometimes works. Even if a program or intervention produces only a slight reduction in recidivism, great strides can be made in terms of improving basic skills, literacy for example or vocational skills. This requires a clarification of rehabilitation goals and a need to better conceptualize the variables for measuring change. Some of the elements to be considered, according to Palmer, are:

1. Does the individual believe (he) can be successful in certain situations;
2. To what extent have the norms or standards that guide individual's aspirations and behaviors broken down. The greater the degree of anomie (separation from the social whole), the more difficult social change is to

accomplish;

3. Where does the person's locus of control lay? Does the individual's sense of personal power lie within him/herself (internal locus of control) or do they depend on external cues and guidelines (external locus of control). There is the need to move the individual from an external to an internal locus of control in order to empower them to feel able to change; and

4. To what degree does the person engage in sensation seeking or risk seeking behavior? Little concern about risk leads to a greater likelihood of repeat contact with the criminal justice system.

The question then becomes how to assist someone in redefining the "utility" of substance use in order to motivate them to consider a change; what process is necessary? Wright (1980) outlined a model for change that included the provision of an overview or "map" of how the individual needs to change and a series of steps or goals for the individual to achieve to bring about the change. The first step to initiating the desire to change may be the introduction of consequential thinking: if "A" occurs, then "B" will follow. Certainly an important step in the process of recovery from an alcohol or drug problem is to acknowledge that a problem exits. However, in order to arrive at a common definition of the problem the person must initially be well socialized, sharing the cultural perspective of the larger society and therefore able to recognize rule breaking or a

violation of norms (Thoits, 1985). The greater the degree of alienation, the harder it may be for the person to conceptualize both the problem and the need to change. For this reason, consequences must be viewed from the individuals' perspective and treatment must be "person-centered".

B. Reasons for Treatment-Seeking

There are a variety of theories explaining the cessation of drug or alcohol use: changes in lifestyle that leads to a cessation of involvement with the drug subculture (Johnson, 1980); a natural history of addiction or life cycle of the addict (Winick, 1964), that includes a genetic predisposition (Schuckit, 1973); or a reduction in the availability of the substance (Smart, 1977). Each approach takes a slightly different view of what the problem is. Miller took a more "client-centered" approach to the problem of drug use when he posed the question: what processes influence the probability that an individual will take certain "recovery related actions" (Miller, 1985). Client motivation has historically been seen as an important factor in seeking treatment, specifically, of alcoholism. A survey of treatment personnel found that 75% believed patient motivation to be important to recovery and, in fact, client motivation is often cited as a prerequisite for treatment (Stern and Putnam, 1965). However, "client motivation" is a term that needs to be operationalized. Some of the aspects are: agreement with the diagnosis and thus acknowledgment of a need for treatment; willingness to self-label i.e. acquiesce to the "sick" role; evidence of compliance hence dependence; a desire for help; and degree

of distress (Miller, 1985).

Self-observed emotional deviance may well lead someone to voluntarily seek (psychiatric) treatment. When Kadushin asked people presenting for mental health treatment why they had come, they cited emotional problems first followed by "social or interpersonal" problems (Kadushin, 1969). Situations (or social context) can act as stimuli, initiating the "deviant" response that leads to seeking treatment. A study done in 1977 found that advice to stop drinking, presented as a three hour assessment and a one hour counseling session given in a "sympathetic and constructive" way, showed some effect in terms of alcohol consumption and reduction of symptom severity, at 12 and 24 month follow-ups (Miller, 1985). Included in this "advice" session was feedback regarding the status and severity of drinking-related problems. Threat to self-esteem, then, seems to be a motivator in terms of seeking (alcohol) treatment, creating that discrepancy between the "real" self and the "ideal" self. Because of the importance attached to "client-based dynamics versus fixed variables" in the treatment process, Miller suggested that before someone would consider entering treatment, there may be a necessary first step of introducing a "motivational intervention". He defined this as:

> an operation that increases the probability of an individual entering, continuing and complying with an active change strategy (Miller, 1985).

Miller also found that "negative consequences have to be proximal and salient" and that when individuals perceived that: a) they had a choice; and b) they had chosen a

particular change strategy, they were more likely to comply with treatment voluntarily. Motivation to change is also highest following a period of acute intoxication thus the "motivational intervention" needs to be paired as closely as possibly with the negative event. There is also a need for individuals to be offered a wide range of alternatives.

Individuals often solicit advice from others about emotional problems in order to confirm their own tentative self-labeling and treatment-seeking decision (Kadushin, 1969). It makes sense then that the advice and support of others is just as useful in creating the new, non-deviant, identity. This presentation of new models, new patterns of behavior that enhances the individuals' perception of self-efficacy, may be particularly relevant when the goal is voluntary treatment. Voluntary treatment implies the person is under self-control and that the existing behavior has been recognized as deviant or self-defeating. Recognition of a problem, even the willingness to self-label does not always lead to seeking remediation.

The question then becomes why will some who have identified themselves as having a drug or alcohol problem seek treatment and others refuse treatment? In a study cited by Rounsaville and Kleber, no difference was found between treated versus untreated addicts on dimensions of race and social class however, the untreated reported less impairment (associated with heroin use) of work and family life (1985). Another study using a "snowball" sample method, found a population of untreated addicts to have "more positive self-esteem, less severe heroin use, and better family lives" then a

population of treated addicts. (Rounsaville and Kleber, 1985). The untreated opiate addicts and those seeking treatment differed on several dimensions. First, was the severity of drug dependence (which may be tied to an earlier stage of use). Generally, there is a range of two to six years between regular heroin use and the seeking of treatment (Winick, 1964). Also, those addicts not in treatment were more likely to be poly-drug users. Second, untreated addicts (i.e. those not in treatment at the time of the study) may have better access to either the drug or the money to obtain the drug, so that there is less risk-taking and perhaps fewer negative consequences associated with obtaining the drug. Third, those not in treatment reported less pressure to seek treatment from friends or family. Fourth, there was a lower rate of psycho-pathology among those untreated (or more measures of depression found in those seeking treatment).

There are several problems with the Rounsaville and Kleber study, particularly not specifying whether those addicts not in treatment had ever considered treatment or sought treatment and been turned away for some reason. Also, why family and friends were not applying pressure to the addicts. These responses need to be further clarified. For example, in a population of heroin addicts who had achieved "stable abstinence," the reason they gave was: "I just got tired of the life." When the circumstances of their abstinence were put together however, many of those abstinent had sought a new relationship, become members of a fundamental religious group, or found a subsequent dependence to replace heroin (Vallient, 1983). When applied to a population of

alcoholics, Vallient found that 57% had developed a substitute dependence; medical consequences had motivated 49% of them to seek treatment; 37% had developed "enhanced self-esteem" from attending AA meetings (Vallient, 1983).

> Motivation, readiness and perceptions of treatment are critical factors in understanding why addicts seek, remain and benefit from recovery-oriented treatment programs (DeLeon, et al., 1994).

Retention and effectiveness have long been correlated, with effectiveness reflecting length of time in treatment. The longer in treatment, the better the outcome (Knapp and Templar, 1991). Once this correlation is accepted, it becomes important to identify client factors that contribute to retention. In general, prediction research suggests that client perception variables are more relevant to retention in treatment than demographic characteristics (DeLeon, et al., 1994). The perception variables may be extrinsic, such as legal or family factors, or intrinsic i.e., self-perceived need for treatment. DeLeon et al. developed an instrument - the Circumstance, Motivation, Readiness and Suitability (CMRS) scale - that measured client perceptions across four inter-related domains: circumstance, motivation, readiness, and suitability, particularly among those in a residential treatment program. "Circumstance" refers to the external conditions or reasons that influence people to seek treatment; "motivation" refers to the person's "inner reasons" for change -- positive or negative; "readiness" is the individual's perceived need for treatment as opposed to utilizing "self-change" options; and

"suitability" is the match between the client and the particular modality. The CMRS was comprised of the scores from the four inter-related scales. The CMRS was able to identify those who would remain in treatment at least thirty days, and the single scale for "readiness" was a consistently better predictor than the other three scales alone. The "readiness" scale alone "approaches the predictive power of the test as a whole" (DeLeon, et al., 1994).

C. Treatment Outcome

When measuring a drug or alcohol treatment program's effectiveness, outcome should reflect the program's primary goal (Palmer, 1992). Secondary effectiveness measures are client-centered -- skill development, attitude change. They are the mid-range or intermediary goals. Substance abuse treatment would have the primary goal of getting the person to stop using drugs or alcohol. The intermediary goal would be to effect the attitude or behavior change that would, in turn, reinforce the primary goal. Certainly a tertiary goal or outcome might be reduced criminality i.e. reduced recidivism.

Across addictions, relapse rates of 70% within one year after treatment discharge are common. A study done in London looking at addicts "new to treatment" presenting themselves at three London clinics (an outpatient drug treatment clinic, a therapeutic community ("TC"), and a crisis intervention center (comparable to our detoxification facilities)) found 37% remaining drug free for the first month after treatment and almost 25% abstinent from heroin at the follow-up, two to five years after treatment (Sheehan,

Oppenheimer, and Colin, 1993). Retention is also a key aspect of treatment outcome as it is unilaterally accepted that more positive outcomes (decreases in drug use and decreases in criminal activity) are found among substance abusers who stay in treatment for longer periods of time (Fletcher, Inciardi, and Horton, 1994). Retention in treatment may be dependent on the provision of broad-based ancillary services -- health care, legal, and family services i.e. treating the client both as an individual and holistically. However, in an illness characterized by relapse, an effectiveness measure based solely on abstinence is always going to be precarious. Case A: A long term heroin addict "recovers" from heroin use only to become alcoholic. Has treatment been effective? After all the person is no longer using an illegal substance. Case B: A "crack" addict who is a habitual criminal, enters treatment voluntarily but drops out two weeks later. S/he never gets arrested again. Is s/he a treatment failure?

The answers lie, in part, with whose definition of effectiveness is being used. Lipton et al. were clear that "absence of recidivism should not be equated with rehabilitation" (Lipton et al., 1975). However, from the criminal justice system's point of view both of these cases might be success stories, as long as the heroin addict turned alcoholic does not get picked up for drunk driving or disorderly conduct. From the view of treatment providers, Case A would be viewed as a failure and Case B would require further review. In the second case, the person may have left the treatment program but connected with a twelve-step program and found their recovery.

Effectiveness of treatment cannot be viewed as an either/or proposition. Rather, there needs to be a more fluid approach, particularly with a criminal drug-using population, where there may be antecedent conditions pushing criminality and another set fueling drug use. Treatment dynamics also have to be considered. There is a certain logic to the idea that if you sentence someone to a residential drug treatment program for eighteen months, with the promise of two or three years in prison for non-compliance, you may well expect that most individuals will remain drug free (and crime free) for the time they remain sequestered in treatment. It is also likely that, within days if not hours of their release from the highly structured environment of a residential treatment facility, the person will resume using their drug of choice and recidivism will follow.

The question of effectiveness is one of the major issues in pressing drug treatment as an alternative to legal sanctions. Sentencing people to treatment began with pressure from the alcoholism field in response to the "get tough" stance against DWI (driving while intoxicated) offenders that emerged in the 1980's. Taking the medical approach to problems of substance abuse (i.e. that the addict/alcoholic has a disease that s/he suffers from involuntarily and that is characterized by denial (Fillmore and Kelso, 1987)) led to offering treatment as an alternative. But, given the element of denial and the concomitant likelihood of relapse, measuring success proved to be difficult. There is also some ambiguity with DWI offenders that is not present with drug offenders. The person arrested for DWI is arrested for a driving-related infraction since alcohol is a legal

substance and a great many people drink. The drug offender, however, seems to be viewed as a "problem person", criminal by the nature of his preferred substance (Gusfield, 1981).

In setting social policy it is common to consider either the act or the agent, but in our characterizing the DWI offender versus the drug offender, we vacillate. With the DWI offender it is clear the problem is the "agent" (i.e. alcohol) and there must be limited access and limited usage. When it comes to substance abuse -- cocaine, "crack" or heroin use, the attention becomes focused on the "act" (i.e. the purchasing or possessing of a controlled substance). This results in the drug offender being placed within the criminal justice system versus the treatment or health care system. This shift in focus makes comparisons between the two populations difficult. DWI offenders may be offered treatment for their health problem fairly early in the process and may have a fairly reasonable prognosis. Drug offenders usually are not offered treatment options until their drug use and criminal behavior has escalated to the point where they are incarcerated or under some other formal social control like probation or parole. Their prognosis may not be as good, partially because there is a greater degree of impairment by the time an intervention is offered.

What seems apparent is that there is no "magic bullet", and no way to compare results across programs because of the lack of uniformity either in design, structure, or setting (Palmer, 1992). It is also clear that there is a need for better designed programs

and better deigned evaluations including replications of existing models. Both process and outcome evaluations need to be performed. The alcohol treatment literature is instructive in that it demonstrates that the type of problem, individual differences, and the type of treatment paradigm are all meaningfully related to outcome (Ross and Gendreau 1980). Caddy listed the major problems associated with conducting alcohol treatment evaluations: (i) resistance from service providers, driven in part by use of paraprofessional staff; (ii) difficulty in following-up on people leaving treatment (an estimated 65-70% of clients are "lost" to follow-up); (iii) inability to create true control groups (with the implication of denying services to those in need for the purpose of research); and (iv) reliance on self-reported data (Caddy, 1980). Caddy believes that treatment outcome measures need to be multi-variate (not just did or did not drink again) and there is a need to consider success in terms of "improvement in life areas". His model for evaluation of treatment outcome is as follows: 1) collect base line data; 2) plan evaluation prior to inception of treatment; 3) adequately define criterion variables; 4) use continuous, quantifiable measures; 5) prepare subjects for follow-up; and 6) use multiple collateral sources for information.

Brecht, Anglin and Wang (1993) found that legally coerced (mandated) clients and voluntary clients appeared to be very similar in terms of their background characteristics and pre-treatment level of criminal activity, and both responded equally well to treatment. They also found a marked decrease in criminal behavior during and

after treatment, compared to pre-treatment levels, for both populations. Fillmore and Kelso, however, found that at least among those being treated for alcoholism, it was the group who entered treatment voluntarily who at follow-up (six months post treatment) were most likely to have abstained for the entire six months (that was 26% of their sample) compared to DWI offenders and criminals (presumably mandated to treatment) (Fillamore and Kelso, 1987). The idea of individuals being "sentenced" to treatment was due in part to the success of the treatment movement that posited the need to take a scientific or medical approach to problems of alcohol versus a moralistic or punitive approach (Fillmore and Kelso, 1987). Mandated treatment became more and more common as it became recognized that "society has attempted for many years and in many ways to control and rehabilitate the narcotic addict...in particular, solely criminal sanctions have proven relatively ineffective" (Anglin and McGlothlin, 1989). However, there were detractors on all sides. There were treatment providers who resented having treatment viewed as punishment and did not want clients' progress in treatment monitored; and adherents to the legal model (which assumes the person in question is responsible for their actions, has choice, and the power to control their behavior) who hated the idea of rehabilitation, seeing it as being "soft on crime" (Dunham and Mauss, 1982).

Any (re)habilitation program must have the breadth to address the multiplicity of deficits being presented by the target population. To be avoided is looking at "a single

cure for a complex problem" (Ross and Gendreau, 1980). Various modalities must be examined to determine what mix of approaches will work with what populations. This makes the evaluation of the effectiveness of drug or alcohol treatment a complex task. Establishing impact is essentially establishing causality i.e. that "A" is the cause of "B" or "B" would not have occurred if "A" was not introduced (Rossi and Freeman, 1989). An impact evaluation must prove that a program produces effects different from what would have occurred without an intervention, acknowledging that "A" might not be the sole reason for "B", but is certainly a contributing reason. In order to accomplish this linkage between "A" and "B" impact goals must be clearly stated and measurable. Impact evaluations are also often less than perfect because these type of evaluations are usually occurring in the field and therefore have limitations. Rezmovic pointed this out, stating: (i) it is nearly impossible to carry out pure experimental designs in the criminal justice arena; (ii) in terms of drug treatment as an alternative, the supply of offenders often exceeds treatment availability; and (iii) it is difficult to account for internal validity (Rezmovic, 1992).

In reviewing the literature it becomes clear that there has been, and continues to be, great discussion concerning treatment effectiveness yet, presently, in New York City, unprecedented numbers of people are being arrested for drug-related offenses. If treatment is not perceived as effective and punishment options are limited, what is the societal expectation? It is also clear that behavioral change is a process that follows a

multiplicity of channels, beginning with a decision to do something different. What impels initial decision-making is the topic of this dissertation.

Chapter 3. Methodology

Statement of the Problem

Drug users represent a population at high risk for continued criminality. Data indicates that drug using misdemeanants in particular virtually flood the criminal justice system. Without further intervention, these people remain caught in patterns of behavior that not only increases the likelihood of their further and enhanced criminality, but also places them at risk for HIV infection. Intravenous drug use in particular is linked with both criminality and HIV infection. According to data provided by the New York City Criminal Court, approximately 35% of all arrests in 1991 were related to intravenous (IV) drug use. In 1992, 41% of the known cases of AIDS (in New York State) were IV drug users (The New York City Department of Health). Previous sentencing practices did not address misdemeanor drug offenders' need for HIV/AIDS information or drug treatment services. In addition, it was not known whether ready access to drug treatment would encourage a decision to enter drug treatment. This dissertation will determine whether a population exposed to an intervention will request a referral to drug or alcohol treatment, and whether those who request treatment differ from those who do not, in terms of drug of choice, length of time of use, age, or sex. Further questions are whether self-identification of a need for treatment facilitates making a decision to enter treatment and whether a person will make a decision to enter treatment once: a) the problem has been identified for them; and b) the means for remedying the problem is introduced and made

readily available.

Hypotheses to be tested

To answer the above mentioned questions, the following hypotheses will be tested:

Hypothesis 1: Treatment seeking will be a function of an individual's drug of choice (heroin versus all else), the degree of debilitation from drugs or alcohol, and the individual's previous exposure to treatment and/or a self-help meeting.

Hypothesis 2: An individual's perception of his/her ability to change will affect their decision to seek treatment.

Hypothesis 3: An individual's choice to seek treatment will not be a function of demographics such as age, race or gender.

Hypothesis 4: The shorter the time between sentencing and exposure to the TRP, the greater the likelihood of an individual requesting a referral for treatment following participation in the TRP.

Hypothesis 5: Those individuals deciding to seek treatment will have known someone who went to treatment or who attend self-help meetings.

Hypothesis 6: Individuals with a prior criminal history will be less likely to seek treatment.

Hypothesis 7: Individuals deciding to seek treatment will have more perceived interpersonal consequences of their alcohol or drug use and will have self-labeled as

someone who has a problem with drugs or alcohol.

A. TRP Model for treatment-seeking

As has been stated above, change is a process that begins with self-awareness, progresses to acknowledgment of one's problems, and leads to a decision to seek a remedy. These concepts can be developed into a model for decision-making, beginning with problem identification and moving to problem resolution (Fig. 1 presents a schematic of a model for decision-making, derived from Rossi, Freeman and Wright, 1979).

Step 1 is problem identification. "Correctly identifying symptoms is the crucial first step towards seeking treatment" (Scheff, 1986). Here, a social problem is operationalized into clearly specified and measurable elements. In the TRP model, the social problem in question is the drug or alcohol use or abuse which leads to criminality. Step 1 is a composite of the individuals' level of awareness, their willingness to self-label as someone who has a problem with drugs or alcohol, and the interpersonal consequences they may be experiencing. Identifying the problem is the first step towards making a decision to do something to rectify the problem.

The TRP is geared to low level drug offenders (those committing so called "quality of life" crimes) and presupposes that the factor amenable to change would be the participants' drug use. Step 2 of the decision-making model requires identification of the imperatives that might be motivating for or against making a decision to change. These

factors can be external or internal. In the TRP model, the external factors might be the probability of escalating legal consequences; the social influence that is being imposed on them that might "push" or "pull" towards a decision to enter treatment. The internal forces could be the presumed level of physical debilitation resulting from the individual's drug or alcohol use.

Step 3 in the decision-making model is the "delivery system." What are the means available to facilitate a decision to change? This includes access to appropriate services; the intervention that is delivered; and aspects that the participant brings to the program. In the TRP population, the goal is the participants' entry into drug or alcohol treatment, however different modalities work for different types of people. Matching a person to a service is a crucial aspect of the process. For example, someone who has been "detox'd" three or four times but has not received counseling or support, has not actually experienced treatment; someone else may have previously been to a residential treatment program and remained drug or alcohol free in treatment but relapsed upon arrival home. Each of these people may need to consider a different method of treatment. Availability, the ready access to services, is also a part of this step. In the TRP population, a person who is ready to consider entering treatment, must be linked with services as immediately as possible.

Step 4 is the outcome or the result of: problem identification (Step 1); recognizing elements impeding or facilitating the decision and setting goals accordingly (Step 2); and

presentation of alternatives (Step 3). These culminate in Step 4: the result, that in the TRP model would be the decision to seek treatment.

In the TRP construct, a Stage 1 result would be that the person identifies their substance abuse problem; a Stage 2 result is forming a goal to address the problem, including an assessment of assets and examining the resources available to them. A Stage 3 result is making a decision to enter treatment indicated by requesting a referral from TRP staff or treatment providers.

The ability to achieve Stage 1 directly impacts on the ability to achieve Stage 2, and the results of both stages 1 and 2, in turn, lead to Stage 3. There is, then, a presumption of a "feedback loop" which is the last ingredient in the TRP model. (See Fig. 2 for a schematic of the TRP decision-making model). If "expectations influence behavior and the outcome of behavior influences expectations" (Piliavin, 1986), then feedback furnishes reinforcement at the various levels of decision-making. Therefore, each step becomes a motivator for subsequent decisions. It is possible that the TRP participant identifies the problem and issues surrounding their alcohol or drug use, but opts to remain the same. This dissertation however, seeks to identify variables associated with the outcome of seeking treatment.

B. TRP Program Description

The Treatment Readiness Program (TRP) began operating in June 1992, providing an intervention on-site at Manhattan Criminal Court. Keeping the decision-

making model in mind, the TRP was designed to provide both the information that would enhance problem identification, and the presentation of alternatives (exposure to treatment) that would facilitate participants voluntarily seeking services, particularly treatment for their drug or alcohol problem. The informational aspect was delivered in an education segment that was comprised of two modules presented on the first day of the TRP sentence. The third module provided an experiential view of drug (or alcohol) treatment, accomplished on site at a local drug or alcohol treatment program. Treatment referrals were available throughout the course of the TRP.

1. **TRP Process**

The TRP was conducted under the auspices of the Manhattan District Attorney's Office, under the administration of the Administrative Judge for New York County. The TRP was designed to provide an intervention for first time drug offenders adjudicated in the borough of Manhattan, for less than felony charges. The Criminal Court was the initial target site for implementing the TRP because it is the natural cachement area for early and progressed substance abusers, including alcoholics, who are arrested for charges directly related to their drug or alcohol use. This population was selected first, because these individuals represent the largest group on the Criminal Court calendar and, second, the nature of the offense indicates a potential need for an intervention. The TRP is novel in that it provides intervention to first time misdemeanor offenders. In contrast, most treatment interventions offered to defendants are offered in

conjunction with incarceration, parole or probation, attempting to impact on the more serious offenders.

As stated earlier, the TRP is categorized as a community service sentence with the understanding that if the defendant fails to show up, a bench warrant will be issued, subjecting the defendant to the full possible sentence, which can be up to fifteen days in jail. Since "time served" is generally two days, the TRP was designed as a two day program so that a sentence to the TRP would not exceed the sentence that defendants would have been given had there been no alternative available. TRP participants were sentenced upon pleading guilty to a drug-related misdemeanor offense. The advantage to the defendant for accepting the guilty plea is that upon successfully completing the TRP (and remaining free of subsequent arrests for a period of time, between six months or one year depending on the judge's discretion) the charges will be dismissed, clearing the defendant's record. (Fig. 3 provides a flow chart of TRP participants' progress from arraignment to completion of the TRP.)

TRP participants are processed by staff of the Manhattan District Attorney's (DA's) Alternative Sentencing Office (ASO). Individuals are scheduled for a specific two day TRP class, usually within a month of their arraignment (for this population, arraignment and sentencing occur at the same time). To enhance the probability of compliance, TRP participants are given some choice in selecting these dates so as not to jeopardize their employment or to enable them to arrange for child care. A referral form

is forwarded from the DA's office to the TRP staff, listing each participant sentenced to the TRP and the date they were assigned to attend. The referral form also includes the individual's Criminal Court docket number.

TRP staff creates an attendance sheet from the DA's referral form, for each TRP session, listing the names of those who are expected to be present and their docket number. When the participants arrive at the TRP office (then located at 100 Centre Street, room 1600A) on their appearance date, they are signed in and assigned a unique client number. Once registered, participants are asked to complete a Client Survey. Their client number and docket number are entered on the survey along with the current date (date of attendance) and date of sentencing.

To enable accurate reporting back to the judge, attendance is taken after lunch on the first day and again the second day, upon arrival at the drug or alcohol treatment program. Participants are also required to sign out upon leaving the treatment program as further verification of their completion of the sentence. TRP participants must complete both days of their sentence consecutively to be considered as successfully completing their sentence. There is no rescheduling of dates. Once the participant completes his/her two days at the TRP, this information is forwarded to the DA's ASO staff, who in turn inform the judges. The County Clerk's office is notified of those participants who do not appear the first day, as well as those who attend the first day but do not appear the second day, and warrants are issued. (Nearly 95% of the TRP participants who appeared the first

day, returned and completed their sentence (Office of Court Administration, 1995).)

TRP participants are also asked to sign confidentiality waivers at the close of the first day of the TRP session. This allows TRP staff to both provide and access information on TRP participants should they decide to enter treatment. This waiver was designed in accordance with federal confidentiality regulations. (See Appendix 1 for a sample Confidentiality Release Form.) Entering drug treatment is not a requirement for successful completion of the TRP participants' sentence, however, it is clearly the desired outcome. TRP participants are encouraged to follow-up with staff upon sentence completion and are given cards with the TRP's telephone number.

2. Components of the TRP

The premise of the TRP is that: (i) if participants begin to develop some concern about their drug use (particularly in terms of their risk of contracting HIV/AIDS); and (ii) gain a base line understanding of the medical model of addiction; then (iii) by providing an experiential view of drug treatment and ready access to such treatment, participants may consider addressing their drug (or alcohol) problem by making a decision to enter treatment. Individuals entering drug or alcohol treatment receive counseling and support in connection with their drug or alcohol problem, but also, where needed, receive preparation for getting their high school equivalency diploma, vocational training, training in basic life coping skills, and access to housing and/or medical services. These are all necessary services for a population whose lives have

likely become unmanageable as evidenced by their contact with the criminal justice system. If TRP participants decide not to enter treatment, they will (i) be receiving information concerning AIDS (information that they may not be getting anywhere else given the likelihood that they have either dropped out of school or attended school before AIDS education became part of the curriculum); (ii)be provided access to free on-site HIV counseling and testing as well as condoms and bleach kits as part of an overall HIV prevention scheme; and (iii) be participating in a dialogue on use and abuse of drugs which will help them clarify the extent of their problem and become aware of indicators of abuse.

The TRP then, has multiple goals: to provide essential information to an at-risk population; to encourage a dialogue on drug use and abuse; and to facilitate decision-making concerning their drug or alcohol abuse. The TRP was designed as an education and intervention program, geared to an adult population (juveniles are usually not processed at Criminal Court). To accommodate the participants, the TRP employed adult learning techniques including role playing, modeling, and the use of open-ended questions to encourage a dialogue.

The TRP is delivered in three modules:

Module 1: Understanding HIV/AIDS. Participants are taught HIV prevention techniques (particularly those related to drug use), the difference between HIV and AIDS, and the benefits of HIV testing. TRP staff reviews common myths associated with HIV

transmission with the aim of heightening participants awareness of what are and are not risk practices. Participants are also provided with an overview of the current treatments available for people with AIDS.

Module 2: Understanding Substance Abuse. In this section, TRP participants are introduced to the medical model of addiction (also referred to as the "disease concept") including an understanding of denial, defining the use and abuse of substances (including alcohol), the progression of the illness of addiction, and an introduction to the treatment process. These first two modules comprise the first day of the TRP sentence.

Module 3: An Introduction to Drug Treatment. On the second day of the TRP, participants are provided with a hands-on demonstration of drug treatment conducted on-site at a participating drug or alcohol treatment program. Participating drug or alcohol treatment programs are those programs that the TRP has created linkage agreements with. Presently there are thirty-two drug and/or alcohol treatment programs that allow the TRP to bring groups of people in to visit. Each of these programs has been visited previously by TRP staff, who outlined the goals and objectives of the TRP, including the relatively brief two day "window of opportunity"that staff has to encourage participants to decide to enter treatment.

TRP participants, accompanied by TRP staff members, are transported to a pre-determined treatment program. At the program, the participants are given a tour of the facility and then participate in an actual counseling session led by a treatment counselor

and/or clients in treatment. Because the TRP population is largely comprised of first time offenders, the focus of the presentation at the treatment facility is on helping TRP participants identify their respective positions on the continuum from first arrest for a drug-related offense to the end-point of a criminal career and years of drug abuse.

One objective that participating treatment programs have agreed to is, if asked, to process TRP participants for intake at the time of the tour on the second day, while the TRP participant is on-site. This eliminates any lag between the person desiring and requesting treatment, and actually getting an appointment for the initial screening interview. This is not an insignificant contribution. According to the New York State Office of Alcoholism and Substance Abuse, there are presently 550,000 addicts in New York City (200,000 addicted to heroin) and only 42,000 drug treatment slots. Every drug treatment program in New York has a waiting list that varies from two weeks to two months. Often individuals lose their motivation before their name comes up for admission. By being able to side-step this waiting period, TRP participants may be more likely to enter drug or alcohol treatment.

The TRP's goal is to foster a decision for voluntary treatment, assuming that once the problem has been identified and a means for resolution is presented, the person will act in their own best interest and opt for treatment. Many individuals currently in treatment with whom TRP participants interact on the second day, can testify to the rapid descent they experienced when drugs took over their lives. The TRP, as an early

intervention program, has the goal of preventing this descent. In terms of the medical model of addiction, this is referred to as "raising the bottom" i.e. helping the substance abuser to identify his or her problem short of reaching the end-point of addiction. It is an accepted proposition in the alcohol and drug field, that the usual outcome of untreated addiction is death, directly or indirectly. A lethal overdose has death as its direct outcome; accidents and illness have death as their indirect outcome. AIDS is the primary illness resulting in death for injecting drug users today (Public Health Service, 1992).

The model for the TRP presentation is part didactic and part inter-relational. TRP participants are encouraged to ask questions in order to process the information presented to them. Having a dialogue encourages participants to identify experientially with the factors related to drug use and abuse. In particular, TRP participants are introduced to the idea of consequential thinking. "If A leads to B and you do not like B, you have got to change A" (Feeney, 1993). An essential component of this line of thought is to hold the TRP participants accountable for the circumstances of their arrest. Blaming and "finger pointing" is discouraged. Rather, individuals are encouraged to talk about the arrest circumstances only in terms of their contribution to that event.

A last element of the TRP "delivery system" is providing TRP participants with exposure to individuals who are already in the process of recovering from alcoholism or addiction. In addition to interacting with the individuals who are in treatment at the program visited on the second day of the TRP sentence, TRP staff also provide a personal

glimpse of addiction and recovery, as several TRP staff members are themselves recovering addicts. In this way, the TRP's primary goal of motivating individuals to change their drug using behavior is being modeled, presenting the tangible possibility of successfully overcoming addiction.

It is indisputable that many factors influence a person's decision-making process. This dissertation specifies one model for decision-making for a population of misdemeanor drug offenders. Although a variety of intervention programs have been implemented with drug offenders, each had flaws. A major problem with these programs has been the tendency to treat what this researcher sees as symptoms of a problem, as the cause. This suggests that there is a need first to identify the problem, and then to provide access to the means of remediation. Problem identification, in fact, may be the single most important factor in the intervention process (Bandura, 1987).

C. Survey Design

Using the steps in the TRP model as a guide, this dissertation seeks to identify those variables that might be predictive of a decision to seek treatment. A survey instrument was designed to delineate the "imperatives motivating decision-making"; this "reason analysis" will attempt to trace the "causal chain leading to the action of an individual" (in this case requesting a referral to drug or alcohol treatment) (Zeisel, 1985). Zeisel lays out a schematic or model for "reason analysis". First, identify what it is that the subject person wants to achieve. Second, identify the influences on the decision.

Third, identify the differences between other possible options that might produce the same advantage including articulating the other options. Finally, learn about the current situation of the person that is relevant to the decision outcome.

To use this model with respect to the TRP population, an initial step is to obtain an impression of participants' self-concept, both of their present drug using situation and their perceived ability to change. Addicts coming into treatment often phrase the flash point as "I got sick and tired of being sick and tired". Palmer (1992) refers to this as the "trigger" or "overwhelming life event". To begin a "reason analysis", pilot interviews needed to be conducted with those who had already made the desired decision in order to learn more about the decision-making process. This step was accomplished through "focused interviews". The objective of a focused interview is to elicit as complete a report as possible of the experience surrounding the situation of moment (in this case the cessation of drug-taking). This type of interview seeks "retrospective introspection" (Merton, et al., 1990). Conducting focused interviews helped to clarify some of the key elements of the decision-making process that enabled the development of the TRP data collection instrument.

The interviews were designed and conducted to collect information bearing on the four key elements of the "reason analysis": perceived needs, knowledge, objections, and availability. Interviews were conducted with three groups of people. Group 1 was comprised of a group of attendees at self-help meetings for drug abusers and alcoholics

who had no relationship with the court or the TRP at the time of the interview. Six volunteers were recruited. They were asked to discuss the decision-making process that led them to decide to stop using/abusing drugs. Group 2 was comprised of people who were currently in treatment for their drug or alcohol problem. These individuals were not connected with the TRP at the time of the interview. Six individuals in treatment were identified by treatment staff and asked to operationalize the steps that led them to the decision to enter treatment. Group 3 was comprised of those TRP participants who opted for treatment. Following a request for a treatment referral, these individuals agreed to spend additional time with TRP staff to discuss the possible factors that brought about their decision to seek treatment.

An effort was made to interview those who had recently decided to seek treatment or self-help so that the decision-making process was fresh in their mind. During the interviews, the interviewer attempted to establish a temporal sequence in the decision-making process. Of particular interest were the words interviewees used to describe themselves prior to entering treatment: angry; tired; depressed; anxious. The interviewer then sought to isolate both motivators for the decision to seek treatment, and the "pulls" toward remaining the same. Zeisel specifies the motivators and detractors of change as: a) person-oriented i.e. the predisposition of the person; b) object-oriented -- the (known) attributes of the desired target or goal of the decision; and c) social setting -- the influences pushing (or pulling) the decision (Zeisel, 1985). Zeisel feels that a decision to

make a change lies in the inter-related effect of dissatisfaction with the old way and satisfaction expected or anticipated from making the change.

Information gained through a content analysis of the foregoing interviews guided the development of the TRP Client Survey. (Those participating in the focused interviews will remain anonymous, but excerpts of a sampling of the interviews are included in Appendix 2). The Client Survey was then developed, based on the information gathered in the interviews and with the objective of quantifying the elements of the TRP decision-making model. First, a series of questions regarding basic demographics were included: date of birth, gender, ethnicity, zip code of residence, and arrest charge. They were followed by a series of questions designed to identify participants' perception of his/her current situation. Each individual entering the TRP had been arrested for an offense related to their drug or alcohol use. Each were asked whether they thought drugs or alcohol was presently a problem for them. To ascertain any consequences the individual might be experiencing, the TRP Client Survey asked whether the participant had ever attended an AA or NA meeting. The survey also included an abridged form of the Michigan Alcohol Screening Test (MAST). The MAST has been validated as an accurate screening instrument for clients referred for alcohol treatment (New York State Division of Alcoholism and Alcohol Abuse (DAAA), 1980).

Next was identifying the factors pushing towards or pulling against a decision to seek treatment. These factors could be external: social and environmental factors; or

internal having to do with the physical aspects of drug or alcohol use. Are they living with a drug user? Do their friends use drugs? Do their family member(s)? How does the individuals' social status impact on their decision to change? Does whether they are employed full-time or part-time have any effect; level of education; marital status? Participants were asked to indicate their drug of choice (including alcohol); how long they have been using; when did they start using drugs or alcohol; and how frequently they use drugs or alcohol?

An additional part of Step 2 in the TRP decision-making model might also be called the "treatment receptive" stage. What is the participants' attitude towards treatment: do they think they need treatment; have they ever tried to stop using drugs (or alcohol); what was the result of any prior treatment experience? How much "clean time" (time free of drugs and alcohol) have they accrued? Do they want to stop using drugs or alcohol?

Step 3, the "delivery system" phase of the TRP model, was measured by the participants' attendance at the TRP, how long the participant waited between sentencing and attending the TRP; and measures of the participants' perception of his/her abilities: Does the participant know anyone who has stopped using drugs? Have they ever been in treatment before? What is the participants' perception of their likelihood to continue to use drugs or alcohol? Did they have a family member who had a problem with drugs or alcohol? And did that family member seek help for their problem?

Step 4, the outcome was measured by whether or not the TRP participant

requested a referral for treatment. A check-off sheet was attached to the Client Survey, labeled with the client's identification number. On this sheet it was indicated whether the participant sought treatment, where s/he was referred to, and what type of treatment program it was (residential, "detox", an MMTP (Methadone maintenance), outpatient, or counseling). In all, the TRP Client Survey had 99 questions and 81 variables. (See Appendix 3 for sample Client Survey.)

D. Sample Selection

The population targeted by the TRP are individuals arraigned for misdemeanor drug offenses in the borough of Manhattan. According to data from the New York City Police Department, in 1993, 25,956 people were arrested for misdemeanor drug charges, city-wide; 8,998 were arrested for offenses related to heroin; 8,891 for offenses related to "crack"; 311 for possession of a needle or syringe; 1,578 for offenses related to cocaine other then "crack"; and 5,399 for "pot". In approximately 27% of these misdemeanor cases, it was the individual's first arrest (approximately 7,000 people). (Note: In 1995 there were 52,843 misdemeanor drug arrests made in New York City and 46% of them (24,642) were first offenders (DCJS, 1996). The New York City Criminal Justice Agency (CJA), a pre-trial services agency, maintains a data base of arrest and court processing information, using information obtained from both the New York City Police Department and from the arrestees themselves. Of the arrestees interviewed by CJA (in Manhattan): 87.6% were males, 12.4% were females; 54% were black, 16% were white,

28% were Hispanic. They ranged in age from 19 to over 40, with 36% being from 30 to 39 years of age. Candidates for the TRP are found in this population.

Selection of actual participants for the TRP is dependent upon: (i) the cooperative agreement of the sentencing judges, the prosecution, and defense counsel (Legal Aid and 18B defense attorneys); and (ii) self-selection on the part of the participant as to whether they appear for their sentence. For an individual to be eligible for the TRP, the arrest charge must be for a drug-related offense and the arrestee should not have outstanding bench warrants or prior offenses. This condition was added by the then Counsel to the District Attorney, Paul Shechtman, presumably because outstanding warrants are indicative, first of a history of offending where, according to Mr. Shechtman "punishment is more appropriate than treatment", and because prior offenses are associated with an increased likelihood that the arrestee will not appear for their sentence to the TRP. Thus, candidates for the TRP are: (i) those offenders whose drug use is considered the presenting problem (adjudged by both the nature of the arresting charge and by the judge's review of the attendant facts and the individual's history); and (ii) those offenders who the judge perceives would benefit from exposure to the TRP model.

The TRP accepted 25 participants for each "regular" two-day session and 15 who were sentenced to the evening session. The TRP conducted two-day sessions twice per week, and one evening session per week. Candidates for inclusion in this dissertation's sample are the TRP participants from the first quarter of 1996 (See Appendix 4 for TRP

calendars for the first quarter of 1996). In the first quarter of 1996, 794 individuals were sentenced to the TRP, 517 of those individuals appeared for their sentence and 488 of this group completed their sentence. This gives the TRP a 65% show rate (which is about average for community service programs based on anecdotal information obtained from the DA's office) and a 94% completion rate (which, again anecdotally, is relatively high for community service sentences). This dissertation's sample population are drawn from those individuals who completed the TRP in the first quarter of 1996. There was no reason to think that participants attending this quarter would be any different than a sample drawn from any other time period. A three month time-frame was used to assure both an adequate and a representative sample.

At the end of 1995, there was a three month wait for entry into the TRP. To provide variation in the length of time between sentencing and exposure to the TRP model, the TRP sessions for the targeted period (January through March of 1996) were opened up two weeks prior to the start date for drawing the sample, and additional participants were added to the existing sessions. This provided a range of "waittime" (the time between sentencing and participation in the TRP) from a day, to up to three months.

E. Data Collection

When TRP participants arrived at the TRP office on their appearance date, they were required to sign in and were then assigned a unique client number. This client number was entered on the Client Survey along with the individual's corresponding

docket number, the date of sentencing to the TRP, and the TRP session date. Participants were offered a cup of coffee and asked to complete the Client Survey, to the best of their ability. It was made clear to participants that completion of the TRP Client Survey was not necessary for their successful completion of the TRP sentence. Participants were instructed not to put their names on the Client Survey so that the information collected remained anonymous. Participants were also informed that they could decline to answer questions they did not feel comfortable answering.

F. Human Subjects Review

Permission by the Committee for the Protection of Human Subjects at the Graduate School and University Center of the City University of New York was granted to conduct this study. The study followed procedures which were delineated when approval was granted.

The voluntary nature of participation in answering questions on the TRP Client Survey was stressed, as was the confidentiality of the subjects. Subjects were informed of the scope of the study prior to their participation. Absolutely no harm to the subjects could or did occur as a result of their answering the Client Survey.

G. Variable list with TRP Decision-making Model Imposed

Variables	Measure	Survey Question No.	Label
Model Step 1: Problem Identification			
A. Level of Awareness			
1. Identification of problem	Self-label as	18	DRPROB

	addict	24	ALCPROB
2. Interpersonal consequences			
MAST items		34	ASKSTP
		35	CONTROL
		36	LOSTJB
		37	FIGHT
		38	SUGRX
Attended a self-help meeting		39	EVERAA
If Yes:			
In the last 30 days		39A	LAST30

Model Step 2: Imperatives Motivating decision-making

A. External Factors			
1. Criminality	First arrest	14	FIRSTAR
	Self reported priors	14A	NOARRB
	Arrest Charge	13	ARRCH
2. Social Status	Education	9	ED
	Occupation	8B	OCC
	Employment Status	8A	EMPSTA
	Insurance	11	INS
	Age	4	DOB
	Gender	6	SEX
	Race	7	RACE
3. Social Stability	Marital Status	10	MARITAL
	Children	12	CHILD
		12A	CHILDW
4. Social Influence	Living with user	30	LIVWTHD
	Living with alcoholic	29	LIVWTHA
	Lover IDU	31	LOVERIV
	Friends use	33	FRHIGH
	Relative with drug or	27	FMUSEDR
	alcohol problem	27A	WHODR
		28	FMDRK
		28A	WHOALC
B. Internal Factors			
1. Degree of Debilitation			
Drug of choice		15	
	"Crack"	1.	CRACK
	PCP	2.	PCP
	Heroin	3.	HEROIN
	Marijuana	4.	MARIJ
	Barbiturates	5.	BARB

	Amphetamine	6.	AMPHET
	Cocaine	7.	COCAINE
	Methadone	8.	Methadon
	Other	9.	OTHER
Years of Use			
	"Crack"	1.	CRACKA
	PCP	2.	PCPA
	Heroin	3.	HEROINA
	Marijuana	4.	MARIJA
	Barbiturates	5.	BARBA
	Amphetamine	6.	AMPHETA
	Cocaine	7.	COCAINEA
	Methadone	8.	MethadonA
	Other	9.	OTHERA
Dependent upon			
	"Crack"	1.	CRACKB
	PCP	2.	PCPB
	Heroin	3.	HEROINB
	Marijuana	4.	MARIJB
	Barbiturates	5.	BARBB
	Amphetamine	6.	AMPHETB
	Cocaine	7.	COCAINEB
	Methadone	8.	METHADONB
	Other	9.	OTHERB
Age of first use:	Drugs	16	AGEFU
	Alcohol	21	AGEFUA
Frequency of use:Drugs		17	DAYSUSD
	Alcohol	22	DAYSUSEA
Mode of use	IDU	15.3.	HEROINIV
		15.7.1	COKEIV
	Sniff	15.7.2	COKESN
	Smoke	15.1	CRACK
	(Quantity of alcohol)	23	NUMDRKS
2. Treatment Receptive			
	Need treatment	41	NEEDRX
	Prior treatment outcome	43	RXOUT
	Want to stop: drugs	19	WNTSTDR
	alcohol	25	WNTSTPA
	Tried to stop: drugs	20	TRYSTPD
	alcohol	26	TRYSTAL
	Amount of clean time: drugs	20A	CLEANTMD
	alcohol	26A	CLEANAL

Model Step 3: Delivery System

1. Exposure to the model	Attendance at TRP		
2. Proximity of consequence	Waittime	3	DOS
3. Perception of ability			
	Ever in treatment	42	EVRINRX
	Time in treatment	43.D	TIMERX
	Likelihood continue use	44 A.	CONTUSE
	Know someone stopped using	40	KNOWSTP
	Did family member seek treatment for drug problem	27B	SEEKRX
	for alcohol problem	28B	SEEKRXA

H. Data Analysis Plan

Once the sample was identified and the data collected, a plan of analysis was developed. First, the Client Surveys were coded so that all data was numeric and could be entered into a data base for analysis. QDATA was the data entry package used. The data was entered by one person and was proofed for data entry errors. For the actual analysis of the data set, a variety of statistical methods would be used. Appendix 5-A contains a discussion of the results of the univariate analysis. A profile of the TRP population is provided: the percent of the TRP population that is male or female; their ethnic or racial breakdown, measurement of their social status; drug using behavior; etc. Scatter plots were done on the interval variables (such as age) to search for outlyers, which were eliminated to enhance the next level of analysis.

A bivariate collection of tests were conducted, running each independent variable against the dependent variable: "seeking treatment" or "not seeking treatment." Comparisons were made between those individuals who sought treatment, and those who

completed the TRP but refused a referral to drug or alcohol treatment. During this level of analysis, tests of homogeneity were performed to ascertain the relationship between the different variables and the outcome measure. During this preliminary step, variables with too great a proportion of cells containing less than five subjects were re-coded.

The TRP data set contained three types of variables, those measured continuously (e.g. age); those with ordinal data (variables where the choices had an implied rank order, e.g. education level); and those with categorical information (e.g. responses are either "Yes" or "No"). For the continuous or interval variables that were normally distributed, a (t-Test) was performed. This procedure tests the significance of any difference found between the mean of two independent samples, in this case those who requested treatment and those who did not. This parametric test works for random samples, drawn from normally distributed variables. In order to ascertain whether the interval variables were normally distributed, histograms were run. Once it was clear which of the interval variables were normally distributed, the t-Tests were performed. To improve significance, the t-Tests were run with missing values omitted. Missing values were defined with a series of 9's to delineate "Missing" from "None" or "Zero", which could be an actual response as in the case of the variable: "Number of drinks per occasion".

A non-parametric test, in this case the Mann-Whitney Test, was used for variables with ordinal data (in this sample that was "education"). A non-parametric test was also used for interval data that was not normally distributed. For categorical data, a Chi square

Test was used. (Note: In the cases of a two-by-two categorical table with fewer than 20 cases overall, the Fisher's Exact Test will be used).

Initially, a relaxed p value of .20 was used, looking for any relationship between the independent variables and the dependent variable that might be significant. The next step in the data analysis plan was to seek interactions in those cases where statistical significance did not appear. For example, whether or not the person has a lover who is an injecting drug user might not be significant in terms of their requesting treatment. However, if this variable was reconsidered selecting first for the individuals who were themselves injecting drug users, this variable might become significant.

To proceed with the last step of specifying the decision-making model, it is necessary to search for collinearity among the model elements i.e. to determine if certain independent variables are correlated, and to what extent. As a preliminary for the logistic regression analysis, correlation coefficients will be computed for those variables suspected or being highly correlated (like the use of heroin and methadone). The correlation coefficients will test the strength of the relationship between the variables and based on the results, a decision will be made as to which variable should be kept in the model.

The objective of these first steps was to quantify the elements in the stages of the TRP decision-making model. Some categories in the decision-making model are composites of several variables, therefore if one variable in the category did not achieve

significance, another might and the model's structure remained intact. Once the variables for inclusion had been determined, the next level of analysis was to perform a logistic regression analysis on those variables achieving significance.

Logistic regression calculates the maximum likelihood estimate for the model parameters and is used when the outcome variable is dichotomous, which is the case with this sample (the subject either requests treatment or does not). The logistic regression analysis determines whether the outcome of seeking treatment is a function of: (i) the extent of use and the person's perception of his/her abilities; (ii)to what extent "treatment receptivity" correlates with a decision to seek treatment; and (iii) does proximity of the consequence have an impact on the decision to seek treatment, and what degree of proximity -- is it whether the participant is seen within a week of sentencing; a month? The objective is to see how the overall model works. Is the dependent variable influenced by any or all of the independent variables and, if so, to what extent?

The aim is not to prove causality, but to identify a model that proves an accurate prediction of a phenomenon -- in this case to make a decision to enter drug or alcohol treatment. At the outset, the assumption was made that the model is specified correctly and it includes: (i) all relevant independent variables; and (ii) no irrelevant independent variables. The final step is to include all the independent variables simultaneously into an equation, to determine which of them is most influential in relation to making a decision to enter treatment. The SPSS Students Pak will be used to perform the various analyses.

Chapter 4. Results

Statistical tests were performed to identify those variables with statistical significance. For the dependent variable, that the subject requested a referral to drug or alcohol treatment, tests of significance were run to identify those variables with statistical significance in terms of predicting whether an individual would seek treatment. As stated in the data analysis plan, the TRP data set has three types of variables: interval, categorical and ordinal. For the bivariate analysis, for the categorical variables, Chi Squares Tests were used; for the ordinal variable (education) the Mann-Whitney Test was used; for the interval data, histograms were run first to determine whether or not the variable was normally distributed, thus allowing t-Tests to be used. If the variable was found not to be normally distributed, a non-parametric test was used.

(Note: Missing values were omitted when test of significance were done).

Histograms

In viewing the histogram for the continuous variable, except for one outlyer, age was normally distributed. For the remaining variables that were not categorical, the Mann-Whitney Test was used to test the significance of differences found.

Tests of significance performed

	Non-Parametric	
t-Test	Mann-Whitney Test	Chi SquareTest
Age	Education	Race
	No. of drinks	Gender
	Days used: alcohol	Marital

Days used: drugs	Employment
Years used:	Occupation
Heroin	Have children
Cocaine	Drug of choice
"Crack"	Dependency
Marijuana	Mode of use
Age of first use:drugs	Drugs a problem
Age of first use:alcohol	alcohol a problem
Wait time	MAST measures
No. of priors	Arrest charge
Clean time: drugs	Perception of ability
Clean time:alcohol	Want to stop drugs/alc.
Time in treatment	Tried to stop drugs/alcohol.
	Likelihood
	Need treatment
	Been in treatment
	Treatment outcome
	Know someone
	Family drug/alc. use
	Friends use
	Lover IDU

A. Bivariate Results

Initially, each model variable was run against the dependent variable, "Requested Treatment", to determine the variables' significance in terms of the TRP participant deciding to seek treatment. Variables are presented in terms of the TRP decision-making model structure.

Step 1: Problem Identification

This step of the TRP treatment-seeking model included whether the individual

thought they had a problem with drugs or alcohol, and whether they acknowledged having consequences resulting from their alcohol or drug use.

1. Self-Identification of a problem with drugs or alcohol

a. Have a problem with drugs: The difference between those admitting to a problem with drugs and those denying they had a problem proved to be statistically significant in terms of later requesting treatment. (Chi sq.=27.96, p=.00) (See Table 1) Twenty-seven percent (n=44) of those who thought drugs were a problem for them requested a referral to treatment and only 8% (n=19) of those who did not think drugs were a problem for them requested treatment.

b. Have a problem with alcohol: Whether or not they thought alcohol was a problem for them did not matter in terms of requesting treatment. (Chi sq.=.833, p=.36) Nineteen percent (n=10) of those who thought alcohol was a problem for them requested treatment as did 13% (n=40) of those who did not think alcohol was a problem for them.

2. Interpersonal Consequences

MAST Measures

The differences found between those requesting treatment and those who did not, for each of the MAST measures, proved to be statistically significant in terms of delineating those requesting treatment and those not. This was not surprising as the MAST is a standardized screening instrument used to evaluate the need for treatment, usually among DWI offenders.

a. Asked to stop using drugs: 20%(n=46) of those who indicated that someone close to them had asked them to stop using drugs or alcohol requested a referral to treatment. (Chi sq.=8.82, p=.00)

b. Loss of control: 22% (n=40) of those who said they felt their drinking or drug use was no longer under their control.

c. Lost a job: 25% (n=29) of those who said they had lost a job because of drug or alcohol use requested treatment. (Chi sq.=13.20, p=.00)

d. Had a fight with someone: 22% (n=24) of those who said they had had a fight with someone they care about as a result of alcohol or drugs requested treatment. (Chi sq.=6.29, p=.01)

e. Someone suggested treatment: 22% (n=34) of those who said someone close to them had suggested they seek alcohol or drug treatment requested treatment. (Chi sq.=9.74, p=.00)

Attendance at a self-help group: Thirty-eight percent of the TRP population had attended an AA or NA meeting at some time in their life; 32% (n=34) of those responding affirmatively to the question regarding AA or NA attendance requested treatment, compared to 9% (n=25) of those who had not attended AA or NA. (Chi sq.=7.56, p=.01) Whether they had attended a meeting within the past month or not however, was not statistically significant in terms of requesting a referral to treatment. (Chi sq.=.615, p=.43) Sixteen percent of those that had attended a meeting within the past

month requested treatment as did 23% of those who had not.

Step 2: Imperatives motivating decision-making

A. External Factors

1. **Criminality**: The TRP survey included three questions pertaining to the individuals' "criminality": was this their first arrest; how many prior arrests (if any) had they had; and what was the arrest charge. According to the requirements for sentencing to the TRP, this was a first arrest for the majority of TRP participants and the predominant arrest charge was "possession".

a. First arrest: 69% (n=303) indicated that this had been their first arrest however, whether or not a person had a prior arrest was not significant in terms of deciding to seek treatment. (Chi sq.=1.30, p=.25)

b. Self-reported prior arrests: The number of prior arrests a person had (one, two, three or more)was not significant in terms of a person seeking treatment. (z=-1.05, p=.29) For those with prior arrests, the mean number was three. Twenty-one percent (n=9) of those with three or more prior arrests requested treatment as did 15% (n=6) of those with two prior arrests and 13% (n=26) of those with only one prior arrest.

c. Arrest charge: The arrest charge was significant in terms of delineating those who would request treatment and those who would not. (Chi sq.=5.71, p=.02) Collapsing into the two predominant charges (possession and trespassing), those who had been picked up for "trespassing" were more likely to request treatment (30%, n=10) than those

arrested for "possession" (13%, n=57).

2. **Social Status**: Any differences found between the various education levels, employment or occupational status, were not statistically significant in terms of requesting treatment, neither was age, race or gender. Having medical insurance (which may be an inferential measure of income level) did have some bearing on a person deciding to seek treatment.

a. Education: 20% (n=32) of those with a high school diploma requested a referral to treatment as did 15% (n=25) of those who had attended college or vocational school, and 9% (n=11) of those with less than a high school diploma. (z=-1.17, p=.24)

b. Employment/Occupational status: 13% (n=22)of those employed full-time requested treatment as did 16% (n=37) of those who were unemployed. Employment status was not significant (Chi sq.=.570, p=.46) nor was one's occupational status (Chi sq.=4.10, p=.66) in terms of a person's likelihood to seek treatment. Twenty-one percent (n=13) of those with clerical jobs requested treatment, as did 19% (n=6) of the laborers and 17% of both artists and trained professionals.

c. Gender and Race: 14% (n=53) of the males requested treatment as did 18% of the females (n=17). Seventeen percent (n=17) of those who were Hispanic, 16% (n=32) of those who were black, and 11% (n=20) of those who were white requested treatment. Any difference found among either gender or race, in terms of whether or not the person sought treatment, was not statistically significant. (Chi sq.=.700, p=.40, and

Chi sq.=3.91, p=.4, respectively).

d. Age: Differences found between the age groups was not statistically significant in terms of deciding to seek treatment. (t=-.02, p=.98) Using a t-Test, it was found that the mean age of those requesting treatment and those who did not was exactly the same (35.8 years). Twenty percent (n=5) of those who were under 20 years of age requested treatment; 12% (n=9) of those 21 to 29 years of age; 19% (n=37) of those 30 to 39 years of age; and 13% (n=16) of those who were over 40 years of age requested treatment.

e. Medical Insurance: Whether or not someone had health insurance did have some bearing on whether or not they requested treatment. (Chi sq.=3.36, p=.19) Those who had no insurance were the people who were somewhat more likely to request treatment (19%, n=36). Those with private insurance were least likely to request treatment (11%, n=14).

3. Social Stability: There were three inferential measures included on the TRP survey to measure "social stability": marital status, the presence of children, and whether the children were living with the family.

a. Marital/Relationship Status: There were differences found between the various categories of marital status and these differences were statistically significant in terms of requesting treatment. (Chi sq.=6.40, p=.04) Twenty-two percent (n=20) of those who were divorced or widowed requested treatment, compared to only 12% (n=27) of

those who were single and 17% (n=20) of those who were married or living with their boy or girlfriend.

b. Children: Neither having children (Chi sq.=1.42, p=.23) nor whether their children lived with them (Chi sq.=.325, p=.57) proved to be statistically significant in terms of requesting treatment. Eighteen percent of those having children requested treatment (n=34), as did 13% of those without children; 14% (n=12) of those whose children lived with them requested treatment, as did 19% (n=18) of those whose children did not live with them.

4. **Social Influence**: Several variables were included in this category, specifically referencing familial use of drugs and alcohol, peers' use, and whether the TRP participant was living with someone who uses or abuses drugs or alcohol.

a. Significant Other: Living with someone who abuses alcohol had no statistical significance in terms of the TRP participant requesting treatment (Chi sq.=.097, p=.76) however, if the participant was living with someone who uses drugs there is some statistical significance in terms of the person seeking treatment. (Chi sq.=3.13, p=.08) Twenty-six percent (n=11) of those living with someone who uses drugs requested treatment, compared to 14% (n=54) of those requesting treatment who said they did not live with someone who uses drugs.

1. Lover an IDU: Any difference in terms of seeking treatment that was found between those TRP participants who have a lover who was an injecting drug user

(IDU) and those who did not, was not statistically significant. (Chi sq.=.000, p=1.00)

b. Peers' Use: Whether or not TRP participants had friends who got high (once a week or more) was statistically significant in terms of the individual requesting treatment. (Chi sq.=8.11, p=.00) Twenty percent (n=35) of those whose friends got high once a week or more requested treatment compared to 10% (n=22) of those whose friends did not get high.

c. Family drug or alcohol use: Whether or not the TRP participant had a family member who used drugs (Chi sq.=.023, p=.88) or abused alcohol (Chi sq.=.053, p=.82) made no difference in terms of whether that person would request treatment.

1. Which family member used/abused drugs or alcohol: When TRP participants were asked who it was in the family that was abusing alcohol or drugs, the "Family Use" variable became significant. The distinction was whether the user was a parent versus another family member (sibling, aunt or uncle). For drug use, it was barely statistically significant (Chi sq.=3.25, p=.20) with 17% of those who said it was their parent abusing drugs seeking treatment, versus 14% who said it was a sibling, aunt, or uncle. For familial alcohol use, who it was in the family that abused alcohol became somewhat more statistically significant in terms of whether the individual sought treatment. (Chi sq.=4.92, p=.09) Nineteen percent (n=10) of those who said it was a sibling, aunt or uncle who abused alcohol requested treatment versus 6% (n=3) of those who said they had a parent abusing alcohol.

B. Internal Factors

1. **Degree of debilitation**: This factor refers to the presumed extent of harm experienced by the individual based on their drug of choice, years of use, self-reported feelings of dependency, age of first use (of drugs or alcohol), frequency of use (in the month preceding attendance at the TRP), mode of use, and quantity used (for alcohol only). (See Appendix 6-A for further discussion of the Debilitation Index).

a. Drug of choice: Whether or not the TRP participant admitted to "any drug use" (using either "pot", heroin, "crack", cocaine or methadone) was not significant in terms of an individual requesting treatment. (Chi sq.=.895, p=.34) Sixteen percent (n=64) of those admitting to "any drug use" requested treatment, compared to 9% (n=4) of those who did not indicate the use of the major illegal drugs. If the TRP participant indicated they used heroin, "crack" or methadone, they were somewhat likely to seek treatment. (Chi sq.=2.50, p=.11, Chi sq.=5.59, p=.02, and Chi sq.=2.53, p=.11, respectively.) Nineteen percent (n=27) of those using heroin (n=139) requested treatment, compared to 13% using a substance other than heroin.[1] Twenty-two percent (n=28) of those using "crack" (n=129) requested treatment, compared to 12% using something other than "crack"; 23% (n=14) of those using methadone requested treatment, compared to 14%

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[1]The TRP population is not the general population in that TRP participants have been arrested for some drug-related offense. Therefore, if the person does not indicate heroin use, for example, the alternate choice is that s/he uses some other substance (including alcohol) rather than assuming that the person does not use drugs.

requesting treatment who used something other than methadone. The use of marijuana, cocaine, and other drugs was not significant in terms of the person seeking treatment. This may be because marijuana, cocaine, barbiturates or PCP are seen as "secondary drugs" whose effect is overridden by the effects of "crack" or heroin.

b. Years of Use (for each substance used except alcohol): Years of use was computed for each substance separately, not as a generic figure. How long someone had used a particular substance was a good indicator of whether the person would decide to seek treatment, if they were using cocaine ($z=-1.61$, $p=.11$), "crack" ($z=-1.70$, $p=.09$), or marijuana ($z=-1.81$, $p=.07$). Twenty-nine percent ($n=6$) of those who had been using cocaine for two years requested treatment as did 34% ($n=16$) of those using "crack" for more than three years, and 23% ($n=3$) of those who had been smoking marijuana for three to four years. Only 13% of those who indicated they had used cocaine for only a year requested treatment, as did 12% who had used "crack" for a year. Only 6% of those who had smoked marijuana for only a year or two requested treatment. The length of time someone used heroin however, was not a factor in terms of the person seeking treatment. ($z=-.060$, $p=.95$)

c. Dependency: This element was measured for each substance that individuals indicated they used. On the TRP Client Survey, column A was where individuals could indicate that they used a particular substance; column B was where they could indicated how long (for how many years) they had used that particular substance; and in column C

they could indicate whether or not they felt dependent on the particular substance. Data on dependency was not entered if the particular substance was not checked off as being used by the participant however, a substance could be checked off as having been used without column C - "Dependency" - being indicated. Eighty-four percent (n=97) of heroin users said they felt dependent upon heroin, compared to only 17% (n=34) of those who smoked marijuana who indicated they felt dependent upon marijuana. Eighty-five percent (n=60) of "crack" users said they felt dependent upon "crack", compared to 26% (n=41) of the cocaine users who said they felt dependent upon cocaine. This admission to feeling dependent on the particular drug that was used however, had no bearing on whether the person subsequently requested treatment, except for those using cocaine and that was only somewhat statistically significant. (Chi sq.=1.81, p=.18) Twenty-six percent (n=41) of those who said they felt dependent upon cocaine requested treatment, but so did 16% of those using cocaine who did not indicate that they felt dependent upon it. Twenty-two percent (n=39) of those who came in saying they used "crack" but did not feel they were dependent on it requested treatment, as did 27% using "crack" who said they did feel dependent. Not surprising, 90% (n=17) of heroin users who said they did not feel dependent on heroin, did not request treatment.

d. Age of First Use: Neither the age when the individual first used drugs (z=-.286, p=.77), nor the age when s/he first used alcohol (z=-.457, p=.65), improved the likelihood of someone requesting treatment. Eighteen percent (n=22) of those who started

using drugs before age 15 requested treatment, as did 16% of those who started using drugs when they were 20 or older, and 15% (n=28) of those who started drinking alcohol at age 15 or younger.

e. Frequency of Use (of drugs and alcohol): This variable was computed generically, with one response regardless of the drug(s) the person used. However, frequency of use of drugs and frequency of use of alcohol was computed separately. The frequency of use of drugs was significant in terms of seeking treatment (z=-4.33, p=.00) Thirty-three percent (n=28) of those who reported using drugs more than half the time in the past month (used 14 or more days out of the last 30) requested treatment, compared to only 8% (n=4) of those who said they had only used one or two days in the past month and 9% (n=9) of those who said they had not used drugs in the past month. How often someone had used alcohol (in the past month) however, had no bearing on whether they would subsequently seek treatment. (z=-1.08, p=.28)

f. Mode of Use: "Mode of Use" is a computed variable, comprised of the variables: intravenous use of heroin (IV), sniff cocaine (sniff), and smoke "crack" (smoke). Whether a person injected, sniffed or smoked their substance was not a significant predictor of a decision to seek treatment (Chi sq.=3.027, p=.22)

g. Quantity (for alcohol only): This variable was computed for alcohol only and was measured by the number of drinks the individual indicated they had drank, per occasion, in the past month. Any difference found between the quantity of alcohol a

person consumed per occasion in the past month and whether they actually sought treatment or not, was not statistically significant (z=-.188, p=.85) Twenty percent of those who indicated no alcohol use in the past month sought treatment, as did 21% of those who drank five drinks or more per occasion.

2. Treatment Receptive

A series of questions were asked pertaining to TRP participants' receptiveness to drug or alcohol treatment: did the participant acknowledge a need for treatment; what had been their prior experience with drug or alcohol treatment; did the person have a desire to stop using alcohol or drugs; had they tried to stop using alcohol or drugs; and if they had tried to stop using (alcohol or drugs), how long had they succeeded in staying alcohol or drug free.

a. Need treatment: Only about a quarter of the TRP population (27%) acknowledged a need for treatment upon entering the TRP. This acknowledgment of a need for treatment was significant in terms of the person later requesting treatment. (Chi sq.=30.61, p=.00) Thirty-two percent (n=34) of those who felt they needed treatment requested a referral, compared to only 9% (n=25) of those who said they did not need treatment.

b. Prior Treatment Outcome: Prior treatment outcome delineated somewhat between those requesting treatment and those not. (Chi sq.=5.84, p=.12) Thirty-four percent (n=12) of those who said they had relapsed requested a referral to treatment,

compared to only 12% (n=3) of those who had "successfully completed treatment". Seventeen percent (n=5) of those "still in treatment" requested treatment.

c. Desire to stop using alcohol: 40% (n=118) of the overall TRP population indicated they had ever had a desire to stop using alcohol. However, any difference found between those who said they wanted to stop using alcohol and those who did not, was not statistically significant in terms of their seeking treatment. (Chi sq.=1.63, p=.44)

d. Made an effort to stop using alcohol: Whether or not someone had tried to stop using alcohol made no difference in terms of their deciding to seek treatment. (Chi sq.=1.87, p=.39)

e. "Clean time" from alcohol: While nearly three-quarters of the TRP population indicated some amount of "clean time" from alcohol, whether or not someone had achieved "clean time" from alcohol was not statistically significant in terms of their requesting treatment. (z=-.49, p=.62) Eighteen percent (n=11) of those individuals who had achieved between one day and three months sobriety requested a referral to treatment, as did 15% (n=12) of those with a year or more sobriety.

f. Desire to stop using drugs: A larger portion of the TRP population (83%) indicated they wanted to stop using drugs than had indicated they wanted to stop using alcohol. However, whether or not someone said they wanted to stop using drugs had no significance in terms of whether or not they sought treatment (Chi sq.=1.38, p=.24)

g. Made an effort to stop using drugs: The majority of the TRP participants

(83%, n=307) indicated they had tried to stop using drugs at some point, and this had some bearing on their decision to seek treatment subsequent to their attendance at the TRP. (Chi sq.=3.17, p=.20) Sixteen percent (n=50) of those who said they had previously tried to stop using drugs requested a referral to treatment, compared to only 8% (n=5) of those who said they had never tried to stop using drugs.

h. "Clean time" from drugs: Almost the entire TRP population claimed to have achieved some amount of "clean time" from drugs and the mean "clean time" from drugs was two years, with a standard deviation of 5.1 years. The amount of "clean time" that a person had from drugs was a significant determinant in terms of their seeking treatment (z=-2.46, p=.01). Those who had not achieved some amount of "clean time" from drugs did not request treatment (100%, n=3); 25% (n=20) of those with between four and eleven months "clean" requested treatment, with a drop to 9% (n=10) requesting treatment among those with a year or more "clean time".

Step 3: Delivery System

1. Exposure to model: The entire sample was exposed to both days of the TRP.

2. Proximity of Consequence: The length of time between the date of sentencing and the date of attendance at the TRP was not significant in terms of the person later deciding to seek treatment. (z=-.16, p=.87) Fifteen percent of those who were seen within a week of sentencing requested treatment as did 16% (n=11) of those who waited up to a month, and 15% (n=12) of those who waited up to two months.

3. Perception of ability: This category is comprised of variables that seek to determine the individuals' view of their ability to change their behavior. The variables ranged from ones that measured the individuals' own direct experience with attempting to change, particularly behavior related to drug or alcohol use; their perception of the likelihood that they will be able to stay clean, subsequent to their attendance at the TRP; and their exposure to a role model for the new, desired, drug or alcohol-free behavior.

a. Ever been in treatment: More than a third (36%) of the TRP population indicated that they had been in drug or alcohol treatment before. This prior treatment experience seemed to have a positive impact on whether someone sought treatment from the TRP. (Chi sq.=2.88, p=.09) Twenty percent (n=30) of those who had been in treatment before requested a referral to treatment; 13% (n=35) of those who had never been in treatment before also requested treatment.

b. Time in treatment before: For those who had been in treatment before, the average time spent in treatment before was close to one year. The length of time someone had spent in treatment before was somewhat statistically significant in terms of requesting treatment again, (z=-1.83, p=.10) with 24% (n=8) of those who had previously been in treatment from one to three months seeking treatment, compared to 7% of those who had spent more than one year in treatment before.

c. Likelihood of continued use of alcohol or drugs: Whether or not the participant thought it "Very Likely" or "Very Unlikely" that they would continue to use drugs (given their present predicament) had no significance in terms of delineating a decision to seek treatment. Seventeen percent (n=12) of those who thought it was "Likely" that they would continue to use drugs sought treatment, as did 16% (n=9) of those who thought it "Very Unlikely" that they would continue to use drugs. (z=.489, p=.22)

d. Know someone who stopped using: 76% of the TRP population knew someone who had stopped using alcohol or drugs and this variable was statistically significant in terms of the TRP participant requesting a referral for treatment. (Chi sq.=5.07, p=.02) Those who knew someone who had stopped using drugs (17%, n=53) were more likely to request treatment than those who said they did not know anyone who had stopped using drugs (7%, n=7).

e. Family member sought treatment for a drug or alcohol problem: Whether or not the participants' family member who had a problem with drugs or alcohol sought treatment, was not statistically significant in terms of whether the TRP participant themselves would decide to seek treatment. (Chi sq.=.309, p=.86 for the person with a family member who had a drug problem and sought treatment, and Chi sq.=.971, p=.62 for the person who had a family member with an alcohol problem that sought treatment.)

B. Interrelationships between select model variables and the outcome variable: seeking treatment

Several key variables in the decision-making model did not initially delineate those who would seek treatment and those who would not. In an attempt to enhance their significance, these variables were re-run in combination with other model variables.

1. Problem Identification

a. Having a problem with alcohol: Whether or not the TRP participant thought alcohol was a problem for them seemed to have no bearing on whether they sought treatment. Nineteen percent of those who thought alcohol was a problem sought treatment as did 13% of those who did not think alcohol was a problem for them. (Chi sq.=.833, p=.36) Thinking the significance of acknowledging alcohol as being a problem and seeking treatment might be improved if only "drinkers" were considered, this variable was re-run selecting first for those who indicated they had drank at least one day in the past month. The statistical significance improved. (Chi sq.=2.25, p=.09) Now, the difference found between those requesting treatment and those not requesting treatment was more dramatic. Eighty-five percent (n=214) of the "drinkers" did not think alcohol was a problem for them and 22% (n=8) of the "drinkers" who thought alcohol was a problem for them decided to seek treatment. This is in comparison to 10% (n=22) of those requesting treatment who said alcohol was not a problem for them. Ninety percent (n=192) of those who drank but who did not think alcohol was a problem for them, did

not request treatment. (See Table 2)

2. Imperatives Motivating a decision to seek treatment

A. External Factors

1. Social Status

While it had been expected that social factors like race and gender would not be factors in terms of whether someone sought treatment or not, these variables were included in the model as a standard reference point. As expected, these variables were not statistically significant in terms of deciding to see treatment however, various inter-relationships were considered between the social status variables to see if the variables' statistical significance would be enhanced.

a. Treatment-Seeking by age and gender: When considered separately, neither age or gender accounted for a difference in whether someone sought treatment or not. However, when age and gender were combined it was found that the mean age of women seeking treatment was younger (age 27) than the mean age for men (age 38) and this difference was now statistically significant. ($z=-2.09$, $p=.04$) (See Table 3)

2. Social Stability

a. Seeking treatment for those with children: Having children has long been a measure of social stability and often a predictor of how people will do once in drug or alcohol treatment. Within the TRP population however, this factor did not make a difference in terms of a TRP participant deciding to seek treatment. Thinking this might

be due to the overwhelming number of men in the sample, this variable was re-run by gender to see if the significance changed. Forty-one percent of the males had children as did 59% of the females. While the percent of men with children seeking treatment was similar to the percent of women with children who sought treatment (18% of the men and 17% of the women, with children) having children proved to be a significant factor in treatment-seeking among the men (Chi sq.=2.57, p=.11) but not the women. (Chi sq.=.239, p=.62) (See Table 4)

B. Internal Factors

1. Quantity of alcohol consumed among drinkers and making a decision to seek treatment: Initially, the quantity (of alcohol) someone drank had no bearing on whether the person would seek treatment. Twenty-one percent of those who reported drinking five or more drinks per occasion requested treatment compared to 20% who reported drinking only one or two drinks per occasion. This variable was reconsidered, selecting only for those who reported that they had drank at least one day in the past month. Now, the difference found in terms of requesting treatment, between the "social" and "heavy" drinkers was statistically significant. (z=2.37, p=.01) Only 8% (n=7) of those "current" drinkers (those who had drank at least one day in the preceding month), who reported drinking one or two drinks per occasion sought treatment, compared to 21% of the "current" drinkers who reported drinking five or more drinks per occasion (in the past month). (See Table 5)

2. Treatment Receptive: Several of the variables in this category did not initially achieve significance in terms of delineating those participants seeking treatment and those not seeking treatment. The variables: want to stop using alcohol; tried to stop using alcohol; want to stop using drugs; and tried to stop using drugs were re-run, selecting first for whether the TRP participant was currently using alcohol or drugs.

a. Desire to stop using alcohol among drinkers: Whether or not someone indicated they wanted to stop using alcohol initially made no difference in terms of whether they sought treatment. Re-running this variable for those who had drank at least one drink in the past month improved the significance but it still did not achieve statistical significance. (Chi sq.=1.44, p=.23) (See Table 6) Sixteen percent (n=12) of drinkers wanting to stop using alcohol requested treatment as did 10% (n=13) of those who said they did want to stop using alcohol.

b. Efforts to stop using alcohol: In addition to the question: "Do you want to stop using alcohol?" there was the follow-up question: "Have you ever tried to stop using alcohol?" Again, initially the responses to this question did not delineate between those who sought treatment and those who did not. Re-running, selecting only for those who had drank at least one drink in the past month ("drinkers"), improved the significance. (Chi sq.=3.02, p=.08) Now, 17% (n=17) of those who indicated they had tried to stop using alcohol requested treatment compared to only 8% of the "drinkers" who had never tried to stop using alcohol.

c. Desire to stop using drugs; made efforts to stop using drugs: The questions pertaining to the participants' desire to stop using and having made prior attempts to stop using drugs, were repeated for those individuals who indicated they currently used drugs (had used drugs at least once in the past month). Eighty-seven percent (n=178) of the current drug users responding to the question (n=205) said they wanted to stop using drugs and this desire to stop using became somewhat more of a factor in the decision to seek treatment. (Chi sq.=1.62, p=.20) Twenty percent (n=35) of those using drugs and wanting to stop requested treatment compared to only 7% (n=2) of those using drugs who did not indicate that they wanted to stop.

When the variable "Tried to stop using drugs" was re-run for those who had used drugs at least once in the past month, the significance (in terms of delineating those who sought treatment and those who did not) actually became less significant, (Chi sq.=.538, p=.46) than before selecting only for current drug users. In this case, selecting for current drug users was not helpful.

C. Logistic Regression Analysis

Logistic regression, in this study, determines the probability that a participant in the TRP population, with a given set of qualities, will make a choice to seek treatment. For example, what portion of the decision to seek treatment can be attributed to the TRP participant knowing someone who was able to stop using drugs, considering all other variables? Or if the person themselves had previously made attempts to stop drinking or

using drugs? Applied to the TRP population, the analysis will identify variables that are associated with treatment seeking in a population of misdemeanor drug offenders. Studies of this type originated in medical science research and only recently have been applied to other situations and/or behavior (Wheeler and Hissong, 1988). A logistic regression is performed to evaluate the degree to which each variable in the model can predict the outcome of the dependent variable -- requesting or not requesting treatment.

1. **Variables to be included in regression analysis**: The variables in the TRP survey were conceived as a treatment-seeking model, with the significant variables listed. Thirty-five variables (from the original 81 variables) proved initially to be significant, in terms of a TRP participant deciding to seek treatment. (See Table 7)

2. **Treatment-seeking model**: In specifying a treatment seeking model for TRP participants, self-awareness of a problem is the starting point. The variables included in "problem identification" are the individuals' own statement that drugs (or alcohol) are a problem for them or whether the individual had ever attended a self-help meeting like Alcoholics Anonymous ("AA") or Narcotics Anonymous ("NA"). Included under "problem identification" are a series of questions pertaining to problems the person might be experiencing with their family, employment, or loved ones, as a result of their drug or alcohol use. There were five measures in this category, taken from the Michigan Alcohol Screening Test (MAST), all of which were found to be statistically significant in terms of the TRP participant seeking treatment.

Impacting upon the participant's decision to seek treatment are imperatives that motivate, for or against, a decision to seek treatment. These "motivators" were divided into two aspects: external factors such as criminality, social status, social stability, or measures of social influence; and internal factors classified here as "degree of debilitation" (which refers to the extent of physical debilitation the person may be experiencing as a result of their substance use), and measures of the participants' receptiveness to treatment. "Degree of debilitation" is being inferred from the type, quantity, and frequency of drug use, and is being classified as "internal factors" as they refer to the probable physical disabilities being experienced from the extensive use of substances.

Of the external factors, actual arrest charge was the only criminality factor that proved to be significant in terms of the person deciding to seek treatment and this was re-coded and included in the regression equation. The two social status measures that proved to be significant were: (i) whether or not the TRP participant had medical insurance (which might be a surrogate measure for economic status); and (ii) the combined effect of age and gender. The social stability factors that proved to be significant in the decision-making process were: (i) marital status; and (ii) the presence of children (a significant factor for men deciding to seek treatment). The social influence variables that proved significant were: (i) living with someone who uses drugs; (ii) had friends who got high (once a week or more); and (iii) having a close family member who used drugs or

alcohol.

Among the "internal factors", the debilitation measures that achieved significance were: (i) drug of choice (heroin, "crack" or methadone); (ii) years of use (for those using cocaine, "crack", or "pot"); (iii) feelings of "dependency" (for those using cocaine); (iv) frequency of use (of drugs); and (v) quantity of alcohol consumed (for those who drank at least once in the past month). The second grouping of "internal factors" were the measures categorized as "treatment receptive". Six variables in this category proved to be significant: (i) the person walked in saying h/she needed treatment; (ii) the outcome of any prior treatment experience; (iii) for those people who had used drugs in the past month, whether they indicated a desire to stop using drugs; (iv) whether the person had ever made an attempt to stop using drugs; (v) how much "clean time" they had achieved (from drugs); and (vi) for those who had drank alcohol in the past month, whether they had ever made an attempt to stop using alcohol.

Lastly, Step 3: Delivery System, relates to both the method used to produce the desired result (in this case making a decision to change their drug or alcohol using behavior) and the abilities the participant brings. A contributing factor to the success of the intervention is the participants' view off their ability to achieve the objective being presented to them. Three variables attained significance in this category: (i) had the participant ever been in treatment before (indicating they had previously identified as having a drug or alcohol problem and now, with a current drug arrest, might be amenable

to reconsidering treatment); (ii) how much time had they spent in treatment (before); and (iii) did they know someone who had stopped using drugs (thus demonstrating the possibility of the desired behavior change and perhaps, modeling how to achieve it). (See Fig. 4 for schematic of TRP model with significant variables.)

3. **Coding of model variables for inclusion in regression analysis**: The dependent variable was dichotomous - the TRP participant requested treatment or did not request treatment. "1" indicated the presence of the attribute (requested treatment); "0" the absence of the attribute (did not request treatment). There were no missing cases for the dependent variable. For the independent variables various approaches were taken to prepare them for inclusion in the logistic regression model.

a. Reconstructed Variables: The following variables were reconstructed into new variables: having insurance (or not), marital status, prior treatment outcome, "clean time" from drugs, and previous time spent in treatment. In terms of insurance, there were also three possible categories: the individual had Medicaid (or Medicare), private insurance, or no insurance at all. This variable was re-coded into three variables: MDCD (having Medicaid or Medicare); PRI (having private insurance); NONE (indicating the person had no insurance). "1" indicated the presence of the attribute in question and "0" was used for all else, including missing data. For marital status there were three possible categories: single; married or living with their boy or girlfriend; and divorced or widowed. Three new variables were thus created: MAR1 for those who indicated they

were single; MAR2 for those who indicated they were married or living with their boy or girlfriend; and MAR3 for those who indicated they were divorced or widowed. "1" indicated the presence of the attribute and all else was coded "0". Age was an interval variable that was reconstructed into four new variables: AGE1 for those 20 years of age and younger; AGE2 for those in their 20's (aged 21 to 29); AGE3 for those in their 30's (30 to 39 years of age); and AGE4 for those 40 and over (actually age 40 to age 65). As with the other re-created interval variables, "1" was used to indicate the presence of the attribute and "0" was used for all else including missing data. (Note: AGE1 will not be included in the regression equation, furnishing a comparison group for the other three age categories.)

Arrest charge was a categorical variable that was made into a dichotomous variable. A new variable (ARRCH3) was created as follows: the varieties of possession charges (220.03, 221.00) were coded "0" and the charge of criminal trespassing was coded "1". Missing data was coded "99". For the variable "prior treatment outcome" there were five possible outcomes that individuals could chose on the TRP survey: (i) still in treatment; (ii) relapsed; (iii) had problems with the treatment program; (iv) had money problems; or (v) successfully completed treatment. Given participants' current legal situation, it might seem that all of the participants had relapsed; however, for the sake of the model, three treatment outcomes were considered and three new variables were created. RXOUT1 were those who said they had relapsed, had problems with the

program, or had money problems. Any of these situations likely resulted in the individual prematurely leaving the program (either against the treatment program's advice or as an administrative discharge), so these three outcomes will be collapsed into one category. RXOUT2 were those individuals who reported they had "successfully completed treatment" sometime in the past. This group has a frame of reference for what the complete treatment process is like, although they too have presumably relapsed. RXOUT3 were those individuals who indicated they were "still in treatment". (Note: the bulk of those who indicated they were "still in treatment" (69%) indicated they were taking Methadone.) For these three new treatment outcome variables, "1" indicated the presence of the attribute in question (relapsed, still in treatment, etc.) and "0" was used for all else, including missing data. To furnish a comparison group, RXOUT3 will be omitted.

"Clean time" from drugs was another interval variable that was reconstructed into new variables. "Clean time" from drugs was initially measured in days, months or years. Reconstructing this variable, first four new variables were created. A matter of only days "clean" from drugs was re-coded into DYSCLND where "1" indicated some number of days "clean" from drugs (between one day and 28 days); "0" was used for all other choices, and "999" was used for missing data. Having between one month and 11 months "clean" from drugs became MNCLND, where "1" indicated the individual had some number of months "clean", "0" was used for all other choices, and "999" was used for

missing data. Having a year or more "clean" from drugs became YRSCLND where "1" indicated the individual had some number of years "clean", "0" was used for all other choices, and "999" was used for missing data. A variable (NOCLNTD) was also computed for those who indicated they had no "clean time" from drugs. "1" was used for those indicating zero "clean time", "0" was used for all other choices, and "999" was used for missing data. To present a variation of this "clean time" factor, a fifth "clean time" variable was created, (SMCLNTD) where any amount of "clean time" (days, weeks, months, or years) was coded "1" and all else was coded "0". Again, initially, all five variants of the "clean time from drugs" variable will be entered into the equation.

"Time spent in treatment" was an interval variable that was reconstructed into three new variables. "Time spent in treatment" was initially measured in days, weeks, months or years. Re-computing this variable into "days", there was a range from one day to six years spent in treatment before (the mean time spent in treatment was 180 days). This variable was re-coded for the logistic regression analysis as follows: having between one day and 30 days became TMRX1; having been in treatment for between one month and 11 months became TMRX2.; and having one year or more in treatment previously became TMRX3. (Note: The data for "time spent in treatment" was only entered for those participants who first indicated that they had been in treatment before.) For each of the new variables, "1" indicated the presence of the attribute in question and "0" was used for all else, including missing data. A fourth variation of "time spent in treatment" was

created, (SMTMRX) where any amount of time spent in treatment was coded "1" and all else was coded "0". Initially, only one of the variants of the "time in treatment" variable (TMRX1) will be entered into the equation (with the others furnishing comparison groups). Then the more generic "spent some time in treatment" will be run.

"Parent or sibling uses drugs" was re-coded into a new variable (WHODR2) where an indication that it was a parent using drugs was coded "1" and all else was coded "0" (the condition not present). For "Parent or sibling uses or abuses alcohol" a new variable (WHOAL2) was created where an indication that it was a relative other then a parent who was using or abusing alcohol was coded "1" and all else was coded "0".

In terms of the drugs used, the ones that initially proved significant in terms of the TRP participant deciding to seek treatment were heroin, "crack" and methadone. It is expected that there will be a high correlation between having used heroin and having used methadone as the use of one (heroin) is the precursor to the use of the other (methadone). Therefore, only one of these substances (heroin) will be entered into the logistic regression equation. The variables "heroin" and "crack" were re-coded with "1" indicating the use of the particular substance and "0" indicating the person does not use the substance. Missing data was coded "9" or "99".

Cocaine, "crack" and "pot" were the three substances where "years of use" initially showed some significance in terms of deciding to seek treatment Based on the literature, using "crack" in excess of a year is seen as problematic, as is the use of cocaine

exceeding three years and marijuana in excess of ten years. "Years of use" was asked specific to each of these substances, allowing a measure to be computed individually for each of them. The variables can then be made dichotomous for entry in the regression equation.. The three "years of use" variables were re-coded as follows: for "crack" use, a new variable (CRACKA3) was created, where two or more years of use was coded "1" (as in problematic use), and one year or less was coded "0". "99" was used for missing data because, for this variable, it was important to differentiate "less than problematic use" (i.e. "0") from missing data. For cocaine use, a new variable (COKEA4) was created where three or more years of use was code "1" (as in problematic use), less than three years of use was coded "0", and missing data was coded "99". For the use of marijuana, a new variable (MARIJA3) was created, where ten or more years of use was coded "1", less than ten years of use was coded "0", and missing data was coded "99".

Only those using cocaine and indicating feelings of dependency proved to be significant in terms of the individual seeking treatment (the variable "dependency on cocaine" was only coded on the TRP survey when the respondent first indicated they used cocaine). For the regression equation, a new variable was created (COKEBB2) where "1" indicated feelings of dependency on cocaine; all else was coded "0".

b. Recoding categorical variables: There were also a series of categorical variables with choices limited to either a "Yes" or "No" response. These variables were re-coded into dummy variables as follows:

- Do you think you have a problem with drugs? (DRGPROB4) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Do you think you have a problem with alcohol? (ALCPROB4) "1" was for "Yes", "0" was for "No", and "99" was missing data.

In the past 12 months,

- Have you had arguments or fights with family or friends as a result of alcohol or drug use? (FIGHT3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Have you lost a job because of drinking or drug use? (LOSTJB3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Has anyone close to you asked you to stop using drugs or alcohol? (ASK3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Has someone close to you suggested you seek drugs or alcohol treatment? (SUGRX3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Have you ever felt that your drinking or drug use was not completely under your control? (CONTROL3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Have you ever been to a self-help meeting like AA or NA? (EVERAA2) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Do you have children? (CHILD3) "1" was coded for "Yes", "0" was for "No", and "99" was missing data.

- Do you live with someone who uses or abuses drugs? (LIVWTHD3) "1" was for

"Yes", "0" was for "No", and "99" was missing data.

- Do your friends get high once a week or more? (FRHIGH3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Do you want to stop using drugs? (WNTSTD3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Have you ever tried to stop using drugs? (TRYSTD3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Have you ever tried to stop using alcohol? (TRYAL4) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Do you think you need treatment? (NEEDRX3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Have you ever been in treatment before? (EVRINRX3) "1" was for "Yes", "0" was for "No", and "99" was missing data.

- Do you know someone who stopped using drugs? (KNOW) "1" was for "Yes", "0" was for "No", and "99" was missing data.

c. Interaction Terms: Several variables only proved significant when combined with another variable -- having children only proved relevant for men; "alcohol is a problem" was only relevant when the person first indicated they had consumed at least one drink in the past month; a desire to stop using drugs was only relevant for those who had used drugs at least one day in the past month; and prior attempts to stop using

alcohol was only relevant for those who indicated they had consumed alcohol, at least one day in the past month. These variables will be entered both singly and as interaction terms with the qualifying variables. The qualifying variables will be re-coded and added to the regression equation as follows:

Gender: was re-coded into a new variable "SEX2." where the males in the sample were coded "1" (the predominant group) and the females "0". There was no missing data for the variable "SEX2".

Quantity of alcohol: ranged from one drink per occasion (in the past month) to 24. Several new variables were created. First a dummy variable (NUMDRK3) was created where a quantity greater than or equal to one drink per occasion was coded "1"; all else was coded "0", including missing data. Then "quantity" was recreated into three new variables: social use of alcohol (had one or two drinks per occasion in the past month) (SOCIAL); mid-range use of alcohol (had three or four drinks per occasion in the past month) (MED); and heavy use of alcohol (five or more drinks per occasion) (HEAVY). Two variants of "quantity" will be placed in the regression equation. First "heavy" use and then the more generic NUMDRKS3.

Frequency of use of alcohol: TRP participants could indicate a number between one and 31 to indicate how many days in the past month they had consumed alcohol. As with the "Quantity" variable, a new variable (DAYSAL) was created, where "days used alcohol" greater than or equal to one was coded "1" and all else, including missing data,

was coded "0".

Frequency of use of drugs: was measured as the number of days in the past month that the person indicated s/he had used drugs. This ranged from none (person had indicated drug use but not in the past month) to 30 or 31 days in the past month (i.e. daily use). Again, a new variable (DAYSDR) was created, and if "days used drugs" was greater than or equal to one, a "1" was coded. All else, including missing data, was coded "0".

4. Testing for collinearity: Correlation coefficients were computed to look for an overlap, particularly between the drugs used, and specifically between the use of heroin and methadone. While the use of methadone must inlude the use of heroin (assuming that the person is obtaining methadone from a MMTP or the street to "detox" from, or cut down on, the usage of heroin) the correlation of their use was not as high as anticipated. (See Table 8) However, as stated earlier, only the use of one (heroin use) will be put in the logistic regression equation.

5. Regression Results: Following the design of the proposed TRP treatment seeking model, each stage of the model, with the corresponding grouping of variables, was considered in separate logistic regression equations. (See Table 9) For the Step 1 variables, "problem identification", none retained their significance when considered, simultaneously.

The second step of the treatment seeking model was divided into two categories: internal and external imperatives motivating a decision to seek treatment. The grouping

of variables classified as "external motivators" were: arrest charge, having (or not having) insurance, age, marital status, having children (considered by gender), and the social influence variables. Running these variables simultaneously in a logistic regression equation, divorced versus being single or married remained significant (.0256) as did having no insurance (.0239), and being middle-aged (30 to 39 years of age) versus all other age groups. Having children was entered as an interaction term with gender since it was initially found that having children was only a significant factor for men. However, this variable did not remain significant when the entire grouping of external motivators was considered. Among the social influence variables: living with someone who uses drugs; having a parent versus an other family member who uses alcohol or drugs; and whether the participant has friends who get high once a week or more, only peers' drug use remained somewhat significant (.0716).

The second grouping of motivating factors, "internal motivators", were first, those factors directly related to drug use: was the participant using heroin[2] or "crack"; the years of use for cocaine, "crack", or marijuana (particularly the problematic "years of use" of each of the substances, versus "less than problematic use"); feelings of dependency on cocaine; frequency of use of drugs in the past month; the number of drinks consumed in the past month (any amount, and the social, medium or heavy use of alcohol, versus no

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[2]The choices were actually heroin, "crack" or methadone but since the use of methadone, by definition, must include the use of heroin, only heroin was entered in the equation.

alcohol use in the past month). Second were the measures of the participants' receptiveness towards treatment: did the participant think h/she needed treatment; what had been the outcome of any previous treatment experience, particularly, did the person acknowledge having had a relapse; did the person indicate a desire to stop using drugs (for those who admitted to being current users of drugs); had the person ever made attempts to stop using drugs (again, among current users); did the person have any "clean time" from drugs; and, among those who were current drinkers, had the person ever tried to stop using alcohol.

The variables related to substance use were entered first into a logistic regression equation, along with the interaction term (used alcohol at least one day in the past month). Only the problematic "years of use" of cocaine (use that exceeded three years) (.0116) and quantity of alcohol (for those who were current drinkers) (.0212) retained significance. The problematic use of "crack" (use in excess of a year) was only slightly significant (.0927). Among the "treatment receptive" variables, admitting to a relapse subsequent to a prior treatment experience, was the only "treatment receptive" variable that retained significance (.0036) when all of the "treatment receptive" variables were considered simultaneously. Having "some clean time" versus none at all was only somewhat significant (.0857).

The third and last step in the TRP treatment seeking model, labeled the "delivery system", included the variables grouped as "perception of ability". These variables were:

(i) had the person ever been in treatment, prior to the TRP; (ii) if so, how long had the person spent in treatment; and (iii) did the person know anyone who had stopped using drugs. Of these three variables, only having spent between one and 28 days in treatment retained some significance (.0858) when considered together in a logistic regression equation.

Part two of this level of analysis was to place all 35 of the variables that achieved even a moderate level of significance into a single logistic regression equation. The second, inclusive run was tried, ordering the entry of the significant variables as they are presented in the TRP model with "problem identification" variables first, "motivators" second, and the "delivery system" variables third, implying that order or hierarchy.

The interaction terms did not help the analysis and they were dropped. The qualifying variables: days drank (none or one or more days in the past month), days used drugs (none or one or more days in the past month), and gender (male versus all other) were included. Also the more generic "spent some time in treatment" (none versus at least one day) replaced the more specific measure of "time in treatment" (TMRX1) which was having spent between one and 28 days in treatment. Results at this stage had to achieve .05 level of significance to be considered (See Table 10).

The ten variables that retained significance in the larger run were:

- age (30 to 39 years of age versus all other age groups);

- being divorced;

- using cocaine in excess of three years;

- using "crack" for two or more years;

- the "heavy" use of alcohol (more than 5 drinks per occasion in the past month) versus the "social" or moderate use of alcohol ;

- acknowledging a relapse after treatment;

- having tried previously to stop using alcohol;

- ever been in treatment;

- having spent some amount of time in treatment previously; and

- knowing someone who stopped using drugs or alcohol.

Five other variables were somewhat significant (between .07 and .09): (i) acknowledging a loss of control over drugs or alcohol; (ii) having friends who get high once a week or more; (iii) frequency of use of drugs or alcohol; (iv) having some amount of clean time (from drugs); and (v) having children.

For a third variation, the ten variables that achieved at least an .05 level of significance were entered into a third logistic regression equation (See Table 11). Again, using the .05 level of significance as the cut-off, the following six of the 10 remained significant:

- age (middle aged versus all other);

- being divorced;

- using cocaine in excess of three years;

- using "crack" for two or more years;

- acknowledging a relapse after treatment; and

- having previously tried to stop using alcohol.

"Knowing someone who had stopped using drugs" completely lost its significance as did having spent some time in treatment and the "heavy" use of alcohol.

In terms of the TRP model for making a decision to seek treatment, the revised model would be as follows: the "problem identification" variables (including perceived interpersonal consequences of alcohol or drug use) were not significant when compared to several of the external and internal imperatives, treatment receptive factors, and measures of the clients' perception of their ability (to stop using drugs or alcohol). The two external motivators that retained significance were marital status and age; the internal motivators from the Debilitation Index that retained significance were the problematic "years of use" for both cocaine and "crack". Among the "treatment receptive" variables, a prior treatment outcome of a relapse retained significance as did acknowledging previous attempts to stop using alcohol. For "perception of ability" under the "delivery system" stage of the model, having spent some time in treatment was barely significant (.0651).

For the last run, the six variables that retained significance were put into a logistic regression equation (See Table 12). In this final run, the model predicted correct group membership (decided to seek treatment or not) for 86% of the subjects. (Fig. 5 presents the revised TRP treatment-seeking model.) Considering the odds ratio for the six

variables retained in the model (see Table 13), the odds of a TRP participant deciding to seek treatment was twice as likely if the person was middle-aged (30 to 39 years of age) versus being in their teens, 20's or over 40. The odds of deciding to seek treatment was also twice as likely if the person was divorced versus being single or living with someone. Those who had used cocaine in excess of three years were more likely to seek treatment than those in the complimentary category, and the odds were equal to those who had who had use "crack" for two years or more.

A person who indicated that their prior treatment experience had resulted in a relapse was twice as likely to decide to seek treatment as the TRP participants who claimed money or program problems as their treatment outcome or those who said they were "still in treatment". Lastly, someone who stated they had previously made attempts to stop drinking on their own was more likely to decide to seek treatment than someone who had never considered stopping the use of alcohol. The odds ratio formulas would be as follows:

$$\text{Odds ratio for seeking treatment} = \frac{\text{Odds of treatment seeking for those 30-39}}{\text{Odds ratio of those seeking treatment for all other age groups}}$$

$$\text{Odds ratio for seeking treatment} = \frac{\text{Odds of treatment seeking for those who are divorced}}{\text{Odds ratio of those seeking treatment for those who are single or married}}$$

$$\text{Odds ratio for seeking treatment} = \frac{\text{Odds of treatment seeking for those using cocaine in excess of 3 years}}{\text{Odds ratio of those seeking treatment for those using for a year or two}}$$

$$\text{Odds ratio for seeking treatment} = \frac{\text{Odds of treatment seeking for those using "crack" two years or more}}{\text{Odds ratio of those seeking treatment for those using only a year}}$$

$$\text{Odds ratio for seeking treatment} = \frac{\text{Odds of treatment seeking for those who claimed a relapse}}{\text{Odds ratio of those seeking treatment for those who claimed other treatment outcomes}}$$

$$\text{Odds ratio for seeking treatment} = \frac{\text{Odds of treatment seeking for those who had made attempts to stop drinking alcohol}}{\text{Odds ratio of those seeking treatment for those who had never made an attempt to stop drinking}}$$

D. Hypotheses Testing

Initially, seven hypotheses were generated:

Hypothesis 1: Treatment seeking will be a function of an individual's drug of choice (heroin versus all other), the degree of debilitation from drugs or alcohol, and the individual's previous exposure to treatment and/or a self-help meeting. This hypothesis had three parts -- that treatment seeking was related to: a) drug of choice (heroin versus

all other); b) degree of debilitation; and c) previous exposure to treatment. Initially, heroin use did emerge as a significant measure for seeking treatment. For the measure "degree of debilitation", three measures proved to be statistically significant in terms of treatment-seeking. They were: (i) "years of use" (for "crack" and cocaine); (ii) "frequency of use" (days used in the past month): and (iii) feelings of dependency (on cocaine only). Use of heroin in itself was statistically significant in terms of seeking treatment, but not the length of time the person had been using heroin. Running "heroin use" and "frequency of use" of drugs simultaneously, "frequency of use" remained significant and heroin dropped out. Re-running the variables simultaneously, substituting "crack" use for heroin use, "frequency of use" and "years of use" of "crack" (two years or more of using "crack"), only "years of use" of "crack" remained significant. Running "frequency of use", "years of use" of cocaine (using cocaine in excess of three years), and "dependency" on cocaine (the individual indicated they had feelings of dependency on cocaine), only "years of use" of cocaine remained significant. When the two alcohol measures that had statistical significance (number of drinks i.e. one of more in the past month, and "frequency of use" i.e. used at least one day or more in the past month) were run together, neither retained significance in terms of the person seeking treatment.

The logistic regression analysis was run again for "crack", using the interaction term (number of drinks for those who drank at least one day in the past month). "Frequency of use" of "crack", number of drinks (for those who drank) and "years of use"

of "crack" remained significant. Re-running the analysis for heroin with the interaction term, "frequency of use" and "years of use" for marijuana, the interaction term lost significance and only "frequency of use" retained significance.

Lastly, adding the use of methadone, prior treatment experience, and attendance at a self-help meeting to the logistic regression analysis, "years of use" of cocaine and the interaction term retained significance. Repeating the process for each substance separately, entering heroin and methadone together first (due to the overlap between heroin use and methadone use) "frequency of use" became significant and the interaction term retained significance. Running the "crack" variables (and leaving methadone in the analysis as well as the "years of use" (exceeding 10 years) of marijuana) only "years of use" of "crack" and the interaction terms remained statistically significant. Repeating this for the significant cocaine debilitation measures (and again leaving methadone and "years of use" of marijuana in the equation) again, it was only the "years of use" for cocaine and the interaction term that achieved significance. Re-running the same logistic regression analysis with methadone left out made no significant difference. So, while two of the debilitation measures have some significance in predicting whether a person will seek treatment, when considered as a whole, exposure to treatment or prior attendance at a self- help meeting (like AA or NA) do not contribute to the decision to seek treatment.

Substituting "having spent some time in treatment" for "ever having been in treatment" also did not make a difference with any of the groupings of the debilitation

variables. Using the second interaction term ("time in treatment" for those who have ever been in treatment) also did not yield a difference.

Hypothesis 2: An individual's perception of his/her ability will affect their decision to seek treatment. There were four measures for "perception of ability" that initially were significant in terms of seeking treatment:(i) the person indicated they had wanted to stop using drugs (for those who said they used drugs in the past month); (ii) had made an attempt to stop using drugs at some time; (iii) had achieved some amount of clean time from drugs; and (iv) had made attempts to stop drinking alcohol (among those who reported drinking in the past month). When these four variables with the interaction terms were entered simultaneously into a logistic regression equation, none proved significant. When the caveats were removed (that the person actually had used drugs or alcohol in the past month), attempts to try to stop using alcohol was significant, and when each variable was correlated separately with the dependent variable "treatment seeking", "tried to stop using alcohol" was the only one that achieved significance (p=.04).

Hypothesis 3: An individual's choice to seek treatment will not be a function of demographics such as age, race, or gender. The initial bivariate analysis found that there was no statistical significance, singly, between each of the following: age, race or gender, and the dependent variable, among the TRP participants. However, because these variables, particularly age, are so often cited in the literature, they were re-visited in combination with each other.

Now, age did prove significant when combined with gender. Those middle-aged and male were more likely to seek treatment than those younger and female. However, when placed in the larger logistic regression analysis with the other significant variables, only the age category "middle aged" remained significant.

Hypothesis 4: The shorter the time between sentencing and exposure to the TRP, the greater the likelihood of an individual requesting a referral for treatment. "Waittime" (the time between sentencing to the TRP and appearance at the TRP) had no statistical significance in terms of treatment-seeking.

Hypothesis 5: Those individuals deciding to seek treatment will have known someone who was able to stop using drugs. Knowing someone who had used drugs and been able to stop initially was significant in terms of a TRP participant seeking treatment. However, when all of the other decision-making variables were considered, this variable did not retain significance.

Hypothesis 6: Individuals with a prior criminal history will be less likely to seek treatment. Prior criminal history (having a prior arrest) had no effect on treatment seeking. Those who stated this was their first arrest were as likely to seek (or not seek) treatment as those who said this was not their first arrest. Among those with prior arrests, those with three or more priors were as likely (or unlikely) to decide to enter treatment as those with only one prior arrest.

Hypothesis 7: Individuals deciding to seek treatment will have more perceived

interpersonal consequences of their alcohol or drug use and will have self-labeled as someone with a problem with drugs or alcohol. A logistic regression analysis was done with the five MAST items and whether the person responded affirmatively to the questions: "Do you think you have a problem with drugs?" and "Do you think you have a problem with alcohol?" Initially, the MAST items and an admission that drugs were a problem had been statistically significant in terms of seeking treatment however, when put together in a simultaneous equation, none of these variables retained significance.

Chapter 5. Discussion and Policy Implications

The objective of this study was to predict, within pre-selected categories, those elements that contributed to a first time misdemeanor drug offender seeking treatment. While a variety of variables were initially significant in terms of treatment seeking, only six retained significance when the entire model was considered. The variables represented one stage or step of the TRP treatment seeking model -- Step 2: Imperatives motivating for or against a decision to change i.e. seek treatment for a drug or alcohol problem: External Factors and Internal Factors. This implies that a revised form of the TRP model for treatment-seeking has validity, and that treatment-seeking is not a one dimensional decision. Rather, it is a function of experiencing some degree of debilitation from specific drugs used and being receptive to treatment, along with two social status factors: age and marital status.

"In criminology, the concept of deterrence is used to describe the prevention of criminal behavior through the use of, or the threat of, legal sanctions" (Meir, 1977). This definition: (i) makes deterrence inherently impossible to measure in that deterrence is only present when the outcome of criminal behavior is absent; and (ii) leaves us to explain cases where there is initial criminal behavior (a first offense) when the deterrent factors obviously did not work, and then a cessation of criminal behavior. If deterrence is evidenced by compliant behavior, then drug use or abuse produces non-compliant, deviant behavior. Conversely, if the drug use or abuse is eliminated, it is reasonable to

expect a greater likelihood that compliance and deterrence can be accomplished because the person is now able to comply with laws against the use and possession of illegal substances.

One result of this line of thought is the proposition that deterrence can be produced by legalizing drugs. This would lead to compliance by eliminating a whole category of crime. While it is true that legalization would eliminate crimes of sale and possession, the attendant problems of robbery, burglary and assault would not be addressed.

When addiction is the problem, criminal sanctions without benefit of treatment also seems counter-intuitive given that, as a society, we define addiction as a disease. Unfortunately, "the status of drug addiction today is that of a deviancy whose cause is not fully determined and whose classification shifts uncertainly between medical and criminal models...(It is) a disease without pathology and a crime without victims" (Adler and Ball, 1972). This tension is exacerbated by either a reluctance or an inability to follow-up on, evaluate, or even characterize success or outcome of the methods eventually employed to address drug addiction.

That education will reduce the incidence of addictive drug use is very much in the medical tradition. However, education in the absence of addressing the interpersonal factors surrounding substance abuse is doomed to fail, not in a small part because education efforts often deny or trivialize the underlying problems that facilitate drug use,

including a societal model of placating problems with some external panacea. In considering substance abuse or chemical dependency as a disease, the medical model assumes that: "the disease (of chemical dependency) has a biological etiology"; that "once activated (triggered by the drug)...has a malignant irreversible course"; that can only be arrested by "total abstinence" (Valliant, 1983). In the medical model, there is no cure -- no matter how long the person (in recovery) may have been free of the chemical, it takes just one new exposure to the substance (a relapse) for the disease to become reactivated.

The origins of the disease of alcoholism, addiction or chemical dependency may be an inborn biologic flaw, a genetic predisposition, making a person uniquely and inevitably susceptible (Vaillant, 1983). The disease has a natural course, history, or progression. The onset is triggered by some innocuous event such as exposure to beer or cigarettes, abetted by some greater than usual environmental stressors. The progression may work its way through the use of various substances or may stay with the initial drug of choice. As the disease progresses, addiction (dependence) sets in. This is characterized by: (i) an uncontrollable craving for the substance; (ii) development of tolerance (more of the substance is required to achieve the same desired effect); and (iii) withdrawal symptoms occurring if the substance is removed. This withdrawal can be dramatic as in the vomiting and sweats experienced by heroin addicts, shakes and seizures experienced by alcoholics, or severe depression experienced by "crack" or cocaine addicts. Along with the physical aspects of addiction come the social disruptions - family problems, job

losses, psychological deterioration - which often presage a further descent into drug use as the person drops through the various social nets that might have furnished barriers to reaching "rock bottom". There is some distinction between the predisposition to alcoholism and other, illicit or illegal substances. Generally, it is believed that alcohol is selectively addictive i.e. some if not most people can use alcohol without becoming addicted. With the illegal drugs - heroin and cocaine in particular - the prevailing opinion is that any use of a sufficient quantity will lead to addiction. Addressing alcohol and substance abuse takes the form of first, keeping the disease dormant and second, offering treatment to help the at-risk alcoholic remain abstinent. For substance abuse it is also necessary to remove the dangerous substances from the general population by legal deterrence. However, interdiction, the scheme of controlling the drug problem by inhibiting supply, has not been particularly effective. The second prong, treatment, has essentially taken three forms: (i) long term residential drug free programs that provide intensive counseling and peer support; (ii) outpatient drug-free where the person also receives counseling and support but remains in his/her community; and (iii) medical management in the form of detoxification or methadone maintenance (Anglin and Hser, 1990). Long-term residential treatment, usually provided in the form of a therapeutic community ("TC"), delivers a psycho-therapeutic approach based on restructuring the person's psychological orientation. The "TC model" relies heavily on confrontation, marathon counseling sessions, and, in its early years, sleep deprivation, to confront the

persons' "delusions about self, their self-images and negative attitudes" (Nesbit, 1971). The goal of the "TC" model is to force the individual to find out about his/her self and then develop a new self-concept assuming that, by definition, the addict has a character flaw that needs correcting. TC's are peer operated, based on an early Synanon model for treatment. The structure is paternalistic and hierarchical. Attitudinal and behavior changes lead to rewards of greater responsibility and respect. Conversely, relapses or lack of progress result in shaming, humiliation, and other punishments. For years the TC model and TC programs were the treatment alternative to incarceration and numerous individuals were remanded to residential drug treatment programs. Given the harshness of the approach and the highly structured environment, it is not surprising that TC's experience high drop out rates and that relapse is high once individuals are released from a TC.

Outpatient alcohol or drug treatment programs most commonly offer group and individual counseling, access to self-help groups such as AA or NA, and social services including help with legal difficulties and family issues. Outpatient programs may be free-standing or attached to a medical facility. Clients most usually enter an outpatient program upon the recommendation of an employer, a family member, or a doctor subsequent to being detoxified ("detox'd") from their drug of choice. Outpatient treatment is designed to stabilize the person; assist him/her in identifying the factors that lead the person to substance abuse; and provide the tools or skills to remain drug or alcohol free.

(Note: The prevailing attitude today in the treatment community is that, by the time a person presents themselves for drug or alcohol treatment, inpatient or outpatient, continued drinking or drug use is not an option. Regardless of mode, treatment in New York State is abstinence based. There is a movement called "rational recovery" where controlled drinking versus abstinence is the goal (Roizen, 1987). This movement however, has not gained a foothold in New York's treatment community.)

A variation on outpatient treatment is psychological counseling provided by mental health clinics or private practitioners. Similar to outpatient treatment programs, counseling tends to focus exclusively on the individual's personal issues and not on remedying social or environmental factors such as employment or health issues. A third variety of treatment, also accomplished as outpatient treatment, is "medical management". Medical management is accomplished most usually through the administration of opiate blockers such as methadone for heroin addicts (Brill and Lieberman, 1972), and the use of Antabuse (or more currently Naltrexone or Prozac) for alcoholics. Placing addiction in the medical arena begins to remove the stigma from addiction and allows for relief of the symptoms. Part of the medical management approach is also the use of acupuncture for both withdrawal symptoms and ongoing medical management.

A variation of the medical management approach is detoxification that is not actually a treatment modality in and of itself, but a preliminary first step. "Detox" is

usually done in a hospital-based (or private) detoxification facility. Patients arrive here, usually on an emergency basis, to be medically stabilized. Alternative drugs are often used: Methadone (or Clonadene) for heroin withdrawal; sedatives, including Lithium, for alcohol withdrawal; and acupuncture, at some facilities, for cocaine withdrawal. A distinction is being made between the emergency nature of "detox" and per se alcohol or drug treatment. "Detox" addresses the acute physical effects of drug or alcohol use; treatment provides the skills to begin to live drug or alcohol free; self-help groups provide the support to continue living drug or alcohol free.

The present study focused on treatment-seeking rather than treatment retention. If our interest is to preserve social order, our focus should be on preparing the populace to be able to comply with the prevailing social rules. Focusing on the law as a mode of control places the greatest accent on external mechanisms. However, internalization of norms would eliminate the need to rely on external mechanisms, particularly in terms of drug violations. Stated simply, if a person moves from being a drug user or abuser to being a non-user s/he will naturally be in compliance with social rules because the source of criminality will have been removed. But, how do we motivate a population of drug users to embrace a new norm? What are the elements of decision-making that moves a person to consider the cessation of drug use? The emphasis, then, of this thesis, is how best to predict and foster a decision that will move an individual from being a drug or alcohol user to being a non-user, and hence from being a criminal to being a non-

criminal.

The TRP has taken an approach that relies on helping the individual develop the cognitive skills needed to begin to develop new norms. This approach, described in the literature as the normative/re-educative ("NR") approach to change, seeks to guide the person through the decision-making process. Assuming that the person is motivated by rational self-interest, the NR approach attempts to "refute the ideas or beliefs that may be keeping the person entrenched in negative, self-defeating (and, in this case, illegal) behavior" (Chin and Benne, 1985). The NR approach is based in part on rational emotive therapy as conceived by Albert Ellis (1975). This idea of "training" people to become less prone to drug use through the use of behavior techniques and support groups is the foundation of drug treatment today. The logic is that "when we directly or indirectly induce people to change their beliefs or philosophies about something, their emotions and behaviors will significantly change" (Wilson, 1975). By exposing people to a range of alternatives, a person can chose to re-train and re-educate themselves and overcome their emotional difficulties. The rational emotive approach starts from the premise that a person wants to change, is uncomfortable with their current status, and needs to be presented with viable options (Ellis, 1975).

The TRP does not ascribe to the power coercive ("PC") model, exemplified by incarceration for (drug) offenders or mandated treatment (Chin and Benne, 1985). This approach assumes no internal commitment on the part of the individual, but rather sees

the individual in need of a highly structured environment that forcefully limits choices and provides negative reinforcement for non-conforming behavior. The power coercive model may be one hundred percent effective for the limited time that the person is externally controlled or confined, but the effects of the "PC" model can only be short-term when internalizing new norms is not the goal. The normative re-educative approach, focusing on relearning versus control, should have longer lasting results as the person is, in effect, taught how to re-frame their thoughts and, hence, their feelings. This researcher believes that when presented with both a viable alternative and the means of achieving the alternative, many people will chose a non-criminal, drug-free lifestyle. (It also makes sense that a choice based on voluntary compliance will yield better results than treatment alternatives that are mandated; however, this comparison is beyond the scope of this particular study.)

A first step in the TRP process of inducing a decision to change a behavior is triggering self-awareness on the part of the substance abuser, and helping the individual to acknowledge the substance abuse problem. Next, the individual needs to recognize the problem and be presented with the means for accomplishing the desired change. A key element to triggering rational self-interest is presenting a viable, accessible option. Decisions are not made in a vacuum, but rather are a result of sifting through a series of options until a workable one is found. The TRP exposes individuals to options through the field trip part of the TRP program where participants can actually experience a

treatment program, if only for a day. Lastly, it may also be necessary for problems to reach a fulcrum before making a decision is even considered. Problems appear, grow and multiply until they are solved at the occasion of a major crisis. Nesbit stated that change occurs from "external events versus internal or exogenous necessity" (Nesbit, 1971).

A crucial aspect of the decision-making process, then, is to bring forth the realization that the person is actually at a decision-making point. This is achieved, in part, for the TRP participants by the introduction of consequential thinking. If change is a process composed of ideas, values and conflicts, the first step may be the introduction of consequential thinking: if "a" occurs, then "b" will follow. Then comes an understanding of how the behavior change might be accomplished. This might also be phrased as the "means" of change. Certainly technology plays a part in this, new advances in drug and alcohol treatment, new approaches to the understanding of addiction and how the mind works, less emphasis on morality and more on the disease mechanisms.

A. Stages of change

This idea of viewing decision-making as a series of steps was incorporated into "stages of change" by Prochaska and DiClemente (1992) for a population of drug users. Prochaska and DiClemente identified the following five stages leading toward a decision to enter drug or alcohol treatment:

Stage 1: Pre-contemplative

This stage is marked by no intention to change behavior in the foreseeable future.

Individuals are unaware or under-aware of their problem. It is not that they cannot see a solution--they cannot see a problem. Families, friends or employers however, are well-aware of the problem. Pre-contemplators may also express a wish to change or may have made attempts to stop using alcohol or drugs, albeit unsuccessfully. "Resistance to recognizing a problem is the hallmark of the person in the pre-contemplative stage" (Prochaska and DiClemente, 1992).

Stage 2: Contemplative

At this stage, people are aware of their problem and are seriously thinking about overcoming it, but have not made a commitment to action. A person in the contemplative stage may know what they want or need to do, but they are not quite ready to do something yet. At this stage the person is weighing the pros and cons of both the problem and the solution.

Stage 3: Preparation

This stage precedes action - the person is intending to take action. This could also be called the "flash point" in the decision-making process. The preparation stage is pre-action and the person may already have taken some halting steps towards the particular goal.

Stage 4: Action

Here the individual may modify their behavior, experience or environment.

Action and change however, are not necessarily correlated.[3] A person may take an action yet find it fails to yield the desired results (i.e. long term sobriety) because additional actions are required to maintain change. Individuals are classified (according to Prochaska) at the "action stage" if they have successfully altered the addictive behavior for a period of one day to six months. Individuals in the action stage endorse statements such as: "I am working hard to change."

Stage 5: Maintenance

Here the person has made a decision, taken action and is now working to prevent relapse. This is a continuous rather than static stage, where there is realization that the problem may be in abeyance, but nevertheless remains a problem. This change or decision-making process, according to Prochaska and DiClemente, is more spiral than linear and those who enter treatment at the "action" stage seem to do better in terms of treatment outcome. While not attempting to test the validity of these stages, it was interesting to see where the TRP population fell in terms of these stages.

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[3] As an example of this disparity between action and results, a TRP participant who had been arrested for possession of "crack" was explaining to the group that he truly did not understand how he had ended up getting arrested. He had acknowledged his "crack" problem months earlier and had gone to his supervisor at work for help. This particular company had an excellent employee assistance program and this man was placed, first in a "detox", followed by several weeks in a short-term residential program. Throughout this process he received full pay and, finally back at work, attended self-help (NA) meetings. He was extremely grateful for the intervention he had received and was thus mystified when, one Friday night, he found himself overcome by an urge to smoke "crack" again, which is how he ended up in the TRP.)

For Stage 1, the pre-contemplative stage, the indicators might be whether the person thought s/he had a problem; did s/he want to stop using drugs or alcohol; had s/he ever tried to stop using drugs or alcohol. Forty-one percent (n=165) of those responding to the question said they thought they had a problem with drugs; only 13% (n=52) felt that alcohol was a problem for them (14% of those who drink); 82% of those who only smoked "pot" said drugs were not a problem for them. In terms of making a decision to enter treatment, those who thought drugs were a problem for them were more likely to seek treatment however, the majority of the TRP population, despite their current circumstances, did not think drugs or alcohol were a problem. This might be the best indicator of the resistance of a pre-contemplator, keeping in mind that one hundred percent of the TRP population have been arrested on a drug related charge.

For the other possible measures of the pre-contemplative stage, 47% had tried to stop using alcohol; 35% of those who drank said they wanted to stop drinking, and 46% of the drinkers (n=101) said they had tried to stop drinking at some time. Fifteen percent of those who drink thought alcohol was a problem for them (n=37). Eighty three percent (n=307) of the population had tried to stop using drugs; 46% (n=163) of those who said drugs were a problem for them said they had tried to stop using drugs; 28% who thought drugs were a problem also thought they needed treatment; and 88% requested treatment.

Stage 2, the contemplative stage, assumes there is some level of awareness of the difficulties drug and alcohol use is causing. This stage can be measured among the TRP

population by the MAST measures that were included on the TRP survey. Fifty-seven percent (n=233) of the TRP population reported that someone close to them (friend or family member) had asked them to stop using drugs or alcohol; 46% (n=183) felt that their alcohol or drug use was no longer under their control; 28% (n=114) said they had lost or nearly lost a job because of their alcohol or drug use; 26%(n=107) had had a fight or argument with someone they cared about because of alcohol or drugs; 38% (n=156) said someone close to them had suggested they seek alcohol or drug treatment. All of these measures proved to be significant predictors of the person seeking treatment, and 27% (n=108) of the TRP population thought they needed drug or alcohol treatment.

Stage 3, the preparation stage, could be measured by evidence that the person had ever taken any step(s) to address his/her alcohol or drug problem. The measures among the TRP population for this stage would be whether or not the individual had ever been in drug or alcohol treatment or had attended an AA or NA meeting. Within the TRP population, 38% (n=160) had attended an AA or NA meeting at one time (33% (n=51) within the last 30 days); 36% (n=153)had been in treatment before. Both having been in treatment before and having attended an AA or NA meeting proved significant in terms of an individual's decision to go into treatment. This appears logical considering that prior treatment experience or attendance at a self-help meeting implies some level of awareness on the individual's part that a problem exists. Theoretically, it should be easier for this group to ask for help than those who have never been in treatment before.

When those who had previously been in treatment were asked for how long they had been in treatment, 20% (n=18) said between one day and two weeks (this is likely those who had been in a "detox" facility); 40% between one and three month (likely to have been outpatient treatment or counseling). Thirty- two percent (n=42) responding said they were still in treatment or had been in treatment within the past month (the month prior to TRP attendance).

Stage 4, the "action" stage, is signified, according to Prochaska and DiClemente, by the person achieving some "clean time" (i.e. a period of time free of alcohol and/or drugs of every variety). Certainly past performance might be considered a good indicator of future performance, and Prochaska and DiClemente did find that people who entered treatment at the "action" stage tended to have a more successful treatment outcome, successful being that they: (i) completed the prescribed course of treatment; (ii) demonstrated a change in attitude; and (iii) remained drug or alcohol free for some specified period of time, post treatment.

Only three people in the TRP population indicated that they had no clean time from drugs and two indicated no clean time from alcohol. Forty-five percent (n=79) responding to the question indicated they had a year of more clean time from alcohol and 39% (n=116) had a year or more clean from drugs. This last variable was a significant predictor for deciding to enter treatment from the TRP. This may demonstrate one premise of the TRP's presentation to participants: sobriety or a drug free lifestyle is an

easier concept to sell to those who have had some experience with it. The lack of significance for clean time from alcohol may be due to the fact that alcohol is not the presenting problem with this population.

Stage 5, "Maintenance", is an unlikely position for TRP participants to be in as, by definition, TRP participants are actively using drugs. This does not mean that a portion of the TRP population is not of the view: "I've learnt my lesson and I'm never going to use again." However, without a tangible plan it is unlikely that this goal will be achieved and, because the TRP is designed for first offenders, those re-arrested are not likely to return to the program. An extrapolation of "maintenance" might be prior experience with treatment and the results, which leads to a discussion of treatment outcome. Successful treatment has been defined as: "1) (drug) abstinence; 2) overall reduction of use; and 3) decline in criminality"; with "effectiveness having been found to relate to age, employment history, stability of living arrangement, and length of time of treatment" (Ockert, Extein and Gold, 1987). Not surprisingly, though reports of low success rates for substance abuse treatment are commonplace, NIDA estimates that, on a nationwide average, 40% of opiate drug users leave programs drug free (1984). But one major question is what is the significance of this number when a "dirty" urine (indicative of continued drug use) will usually results in an administrative discharge from a treatment program. You could just as easily say that one hundred percent of those who successfully complete treatment are drug free, but what percent is that of those who initially sought

treatment? And what happens to those who are discharged early?

Studies looking at treatment outcome suffer from a host of problems. Therapeutic approaches are often poorly defined, as are the program's goals. For example, early in the history of TC's, being drug free did not include alcohol-free. In fact, drinking privileges could be earned, until someone realized that a large portion of TC graduates were becoming full-blown alcoholics. Treatment goals were then modified to be both drug and alcohol free.

Questions of effectiveness remain difficult to answer because follow-up studies of recovering addicts have proven difficult to conduct. One study done found that "if a person stays for 90 days, about 45% will remain drug free for a period of time."; for those in outpatient "milieu" therapy, 50% discontinued treatment; of those left, 75% remained drug free (Hubbard, et al., 1985). In terms of outcome: "75% remained drug free"...the question is for how long? And what happens to those who drop out? Did they remain drug or alcohol free for a length of time? And is there variance depending on the drug of choice? "Treatment outcome was found to be significantly affected by the type of pre-induction drug of abuse i.e. opiate users had greater levels of relapse when compared to cocaine users" (Okert, Extein and Gold, 1987). An "opiate use is a conditioned response whose tendency becomes stronger as a function of the quality, number, and size of reinforcements" (McAuliffe and Gordon, 1980). This, of course, was before the advent of "crack".

A study done in Britain correlated length of time in treatment with future criminality in a two year follow-up study. Some of the variables considered were sex, prior arrests, age of first conviction, education, employment, evidence of psychiatric care, and IQ. Lower probability of future convictions correlated with being female, older, having fewer priors and having an "extroverted personality" (Wilson and Mandelbrote, 1978). Another study found that the greater the length of time in treatment, the less re-conviction post treatment (Ockert et al., 1987). This was echoed by Johnson: "the longer heroin and cocaine abusers remain in treatment, the less their post treatment criminality when compared with their pre-treatment criminality" (Johnson, 1986). Yet another study found a variety of predictors for a positive treatment outcome, among adolescents: a steady work history, late onset of (opioid) use, and length of time remaining in an MMTP (Methadone Maintenance Treatment Program) (Knapp and Templar, 1995). A study done in London with addicts new to treatment found that 37% were drug free for the first month following treatment and almost 25% were found to be "currently abstinent" two to five years post treatment. However, alcohol and marijuana use were prevalent among half the sample at time of follow-up (Sheehan, et al., 1993). What factors contribute to someone remaining in treatment for longer periods of time and what factors predict a "successful" treatment outcome continue to be the topics for studies of alcohol and drug treatment. As mentioned earlier, DeLeon's CMRS scale attempted to elucidate this information.

B. Criminality

Within the TRP population are first time offenders as intended and, as the data indicates, people with a slightly longer history of offenses. This criminal history did not make a difference in terms of the person seeking treatment which may be interpreted that the number of prior arrests can go either way: many priors, particularly if they are for drug offenses (or activities related to drug use), would indicate a history of use that is not conducive to alteration, i.e. the person has become ambivalent or hopeless about their situation. On the other hand, a person experiencing their first arrest might exhibit a greater tendency to normalize the situation, i.e. deny that anything is wrong.

C. Social Status

As suspected, social status variables such as race and gender had little to do with whether someone voluntarily decided to seek drug or alcohol treatment. Similarly, a person's employment status, what they did for a living, and the level of education they had attained were also not important indicators. A variable that did prove to be significant was whether or not the person had insurance -- private insurance, Medicaid or Medicare. Perhaps it should not be surprising that those without insurance were more likely to seek treatment. The TRP is able to offer access to a variety of treatment modalities, to the insured and uninsured alike. The significance of this variable confirms the importance of removing artificial barriers to treatment (like lack of insurance). It also demonstrates that there are indeed "functional" addicts who work (assuming those with private insurance

are those who are employed) although they may be having difficulty maintaining intimate relationships (hence the significance of marital status, i.e. divorce, in treatment-seeking).

In contrast to what might have been expected, social stability factors such as whether a person had children and whether the person's children were living with them, were not statistically significant. This is despite the fact that having children has long been viewed as a significant predictor of a successful treatment outcome. Its lack of overall significance in terms of making a decision to enter treatment may be attributed to the fact that: (i) the TRP population is primarily middle aged (over 30) and any children would be of age to be living on their own; and (ii) the population is largely male and, given the chaos of addiction, are not living in the household with their children.

D. Social Influence

A history of parental drug (or alcohol) use and having friends who use or abuse drugs are clear indicators of who is likely to use, use early, and use frequently (Bucholz and Robins, 1987). "Literature regarding parental drug use and child's later heroin use is sparse however, if a poor family environment yields alcohol use, one would expect an even more disruptive family life would conduce to heroin use" (Robbins, 1987). "Literature indicates individuals who come from a family with a history of substance abuse are at risk of abusing substances themselves." and "growing up in a family with a history of parental substance abuse places one at risk to engage in drug using behaviors" (Neisen, 1993). Only 27% (n=114) of the TRP population had a family member who

used or abused drugs, but for about a quarter of them (22%) this person was a parent, and this variable was somewhat significant terms of the TRP participant seeking treatment. Slightly more of the TRP population had a family member who abused alcohol; nearly half said that the person was a parent, and this variable was also significant in terms of seeking treatment. "Literature regarding parental drug use and child's later heroin use is sparse however if a poor family environment yields alcohol use, one would expect that an even more disruptive family life (living with parental substance abuse) would conduce to heroin use" (Bucholz and Robins, 1987). While half (53%) of the TRP population reported that their family member who was in trouble with drugs sought treatment, only 39% of those with a family member who abused alcohol said that the person sought treatment. This may be because of the tendency for society to accept alcohol abuse more so than drug use or abuse.

Over half the population (57%) said they did not have friends who get high (once a week or more) however, those who did were more likely to seek treatment and this variable was significant. Interesting, three quarters of the TRP population (76%) also knew someone who stopped using and this was a significant predictor of treatment seeking. This may indicate that while friends' use may facilitate one's entry into drug use, friends' getting clean may exert the same influence on getting people to consider entering treatment (i.e. not using).

Relatively small numbers reported living with someone who uses or abuses drugs

or alcohol (9% (n=43) are living with someone who uses or abuses drugs; 5% (n=26) are living with someone who abuses alcohol). This may be explained by the fact that 90% of the TRP population is male. The prevailing wisdom is that a drug or alcohol using male is more likely to be with a non-using partner; and it is unlikely for a non-using male to remain in a relationship with a drug or alcohol using female. Only 4% (n=17) of the TRP population said they have a lover who is an injecting drug user (IDU); 10% said they themselves were an IDU.

E. Patterns of Drug Use among the TRP population

"Drugs became defined as illegal only as evidence for problems resulting from their use appeared... Since World War II use of illegal drugs has spread first from the segregated black ghettos, to the urban, middle class college students, to their younger siblings and working class youths, finally moving to the suburbs...Age of first use has declined but is unusual under 13 or older than 25" (Bucholz and Robins, 1987). Within the TRP population, age of first use of "hard" drugs was likely to be aged 20 and older whereas age of first use of alcohol was predominantly age 15 or younger. This might demonstrate the notion of alcohol as the "gateway" drug. "Retrospective studies of drug histories of heroin addicts, in which marijuana use was found to characterize every respondent" gave rise to the controversial "stepping stone" theory of drug addiction specified by Kandel in 1975, in which use of marijuana was assumed inevitably to lead to the use of hard drugs" (Golub and Johnson). The TRP survey however, did not ask

questions about cigarette smoking and did not ask for the age of first use of specific drugs. While age of first use alone was not a predictor of a decision to enter treatment, it does have bearing on the extent of damage the person might be experiencing from drugs.

In the past, young drug users tended to be urban, male and minority (Bucholz and Robins, 1987). Within the TRP population two-thirds of the population were black or Hispanic and 80% were male however the TRP population tended to be middle aged rather than young. By definition the TRP population are drug users. Over one half of the TRP population smoked "pot"; nearly half used cocaine other than "crack"; 69% drink alcohol (i.e. drank at least once in the past month). Heroin use was predominantly a "white phenomenon" and "crack" was a "black phenomenon". This breakdown of drug of choice by race did prove to be significant and may help refute the notion that the use of "hard" drugs is predominantly a minority problem.

Not only is this a using population, but TRP participants have used for significant periods of time. Half of the heroin users reported five or more years of use and 53% of the "crack" users reported more than three years of use. Those using heroin or"crack" are most likely to report dependency but despite the years of use (which the literature indicates are benchmarks for addiction), this feeling of dependency did not translate into deciding to enter treatment, perhaps because a single "yes/no" measure for dependency was not sufficient to tease out true feelings of dependency.

This is also a poly-drug using population, with the greatest overlap occurring

between marijuana and cocaine. However, it was the use of heroin and "crack" that predicted that a person would seek treatment. Nearly half of the population had been smoking "pot" for ten years or more. IDU is not prevalent in this population. Half indicated they sniff (either heroin or cocaine) and from conversations with participants, sniffing heroin remains popular until it is no longer cost-effective.

Summary

The TRP provides a model for intervention delivered to low level drug offenders that could be implemented in other courts, in other localities. The basic question is did the intervention produce its intended effect? In terms of the TRP population, the intended effect was, first, to deliver an alternative sentence to a population where jail would be considered too severe a penalty. This was achieved. Sixty-five percent of those sentenced to the TRP appeared for their sentence and 94% completed their sentence. Second, there was the goal to facilitate treatment entry for that portion of the population that perceived they had a problem with drugs or alcohol, and to prompt a decision to seek treatment among those participants who had not yet determined that they had a need for treatment. This, too, was achieved albeit on a smaller scale.

Policy questions that need to be answered at this point are:

- How should this current initiative be modified to enhance both of the stated goals?
- What was this initiative's effect on overall outcome (i.e. recidivism)?

- How should further resources be allocated to interventions aimed at first time offenders?
- What new initiatives should be undertaken? Can this model be applied to other populations of misdemeanor offenders?

Major Findings

This study provided several important findings:

1. In a misdemeanor, drug offending population, a portion will decide to seek treatment, making an effort to change their drug using (i.e. criminal) behavior.

2. There are indicators within this population that are predictive of a decision to seek treatment. They are:

- o using cocaine and "crack" for problematical lengths of time;
- o having prior experience with treatment and acknowledging a relapse,
- o being divorced;
- o being 30 to 39 years of age versus being aged 20 to 29 or over 40; and
- o having made prior attempts to stop drinking.

3. Usual factors such as social stability, employment or education do not exert influence on this population's decision to seek treatment, nor do family influence factors. These factors may effect the individuals' later decision to remain in, and succeed at, treatment.

4. Degree of debilitation from drugs can be conceptualized into an index that

might be converted into a screening instrument.

5. A decision to seek treatment is multi-faceted, but elements of social learning theory (having previously taken steps to ameliorate the problem, and acknowledging failure) seem to exert the most influence on the decision-making process.

Discussion of hypotheses

"Crack" and heroin both initially emerged as important determinants for treatment-seeking. It may be that, "crack" in particular, produces a noticeable debilitating effect quicker than other substances. "Years of use" for heroin did not remain significant when other variables were considered, perhaps because heroin use, in and of itself, is seen as a problem regardless of the length of time of use. "Crack" use in excess of two years remained significant when all other variables were considered. "Frequency of use" (the days used in the past month, from one day to daily use) was initially a significant contributor to the participant making a decision to seek treatment indicating that participants recognized that once use becomes more and more frequent, problems arise. However, again, this variable did not hold up in the final model indicating that "frequency of use" can be subsumed by the duration of use.

Feelings of dependency was measured by a single question which certainly may not be adequate to accurately assess drug dependency. The TRP study included the measure to get a sense of the participants' view of their drug use. It was not meant to be a clinical assessment. Having said that, the "dependency" measure only had validity among

cocaine users (although it did not retain its significance in the logistic regression model). This can be explained one or two ways. First, participants may have viewed "feeling dependent upon" as a given for heroin use and passed over the question. Another possibility is that the cocaine users may be better socially integrated than their heroin and "crack" using counterparts (more likely to be employed, married, etc.), hence their arrest may have been more surprising, had a greater impact, and functioned as a "wake up call", triggering an acknowledgment of their situation. However, "feeling dependent upon" did not over-ride "years of use" for cocaine, in terms of predicting treatment seeking, when the logistic regression equation was run.

It was interesting that prior attendance at AA or NA meetings or exposure to per se drug or alcohol treatment did not contribute to a decision to seek treatment at this present time. The logic operating here may be that those who have attended a self-help meeting (38% of the overall TRP population had attended an AA or NA meeting at some point) feel that they have the fellowship to fall back on and do not need per se treatment. Those who responded that they had been in treatment before (36% of the overall TRP population) may perceive this current arrest as a treatment program failure (given that they had made a step towards not using), making them reluctant to try again. It could also mean that the participant has their own network for seeking treatment and does not need to seek a referral from the TRP. It is notable that prior experience with treatment did not work against a decision to seek treatment again; it simply had no effect.

"Perception of ability" was a conceptualization of "perceived self-efficacy" which is a major aspect of social learning theory. It is considered to be a precursor to any behavior change. The only variables that retained significance in this category, when the entire model was considered, was a prior attempt to stop using alcohol, and a prior treatment outcome of "relapse". This may indicate that, save for heroin and "crack" users, the TRP participants see their drug use as harmless while at the same time acknowledging problems with alcohol. This is interesting since alcohol is a "legal drug" versus cocaine and marijuana which are illegal. (Anecdotally, TRP participants do more readily acknowledge the detrimental effects of alcohol while perceiving marijuana use, in particular, as a harmless, even healthy, pursuit). It seems clear that the legal sanctions against using these substances has: 1) failed to deter use; and 2) failed to inculcate the notion that these substances are dangerous.)

Acknowledging a relapse might also fit back into Stage 1 of the treatment seeking model: problem identification. TRP participants have been arrested for a drug-related offense and pled guilty to that charge. Among them, are a group who acknowledged that they have previously been in treatment. When asked about the outcome of that prior treatment experience, a number of them candidly acknowledged a relapse -- either physically re-using drugs or alcohol or taking the first step in the relapse process by placing themselves in the cautionary "people, places and things" scenario. This last group of TRP participants are achieving the first step in the change process -- problem

identification. Coupled with that, they have the additional benefit of having experienced the means of remediation. This might make them more likely to decide to seek treatment (again).

Seeking treatment was not a function of age, race or gender however, the TRP population was not a representative sample. Eighty percent were male and 76% were middle aged (i.e. over 30). As a result, it would be difficult to draw any firm conclusions regarding these social determinants. Some comparisons were made between the TRP population, those participating in the NIDA Household Survey, and those interviewed for the Drug Use Forecast, in New York City. Based on this review, the TRP population is neither typical of the general population nor the per se criminal population. The TRP is older than either the DUF group or the NIDA group, however on other measures the TRP population has more in common with the NIDA population than the DUF group. In terms of drug use however, the TRP population has more in common with the DUF group than the NIDA population. (See Appendix 7 for comparisons between these three populations.)

"Waittime" (the time between sentencing and actually receiving the intervention) was not a significant factor in treatment seeking, with this population. This leads to the conclusion that if someone wanted treatment they would seek it and the idea of "proximity" (pairing the intervention close to the negative event) had no relevance.

"Criminality", a composite of arrest charge, having a prior arrest, and the number

of prior arrests, was another variable that had no relevance when all variables in the model were considered. It should be noted however, that the TRP population was not a representative sample of the criminal population in that most of them were first time offenders, as was intended by the original structure of the model. Arrest charge proved significant but further consideration found that arrest charge (possession versus criminal trespass) and actual drug used (heroin, "crack", or cocaine) was highly correlated.

Having a frame of reference for recovery from alcoholism or substance abuse (i.e. knowing someone who had stopped using drugs or alcohol) had some initial significance in terms of deciding to seek treatment and makes a case for the importance of "modeling" in the decision-making process. Kadushin had found that friends influenced one's decision to enter psychotherapy and it seems there is a similar influence applied to a decision to seek drug or alcohol treatment (Kadushin, 1969). The question regarding knowing someone did not specify the relationship but it is logical to think it was an intimate of the TRP participant, given that people do not readily share drug use and cessation information with a broad spectrum of people. The fact that this variable did not retain significance means its importance was overshadowed by the other variables. This bears further consideration.

The variables comprising the category "interpersonal consequences" while initially having statistical significance did not retain their significance in the second phase of analysis. One explanation might be that these measures were validated for alcohol

abusers but do not translate to substance abusers. Perhaps a different set of consequences should have been specified.

Chapter 6. Implications and Recommendations

The TRP study indicates that in a population of first time drug offenders there are those with both a relatively short history of drug use and those with a long history of use. Therefore, deterrence is not being effected and, up to now, the likelihood of arrest has been relatively low. Second, a portion of this population, regardless of years of use or substance used, will voluntarily seek treatment to resolve their alcohol and drug problems. This certainly supports the need for more programs of this kind directed at this population that is at the starting point of their criminal career. Another logical implication is to conduct what would be Part II of this study: what were the results of the decision to seek treatment? Did the participant who sought treatment complete treatment? Did they achieve sobriety? Were they re-arrested subsequent to the TRP experience?

Recommendations

Given the inherent shortages of funding for innovations in the criminal justice field, it had been a goal of this researcher that once variables had been identified that where predictive of treatment-seeking, the Judges of Manhattan Criminal Court could be advised to seek those people with these attributes and sentence them to the TRP. The TRP has never been able to service the entire eligible drug using population presenting themselves at Criminal al Court. Therefore, they must be utilizing some abstract selection criteria. The results of this study can provide the Judge's with a quantified list of qualities to look for that would predict the best outcome of the TRP experience.

Recommendation 1: A follow-up study be conducted to track recidivism among those TRP participants who decided to seek treatment and those who presented with similar drug or alcohol problems, but did not decide to seek treatment.

Recommendation 2: The TRP model be applied to other populations of offenders to form comparison groups.

Recommendation 3: That the judges at Criminal Court begin to employ the following checklist when sentencing an individual to the TRP:

Checklist

1. What is your marital status? Check one: __ Single __ Married/Living with boyfriend/girlfriend ____ Divorced or widowed

2. Date of birth: _____

3. Have you ever tried to stop using alcohol, on your own, even for a day? ___Yes ___No

4. Have you ever been in drug or alcohol treatment before? ___ Yes ___ No

If Yes:

5. What was the outcome of your prior treatment experience?
   ___ A relapse ___ Completed treatment ___ Left early___ Still in treatment

6. What is your drug of choice?
   ___ Cocaine (not "Crack")
   ___ "Crack"
   ___ Heroin
   ___ Methadone
   ___ Alcohol

   If either cocaine or "Crack":

7. a. How long have you been using: "Crack": _____
   b. How long have you been using Cocaine: _____

Appendix 1

CONFIDENTIALITY RELEASE

I, _____, authorize
(Name of Defendant)

_____, to notify:
(Name of Treatment Program)

_____,
(Court)

or Manhattan Criminal Court Project/Treatment Readiness Program being operated by The Foundation For Research On STD's, Inc. (FROST'D) whether or not I have been accepted for treatment, and whether I completed or terminated treatment, for the purpose of informing the court listed above of my attendance and progress. This consent for release of information will remain valid for 12 months from the date it was signed and pertains only to relevant information covered by federal regulations 42 CFR Part 2.

I also understand that as part of my community service to the Manhattan Criminal Court Project I will be touring a drug treatment facility. I understand that Federal regulations prohibit the disclosure of any information pertaining to the clients that I might be in contact with during this tour. That included any reference to identity, physical whereabouts, diagnosis, treatment, or prognosis. I understand that this regulation was designed to ensure privacy of any individual who seeks treatment for substance abuse and includes specified fines for violations. I also agree to follow the directions of the staff of the Treatment Readiness Program and the drug treatment program and to follow program guidelines when I am on the premises of the facility.

I signify that I have read and am willing to comply with the above statements.

_____ _____
(Date) (Signature)

Appendix 2

Excerpts from focused interviews

Group 1: Attendees at AA/NA meeting who have had no connection with the TRP.

Interviewer: What brought you into "the rooms"?

Subject A: "I knew I had to do something but I didn't know what. I had been using drugs or alcohol for about 17 years and I was sick and tired of being sick and tired. A friend asked me to go to an AA meeting with them. At first I said no. I knew about the fellowship and I didn't like all that God stiff. About 2 weeks later my girlfriend kicked me out; I lost my job; and I had no where else to go. I walked into one of those 24 hour meeting places and decided to stick around. At first I just sat in the back not saying anything but one night a guy started sharing and something he said touched me so I raised my hand. That was the beginning. I have 37 days clean now."

Interviewer: Can you describe what being "sick and tired of being sick and tired" meant for you?

Subject B: "Drugs don't do nothin' for you. In the beginning you think they're the answer that they've soled your problems. But listen: If drugs are the answer, what's the question? Tell me that. It doesn't take too long for drugs to become your number one problem. I'd wake up sick every morning thinking about where I'd go to cop; how much money I'd need. I never slept well. I was run down. Of course I kept sayin' everything was ok. I couldn't admit how bad it really was. The one day I had no fight left."

Subject C: "I abused cocaine for about 5 years. I always had enough money or boyfriends who gave me it to me until my habit got too big. I started hanging around older guys, messin' with them to get what I wanted. One day I came home and my husband had my clothes neatly packed outside the apartment door with a note attached saying he'd had enough. I went to stay with my sister but that didn't last long. She was a heroin addict and finally got diagnosed with the virus. After that she really went crazy and I just did more coke, free-basing, whatever. One night I had a seizure and ended up in the emergency room. From there I went to a rehab and then NA. I've been clean 7 years. My sister died last year. I know if I pick up again I will die."

Subject D: "I didn't have a problem. Everyone around me had a problem. My father was an alcoholic and so were my two brothers. I was the one who had things under control or so I thought. I drank socially...very socially! I guess I was the only one surprised when I got arrested for DWI. I went to some classes; learnt a little bit about alcoholism but nothing change. In fact, I don't remember too much about what I learnt until I found myself in a detox about 2 years later. I had developed pancreatitis...do you know how much you have to drink to get pancreatitis? Alot. Even then I wasn't sure if I'd stop drinking. But they had AA meetings at the detox and I went to one and something clicked. I knew what I was hearing had a ring of truth. After I left the detox I went on a couple more binges but maybe 6 months later I started attending meetings regularly and today I

have 10 years sobriety."

Interviewer: Can you identify a sequence of thoughts that helped you decide not to drink?

Subject D: "Sure, It's the same process I use everyday to stay clean: I want a beer. If I pick up a beer I'll want another beer. I'll lose my sobriety; I'll lose my life as I know it. I need to pick up the phone instead. Nine tenths of sobriety is following a feeling through to the end;, looking at the possible consequences; and then taking a positive alternative action."

Group 2: Clients already in treatment.

Interviewer: How did you decide to go into treatment?

Subject E: "For me it was easy. I was smoking "crack" and at 31 had a massive coronary. They did triple bypass surgery and my doctor said I would die if I picked up the pipe again. My wife left me and took my three daughters; I didn't see how much worse it could get. Once I recuperated from my surgery I came to _____ treatment program. It's been rough. I've got 7 months clean and fight the craving for "crack" everyday. This is an outpatient program and I go home every night and every night I have to walk past a cop spot. It's hard."

Note: Subject E achieved 13 months being clean and relapsed the day before his graduation from the treatment program.

Subject F: "This is my third time in treatment. I bottomed out a few months ago when I lost my teaching job. I thought I had everything under control."

Subject G: I guess I didn't make the decision to do something different, it was made for me. I used to rob houses to get money for "crack" and I was good at it. I could get in and out of a house so quick and so quiet, the people could be asleep and not even know I was there. Except this one time when the guy woke up and came at me with a bat. I'm fighting him off, I guess his old lady called the cops because next thing I know, cops are everywhere. I got 5 to 7; served 48 months and a condition of my parole was I go to treatment. I've been clean now for 26 months and I'm starting to learn how to live like without a substance. Don't get me wrong. Sometimes I want "crack" so bad I can taste it. But I keep remembering what it was like. What it felt like to have no one trust me. My mom hadn't talked to me in over 3 years because she couldn't stand to be around me. She used to drink but started going to AA and said she couldn't watch me destroy myself. Now she comes to visit me and takes part in the family group here. It's different, man. I'm registering for school. Before the only thing I could do was plan my next stick up and I'd always be walking around with a sick feeling."

Group 3: TRP clients who requested a referral to treatment and were willing to be interviewed subsequent to their attendance at the TRP.

Interviewer: What made you request a referral to treatment right now?

Subject H: "I knew I had to do something when I woke up in the holding cell, sitting with ten other girls; it's 95 degrees and there's no air conditioning. I'd never been arrested before, even though I've been out there drinking and drugging for more than 17 years. I came to the TRP and you treated me with respect, which surprised me. I had never thought about addiction as a disease and I think that made it a little easier. But I'll tell you what really got to me. When we went to the treatment program and the counselor there looked around the room and then at me and said: "Well you certainly don't need any help. You look like you're pretty content with your life." Man, that was like a slap in the face. Here I am feeling so ashamed, like I'm at the bottom and he thinks I'm ok with this. It just wasn't right. I've never been in treatment before and I'm scared but I couldn't live this way anymore."

Note: Subject H has over 12 months clean and sober, is working as an outreach worker, and going to school for a CAC.

Subject I: "I'm using too much. I say I'm going to use 3 bags and I use 6. I swore I'd never shoot up and I started shooting 3 months ago because it was getting too expensive. In fact, before I came here today I had started calling programs I had heard of, to try and get a bed but they're all full. They said they had no beds and didn't know when they would have one. So when _____ treatment program said they'd do an intake today and could have a bed for me Thursday, I couldn't believe it."

Subject J: "You brought me to my knees. There's not a thing that was said here that I don't know. But hearing it played back to me, it just hit me. I'm only fooling myself. I was lucky this time. I may not be so lucky next time. If help is being offered it's a stupid man that doesn't take it.

Those TRP clients willing to be interviewed who did not opt for a treatment referral.

Subject K: "I've been a heroin addict for 23 years. There ain't nothin' you or anyone else can do for me. I'm going to die with a needle in my arm."

Subject L:
I'm not ready. I know you're right. I can see things getting worse. I'm just not ready to go into a rehab. I'd have to tell my wife and my boss what's up and I can't do that."

Appendix 3 - TRP Client Survey

THIS QUESTIONNAIRE IS CONFIDENTIAL. THE INFORMATION IS NOT FOR THE COURT AND YOU DO NOT HAVE TO ANSWER ANY QUESTIONS YOU'RE NOT COMFORTABLE WITH HOWEVER YOUR COOPERATION IS APPRECIATED AS THE ANSWERS WILL HELP US TO IMPROVE SERVICES.

Demographics:

1. Client No:_____ 2. TRP Date:_____ 3. Date Of Sentence:_____

4. Date of Birth:_____ 5. Zip Code:_____ 6. Sex: Male (1)___ Female (2)____

7. Race/Ethnicity: White (1)____ Black/African American (2)____ Latino (3)____
Native American(4)____ Asian(5)____ Other (Please specify) (6) _____.

8. Are you currently employed? Yes(1)___ No(2)___
IF YES: A. Full-time(1)__ Part time(2)____
B. What is your occupation? _____

9. What was the last grade of school that you completed: _____ Check here if currently in school____

10. Marital Status: Single (Never Married) (1)____ Married (2) ____ Living with boyfriend/girlfriend/partner (3)___ Divorced/Separated (4)_____ Widowed (5)_____

11. Do you have: Medicaid(1)__ Private Insurance(2)__ Medicare(3)__ No Insurance(4)___

12. Do you have children:Yes(1)___No (2)___ If YES: Are your children living with you? Yes(1)__ No(2) _

13. What were you arrested for?_____

14. Was this your first arrest? Yes(1)____ No(2)____
IF NO:a. How many times have you been arrested before?_____
b. Were you on Probation at anytime in the past 12 months? Yes(1)____ No(1)_____
c. Have you ever been in jail or prison? Yes (1)___ No (2)_____

15. Substance Use History CHECK HERE IF you don't use (illegal) drugs_____

A.Please check each of the substances that you use/ used	How many years have you used or did you use?	Check here which you ever felt "hooked" or dependent upon:
Check		
__ a. "Crack"	_____	_____
__b: PCP	_____	_____
__ c: Heroin		
Mode of Use: (IV____) (Snort____) (Smoke___)	_____	_____
__ d: Marijuana ("Pot")	_____	_____
__ e: Barbiturates (Downers)	_____	_____
___ f: Amphetamines (Uppers)		
Mode of Use: (IV_____)	_____	_____
__ g: Cocaine (not "Crack")	_____	_____
Mode of use: (IV___) (Snort___)	_____	_____
__ h: Methadone	_____	_____
__ i. Other(Please specify_____)	_____	_____

16. How old were you when you started using (illegal) drugs? _____
17. During the past month on how many days would you say you used at least one (illegal) drug?_____

18. Do you feel that you have a problem with drugs? Yes (1) ___ No (2) ___

19. Have you ever wanted to stop using (illegal) drugs? Yes(1)____ No(2)____

20. Have you ever tried to stop using drugs on your own? Yes(1)____ No(2)____
IF YES:
A.What is the longest amount of time that you've been able to stay clean? _____

CHECK HERE IF you don't use (illegal) drugs anymore_____
Alcohol Use History
21. How old were you when you first had a drink (an alcoholic beverage) not including a sip of someone else's drink? _____ CHECK HERE IF you don't drink_____

22. During the past month on how many days did you drink any alcoholic beverage?_____

23. During the past month, on days when you drank (alcohol), about how many drinks did you have, on average? _____

24. Do you feel that you have a problem with alcohol? Yes (1) ___ No (2) ___

25. Have you ever wanted to stop drinking? Yes(1)____ No(2)____

26. Have you ever tried to stop drinking on your own? Yes(1)____ No(2)____
IF YES:
A.What is the longest amount of time that you've been able to stop drinking? _____
CHECK HERE IF you don't drink anymore____

27. Do you have family members who use or abuse (illegal) drugs? Yes(1)____ No(2) _____
. IF YES:
A.Are they: Parents? (1) _____ Brothers/Sisters? (2)_____ Other? (3)_____
B. Did this person seek treatment or attend a self- help meeting like NA, CA, MA, etc.? Yes(1)__ No(2)__

28. Do you have a family member with a drinking problem? Yes(1)____ No(2)____
IF YES:
A.Is it: Parents? (1) _____ Brothers/Sisters? (2)_____ Other? (3)_____
B. Did this person seek treatment or attend AA? Yes(1)__ No(2)__

29. Are you currently living with someone who uses or abuses alcohol? Yes(1) ____ No(2) _____

30. Are you currently living with someone who uses or abuses (illegal) drugs? Yes(1) __ No(2) ___

31. Do you have a lover who is an IVDU? Yes(1)___ No(2)___

32. Among your close friends how many drink or use (illegal) drugs quite a bit?
Nearly all of them(1) __
More than half of them(2) __ Less than half of them(3) __ Only a few(4) ___
None of my close friends drink or use drugs alot(5) __

33.. Do your close friends get high once a week or more? Yes (1) ___ No (2)___

34. Has anyone close to you (friend or family member) asked you to stop using drugs or alcohol? Yes(1)___ No(2) ___

35. Have you ever felt that your drinking (or drug use) was not completely under your control? Yes(1)___ No(2)___

36. Have you lost a job or nearly lost a job because of drinking or drug use? Yes (1)_____ No(2) _____

37. In the past 12 months, have you had arguments or fights with family or friends as a result of alcohol or drug use? Yes(1)___ No (2) ___

38. Has someone close to you suggested that you seek alcohol or drug treatment? Yes(1)____ No(2)____

39. Have you ever been to a self-help meeting like AA or NA? Yes(1)____ No(2)_____
IF YES:
A. Have you attended a meeting recently (within the last 30 days)? Yes(1)_____ No(2)_____

40. Do you know anyone who used drugs and was able to stop? Yes(1)_____ No(2)_____
. IF YES:
A. Which expression best describes how you feel about this person: (Check each that apply)
(1)He/she deserves a lot of respect. _____
(2)He/she was lucky. _____
(3)I know he/she worked hard for their recovery. _____

41. Do you think that you need drug or alcohol treatment? Yes(1) ___ No(2) ___

42. Have you ever received treatment for the use of any drug including alcohol? Yes(1)___ No (2)____

IF YOU HAVE NEVER HAD TREATMENT FOR AN ALCOHOL OR DRUG PROBLEM GO TO Question 44.

IF YOU HAVE EVER BEEN IN DRUG OR ALCOHOL TREATMENT:
43 A. What kind of treatment program? CHECK ALL THAT APPLY
TC(residential treatment program)(1)_____ Hospital-based Inpatient Detox(2)____
Hospital ER (3) _____ Outpatient drug or alcohol treatment program (4) _____
Counseling(5)_____ Methadone Maintenance(6)____ Other(7) _____
B. When was the last time you received alcohol or drug treatment: In the past month (1)____ 1 to 6 months ago (2)____ 6 months to a year ago(3)_____ 1 to 3 years ago (4)_____
More than 3 years ago (5) Presently in treatment(6) ____

C. What was the outcome of the treatment you last received: Still in treatment (1) _____ Successfully completed(2)____
Had a problem with the program (3) ____ Couldn't afford to continue treatment (4)____
Began using drugs again (5)_____

D. How long did you stay in treatment? _____

44. On a scale of 0 to 10:
A. How likely is it that you will continue to use (illegal) drugs:

0	2	4	6	8	10
	Very Unlikely		Somewhat Unlikely	Somewhat Likely	Very Likely

B. How likely is it that you'll get re-arrested:

0	2	4	6	8	10
	Very Unlikely		Somewhat Unlikely	Somewhat Likely	Very Likely

PART II
Client No. _____

45. TRP AM___ PM_____
46. Tour site:_____(Code_____) 47. Type ____ Code_____
48. Requested treatment referral: Yes(1)_____ No(2) _____

49. Program referred to: _____(Code_____)

50.Type of Treatment: _____ (Code_____)

Appendix 4

TRP CALENDARS

Month: January

	Mon.	Tues.	Wed.	Thurs.	Fri.
Date	1/1	1/2	1/3	1/4	1/5
A.M.	Holiday		TRP	Tour: Create	
P.M.					
Date	1/8	1/9	1/10	1/11	1/12
A.M.	TRP	Tour: Lucha TRP	TRP Tour: NRI	Tour: Realization	
P.M.					
Date	1/15	1/16	1/17	1/18	1/19
A.M.	Holiday	TRP	TRP Tour Aurora	TRP Tour BI 125th	Tour StuySq
P.M.		TRP	Tour Trinity		
Date	1/22	1/23	1/24	1/25	1/26
A.M.	TRP	Tour Reality	TRP	Tour Lafayette	
P.M.	TRP	TRP Tour Awayout	Tour Daytop		
Date	1/29	1/30	1/31		
A.M.	TRP	TRP Tour Create	TRP Tour Reality		
P.M.	TRP	TRP Tour Lucha	Tour Reality		

CALENDAR

Month: February

	Mon.	Tues.	Wed.	Thurs.	Fri.
Date				2/1	2/1
A.M.				TRP	Tour LES
P.M.					
Date	2/5	2/6	2/7	2/8	2/9
A.M.	TRP	Tour LES	TRP	Tour Create	
P.M.	TRP	TRP Tour Trinity	Tour NRI		
Date	2/12	2/13	2/14	2/15	2/16
A.M.	Holiday	TRP	TRP Tour Aurora	Pros. Tour Daytop	
P.M.		TRP	Tour Awayout		
Date	2/19	2/20	2/21	2/22	2/23
A.M.	Holiday	TRP	TRP Tour St. Luke	TRP Tour Redhook	Pros. Tour StuySq.
P.M.		TRP	Tour Reality		
Date	2/26	2/27	2/28	2/29	
A.M.	TRP	TRP Tour Interfaith	TRP Tour	Tour Create	
P.M.	TRP	TRP Tour LESHR	Tour Trinity		

CALENDAR

Month: March

	Mon.	Tues.	Wed.	Thurs.	Fri.
Date	3/4	3/5	3/6	3/7	3/8
A.M.	TRP	Tour AIDSSC	TRP	Pros. Tour BI	
P.M.	TRP	Tour Lucha			
Date	3/11	3/12	3/13	3/14	3/15
A.M.	TRP	Tour TriCenter	TRP	Tour Smither's	
P.M.	TRP	Tour NRI			
Date	3/18	3/19	3/20	3/21	3/22
A.M.	TRP	Tour BRC	TRP	Tour Aurora	
P.M.	TRP	Tour Trinity			
Date	3/25	3/26	3/27	3/28	3/29
A.M.	TRP	Tour BRC	TRP	Tour BI - 125th	
P.M.	TRP	Tour Reality			

Appendix 5-A

Discussion of Univariate Statistics for Entire TRP Sample Characteristics

Demographics:

The TRP population was primarily male (80%, n=391) and fairly equally distributed by race: 42% (n=202) were black; 37% (n=175) were white; and 21% (n=102) were Hispanic. (See Appendix 5-B) Asians and Native Americans comprised only a negligible 2% of the TRP population. In terms of age, 46% (n=193) of those responding to the question (n=417) were between 30 and 39 years of age, with a mean of 36 and a range between 17 and 65.

Social Status:

The TRP survey considered the following measures of social status: level of education achieved, marital/relationship status, employment status (employed full time, part time and not employed), occupation, the presence of children, and whether or not they had medical insurance. The results were as follows:

a. Education: 36% (n=162) of those answering the question (n=448) were high school graduates; 36% (n=164) had attended college or vocational school; 27% (n=122) had less than a high school diploma.

b. Marital/Relationship status: more than half the TRP sample (53%, n=234) of those who answered the question (n=440) were single; 27% (n=117) were married or living with a boy/girlfriend; 20% (n=89) were divorced or widowed.

c. Employment/Occupation status: the TRP population was fairly evenly divided between those employed and those unemployed. Of those responding to the question, (n=440) 49% (n=214) were employed; 51% (n=226) were unemployed. The majority of those who were employed, were employed full time (82%, n=176). Of those responding to

the question regarding occupational status, (n=236) 26% (n=62) were employed as clerical or general office workers; 24% (n=57) worked as unskilled labor (a maintenance man or warehouse worker, etc.); 15% (n=35) were trained professionals i.e. teachers, nurses, or social workers; 14% (n=32) worked as laborers (skilled and unskilled trade); 13% (n=30) were artists (musicians or those working in the fashion industry).

d. Children: 56% (n=244) of those who answered the question (n=436) did not have children; 44% (n=192) did. Of those with children, 54% (n=97) said their children did not live with them.

e. Medical Insurance: 56% (n=248) of those answering the question (n=443) had some type of medical insurance; 50%(n=125) of those with insurance had private insurance; 50% (n=123) had Medicaid or Medicare; 44% (n=195) had no insurance.

Alcohol/Substance Use:

Ninety percent (n=410) of the TRP population responded to the various drug use questions; 10% (n=44) indicated they did not presently use illegal drugs.

a. Drug(s) Use(d): TRP participants were given a checklist of substances and were asked to check off the substance (or substances) they currently use or had used. Eighty-eight percent of the overall TRP population (n=430) indicated that they used the predominant drugs of choice: marijuana (used by 49% of the sample (n=240), 56% of those responding to the question); cocaine not "crack" (used by 41% of the sample (n=202), 47% of those responding to the question); heroin (used by 29% (n=139) of the sample, 32% of those answering the question); and "crack" (used by 26% of the population (n=139) 30% of those

responding to the question.[4] Only about 15% of the overall TRP population indicated they used either amphetamines, barbiturates, PCP, or other drugs, primarily hallucinogens; 13% were (or had been) on methadone; and 13% said they only smoked marijuana. Sixty-two percent said they did not use "crack"; 60% did not indicate heroin use; 47% did not use cocaine; and 39% said they did not use marijuana.

b. Age of First Use: Age of first use of drugs ranged from six to 63 with a mean age of 21. The mean age of first use of alcohol was 15. Forty percent (n=144) of those answering the question (n=361) said they started using drugs after age 20; 34% (n=124) were 15 years old or younger; 26% (n=93) were 16-19 years of age. Fifty-three percent (n=182) of those answering the question (n=342) stated they had started using alcohol when they were 15 or younger; 37% (n=127) were between 16 and 19 years of age; and 10% (n=33) were over 20.

c. Years of Use: Participants were asked to indicate the number of years they had used each of the substances they had checked off that they used. This report on years of use is specific to the particular substance the TRP participant used and is not a generic measure. This question pertaining to years of use was not asked for alcohol since it was anticipated that alcohol use would be prevalent but not actually what they were arrested for. Between 60% and 70% of the users responded to this question concerning years of use. Considering those who used heroin (and responded to the question (n=100)), 50% (n=50) indicated they had used heroin for five years of more; 29% (n=29) had used heroin for two to four years; 21% (n=21) had only used heroin for up to one year. For cocaine, of the cocaine users responding to the question of years of use (n=122) 51% (n=62) had used cocaine for three years or more; 31% (n=38) had used cocaine for up to one year; and 17% (n=21) for two

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[4] The categories of drugs used are not mutually exclusive. A person smoking marijuana might also sniff cocaine.

years. Sixty-two percent (n=56) of those who indicated "crack" use said they had used "crack" for three years or more; 19% (n=17) said they had used "crack" for up to one year; another 19% said they had used "crack" for two years. Of the 159 marijuana users who answered the question, 46% (n=73) indicated they had smoked marijuana for 10 years or more; 23% (n=37) had used marijuana for five to nine years; and 23% said they had only been smoking marijuana for one or two years.

d. Frequency of Use: The question regarding frequency of use was asked generically, first for any drug the person might use and then for alcohol. TRP participants were asked to report the number of days, in the past month, that they had used drugs (or had used alcohol). Of those responding to the question regarding drug use (n=345), 28% (n=98) said they had not used any drugs in the prior month; 32% (n=111) had used between three and 10 days in the past month; 24% (n=84) had used half the time if not daily (between 14 and 31 days in the past month); 15% (n=51) had used only one or two days. Regarding the frequency of use of alcohol (in the past month), 31% (n=113) of those answering the question (n=365) indicated they had not used any alcohol in the preceding month; 38% had drank between three and fourteen days out of the last month; 18% (n=66) said they had drank only once or twice in the past month; 13% (n=49) had drank half the time if not daily (between 15 and 31 days in the past month).

e. Quantity (for alcohol only): The TRP participants were asked to indicate how many drinks they had had on those occasions, in the past month, that they had drank. In the overall TRP population, of the 332 people who answered the question, 26% (n=86) said they had not had a drink in the past month; 51% (n=170) had had between one and four drinks per occasion in the past month; 23% (n=76) had had five or more drinks per occasion in the past month.

f. Dependency:"Dependency" was measured, like "years of use", individually for each substance the individuals had checked off that they used. Therefore it would be possible for the individual to check off that they used marijuana ("pot") and heroin, for example, but could indicate that they felt dependent on heroin but not marijuana. It was also an option that the individual might check off that they use(d) a substance but not that they felt dependent on it. By substance then, 70% (n=97) of those who indicated they used heroin said they felt they were dependent upon heroin; 20% (n=41) of the cocaine users said they felt dependent upon cocaine; 47% (n=60) of "crack" users said they felt dependent upon "crack"; and 14% (n=34) of those who smoked marijuana said they felt dependant upon it.

Interpersonal Consequences:

The category "Interpersonal Consequences" had nine variables. First, whether the person thought drugs were a problem for them or did they think alcohol was a problem for them? Then, seven items were included from the Michigan Alcohol Screening Test (MAST) including two items pertaining to attendance at a self-help meeting (AA or NA). Fifty-nine percent (n=242) of those responding to the question (n=407) did not think drugs were a problem for them; 41% (n=165) did. Eighty-seven percent (n=358) of those responding to the question (n=410) did not think alcohol was a problem for them; 13% (n=52) did.

a. MAST Measures: The MAST measures included on the TRP survey were: Has someone close to you asked you to stop using drugs or alcohol; Do you feel that your drinking (or drug use) is no longer under your control; Have you lost a job because of drug or alcohol use; Have you had a fight with someone you care about as a result of alcohol or drugs; Has someone close to you suggested you seek alcohol or drug treatment. There were varying response rates to the MAST measures (between 80% and 84% of the population responded to the questions). For the first question: has someone close to you asked you to

stop using drugs or alcohol, 57% (n=233) of those responding to the question (n=407) said, yes, someone close to them had asked them to stop using drugs or alcohol. Forty-six percent (n=183) of those responding to the question (n=395) said they felt their drinking or drug use was no longer under their control; 28% (n=114) of those responding to the question (n=414) said they had lost a job because of drug or alcohol use. (This is 53% of those indicating they were employed.) Twenty-six percent (n=107) said they had had a fight with someone they care about as a result of alcohol or drugs; 38% (n=156) said someone close to them had suggested they seek alcohol or drug treatment.

b. Attendance at self-help meeting: The last part of the "Interpersonal Consequences" section asked participants whether they had ever attended a self-help meeting (Alcoholics Anonymous (AA) or Narcotics Anonymous (NA)) and, if they had, was it in the last thirty days. Regarding attendance at AA or NA, 38% (n=160) of those responding to the question (n=417) had attended an AA or NA meeting and 33% (n=50) had done so within the past month (67% (n=100) of those who had attended AA or NA had not done so within the past month).

Proximity of Consequence:

It was of interest to see how long TRP participants had waited to get into a TRP class. "Waittime" was a factor that this researcher had no control over, as it is a function of when people are sentenced to the TRP by the Criminal Court judges. The TRP was able to handle approximately 250 people a month. As of early 1996, about 400 people a month were actually sentenced to the TRP. To test the importance of "waittime", selection of the TRP sample for this study was arranged so there would be a range of time from a week to three months. Forty-three percent (n=178) of those who provided the TRP with a date of sentence (DOS) (n=416) were seen within one week of sentencing; 20% (n=82) waited up to two

months; 17% (n=69) were seen within one month; 14% (n=57) were seen within two weeks of sentencing. The smallest number (7% (n=30)) waited up to three months before attending the TRP. The average "waittime" was three weeks.

Criminal History:

This was a first arrest for the majority (69%, n=303) of those TRP participants answering the question (n=440). For those participants responding who indicated a prior criminal history (n=133) 36% (n=48) had only one prior; 31% (n=41) had two priors; 33% (n=44) had three or more priors. In addition to the number of priors, participants were asked what they were arrested for. As the TRP is designed for misdemeanor drug offenders, it was expected that the charges reported would be limited to drug related activities: criminal possession of a controlled substance; possession of marijuana; possession of (drug) paraphernalia; criminal trespassing; or disorderly conduct (the charge that low level offenses can be pled down to). Recoding into two categories, possession (of a controlled substance) and criminal trespassing, the most common charge among those responding to the question (n=458) was "possession" (92%, n=425).

Perception of Ability:

An aspect of decision-making, particularly a decision to change one's behavior, according to Bandura, is a person's "perceived self-efficacy". (1987) This Social Learning concept has been translated, for this study, into a person's perception of their ability to change. To measure one's "Perception of Ability", questions were included that might determine the TRP participants' desire for change (pertaining to their alcohol or drug related problem) and what steps they may have taken in the past to try to change. There were six variables that comprised the category "Perception of Ability": Did the participant want to stop using alcohol? drugs? Had they ever tried to stop using alcohol? drugs? How much

"clean time" had they managed to put together from alcohol? from drugs?

a. Desire to stop using alcohol: only 40% (n=118) of those responding to the question (n=299) said they wanted to stop using alcohol; 60% (n=181) said they did not want to stop using alcohol.

b. Prior effort to stop using alcohol: 47% (n=146) of the population answering the question (n=312) indicated they had tried to stop using alcohol; 53% (n=166) had not.

c. "Clean time" from alcohol: For those who indicated they had tried to stop using alcohol, a follow-up question was asked: how long were you able to refrain from using alcohol? Of the 175 people responding to this question, 36% (n=63) of them had achieved between one day and three months clean from alcohol and 45% (n=79) said they had achieved a year or more sobriety. The mean "clean time" from alcohol, among the TRP population, was two years.

d. Desire to stop using drugs: Of the 338 people who answered the question, 83% (n=282) said they wanted to stop using drugs; 17% (n=56) did not.

e. Prior effort to stop using drugs: Of those responding to the question (n=369) 83% (n=307) said they had tried to stop using drugs. (This is 75% of the population who indicated they had ever used any drugs (n=407)).

f. "Clean time" from drugs: For those who indicated they had tried to stop using drugs, a follow-up question was asked: how long were you able to refrain from using drugs? Of the 298 people who responded to this question: 1% (n=3) said they had not achieved any "clean time" from drugs prior to their coming to the TRP; 39% (n=116) had achieved a year or more; 34% (n=100) had between one day and three months "clean"; 27% (n=79) had been "clean" from four months to 11 months. The mean "clean time" from drugs was two years, with a standard deviation of 5.1 years.

Treatment Receptive:

For those individuals evidencing a perception that there was a need to address their alcohol or drug problem; acknowledging that they wanted to stop using drugs or alcohol; and in fact, had made attempts to try and stop using, the next logical question was whether the participants had any prior experience with drug or alcohol treatment. There were four variables that comprised the category "Treatment Receptive": Did the person think s/he needed treatment? Had they ever been in treatment? If so, for how long, and what was the outcome of their prior treatment experience?

a. Need treatment: only 27% (n=108) thought they needed treatment; 72% (n=289) of those responding to the question (n=397) said they did not think they needed treatment.

b. Prior Treatment Experience:

1. Ever been in treatment: 36% (n=153) of the TRP population had been in treatment before; 64% (n=271) had not.

2. Time in treatment: For those who had been in treatment before, the average time spent in treatment was one year. Only about half the population who had been in treatment responded to this question (n=92), 40% (n=37) of them had spent between four months and one year in treatment; 40% had spent between one and three months in treatment; and 20% (n=18) had spent between one day and two weeks in treatment. The range was between one day and one year.

3. Prior treatment outcome: For those TRP participants who had been in treatment before, the second question asked was what the outcome of prior treatment had been: a relapse (the person indicated they had resumed drug or alcohol use); money or program problems (implying the person left treatment against clinical advise prior to graduating or completing the program, or received an administrative discharge for lack of compliance with

program rules); was still in treatment; or had successfully completed treatment. Recoding to eliminate zero cells, of the 131 responding to the question, 32% (n=42) of those who had been in treatment before said they were still in treatment; 27% (n=35) said they had relapsed; 21% (n=28) said they had had "program problems"; 20% (n=26) had completed treatment.

Social Influence:

The last series of questions on the TRP survey pertained to the individuals' social milieu. Eleven variables comprised the category "Social Influence": Did their family use or abuse alcohol or drugs? Which family member/s? Had those people in the individuals' social sphere, who had problems with drugs or alcohol, sought treatment? Did the individual know anyone who had been able to stop using drugs or alcohol? Do their friends get high? Do they live with someone who abuses alcohol? Uses drugs? Do they have a lover who is an injecting drug user (IDU)?

a. Know someone who stopped using: 76% (n=308) of those who answered the question (n=405) said they knew someone who had stopped using drugs or alcohol; 24% (n=97) did not.

b. Family drug or alcohol use: Of the 429 people responding to the question, 27% (n=114) had a family member who used drugs; for 22% (n=24) of them it was a parent and for 78% (n=85) it was another family member: a sibling, aunt, or uncle. Fifty three percent said the family member with a drug problem sought treatment. Thirty-two percent (n=106) of those responding to the question (n=335) said they had a family member who abuses alcohol; 47% (n=47) indicated that the family member was a parent, 54% said it was an other family member (sibling, aunt or uncle); 39% (n=35) said the family member had sought treatment, 61% said they had not.

c. Peers' Use: There were four variables regarding peers' use: Does the individual have friends who get high (once a week or more)? Do they have a lover who is an injecting drug user? Do they live with someone who abuses alcohol? Uses drugs? Of the 405 responding to the question, 43% (n=175) said that their friends got high (once a week or more); 57% (n=230) said their friends did not get high (at least not that frequently). Only 4% (n=17) of those answering the question said they had a lover who was an IDU; and only 6% reported they are living with someone who abuses alcohol; 10% reported they are living with someone who uses drugs.

Requested Treatment:

Fourteen percent (n=70) of the 488 TRP participants requested a referral for treatment; 86% (n=418) did not.

Appendix 5 - B
Univariate Statistics

Demographics	n	Percent	Number
Gender:			
Male	488	80%	391
Female		20%	97
Race			
White	488	37%	175
Black		42%	202
Hispanic		21%	102
Other		2%	9
Age			
Mean		36	
under 20	417	6%	25
21-29		18%	74
30-39		46%	193
Over 40		30%	125
Social Status:			
Education:			
Less than HS	448	27%	122
HS grads		36%	162
Any college or vocational school		36%	164
Marital status:			
Single	440	53%	234
Married or living with girl/boyfriend		27%	117
Divorced/Widowed:		20%	89
Employment status			
Employed FT	440	40%	176
Employed PT		9%	38
Not employed		51%	226
Occupation*			
Clerical	236	26%	62
Unskilled		24%	57
Trained Professional		15%	35
Laborer		14%	32
Artist		13%	30
Executive		4%	10
None		4%	10

* Occupational categories are composites: "Laborer" is skilled trade. "Clerical" is general office work.Artist" is artist,musician, fashion. Trained Professionals are teachers, nurses, etc.

	n	Percent	Number
Have children:			
Yes	436	44%	192
No		56%	244
If you have children:			
Are they living with you?	181		
Yes		46%	84
No		54%	97
Insurance			
Medicaid/Medicare	443	28%	123
Private Insurance		28%	125
None		44%	195
Drug Use			
Any drug use*	451	90%	407
No illegal drug use**		10%	44

Drug(s) Use(d) ***	Total Pop.	Resp.	Use this drug	Per. Resp.	Don't Use this drug	Missing
Pot	488	430	49%/240	56%	39%/191	12%/57
Cocaine	488	430	41%/202	47%	47%/228	12%/58
Heroin	488	430	29%/139	32%	60%/271	12%/58
Crack	488	430	26%/129	30%	62%/302	12%/57
Other	488		15%/54			
Methadone	488		13%/62		76%/369	12%/57

Age of First Use:				
of DRUGS				**Mean**
15 or under	361	34%	124	21
16-19		26%	93	
over 20		40%	144	
of ALCOHOL				
15 or under	342	53%	182	15
16-19		37%	127	
over 20		10%	33	

FOR THOSE WHO INDICATED THEY USED EACH OF THE SUBSTANCES:

Years of Use:****			
For those using HEROIN			
1 year	100	21%	21
2-4 years		29%	29
5 or more		50%	50

* Compiled from those indicating the use of any substances on the checklist.
** The results from the survey question:Don't use illegal drugs.
***Categories of substances used are not mutually exclusive.
**** Not asked for those using alcohol.

Years of Use:	n	Percent	Number
For those using COCAINE:			
1 year	122	31%	38
2 years		17%	21
3 or more		51%	62
For those using CRACK:			
1 year	90	19%	17
2 years		19%	17
3 years or more		62%	56
For those using POT:			
1-2 years	159	23%	36
3-4 years		8%	13
5-9 years		23%	37
10 or more		46%	73
FREQUENCY OF USE OF ANY DRUG			
Days of use in past month			
None	345	28%	98
1 or 2		15%	51
3-10 days		32%	111
14-31 days		24%	84
FREQUENCY OF USE OF ALCOHOL			
Days of use in past month			
None	365	31%	113
1 or 2		18%	66
3-14 days		38%	137
15-31 days		13%	49
Quantity (of alcohol)			
Number of drinks per			
occasion in past month			
None	332	26%	86
1 - 2		18%	90
3 - 4		16%	80
5 or more		16%	76
Missing		32%	156
Dependency*			
Of those who used:	**Felt dependent upon:**		
Heroin	139	70%	97
Cocaine	202	20%	41
Crack	129	47%	60
Pot	240	14%	34

* Not asked for those using alcohol.

	n	Percent	Number
Interpersonal Consequences:			
Do you think DRUGS are a problem for you?			
Yes	407	41%	165
No		59%	242
Do you think ALCOHOL is a problem for you?			
Yes	410	13%	52
No		87%	358
MAST Measures			
Someone close to you has asked you to stop using alcohol or drugs			
Yes	407	57%	233
No			
Drinking or drug use is no longer under your control.			
Yes	395	46%	182
No			
Lost a job because of drug/alcohol use			
Yes	414	28%	114
No			
Had a fight with someone you care about as a result of alcohol or drugs			
Yes	411	26%	107
No			
Someone close to you has suggested you seek alcohol or drug treatment			
Yes	413	38%	156
No			
Ever been to AA or NA			
Yes	417	38%	160
No		62%	257
If ever attended AA/NA:			
Attended in the last 30 days:			
Yes	150	33%	50
No		67%	100

Proximity of Consequence	n	Percent	Number	Mean
Wait Time:				
Seen within 1 wk.	416	43%	178	3 wks.
Waited up to 2 weeks		14%	57	
Waited up to 1 mo.		17%	69	
Waited up to 2 mo.		20%	82	
Waited up to 3 mo.		7%	30	
Criminal History				
First arrest?				
Yes	440	69%	303	
No		31%	137	
For those who had priors: HAD				
1 prior arrest	133	36%	48	
2 priors		31%	41	
3 or more prior arrests		33%	44	
Arrest charge:				
CPCS	458	91%	442	
Trespassing		7%	33	
Perception of Ability:				
Do you want to stop using ALCOHOL				
Yes	299	40%	118	
No		60%	181	
Have you tried to stop using ALCOHOL				
Yes	312	47%	146	
No		53%	166	
Clean time from ALCOHOL				**Mean**
None	175	1%	2	2 years
1 day to 3 mos.		36%	63	
4 to 11 mos.		18%	31	
1 year or more		45%	79	
Want to stop using DRUGS?				
Yes	338	83%	282	
No		17%	56	
Tried to stop using DRUGS				
Yes	369	83%	307	
No		17%	62	
Clean time from DRUGS				
None	298	1%	3	2 years
1 day to 3 mos.		34%	100	
4 to 11 mos.		27%	79	
1 year or more		39%	116	

Treatment Receptive:	n	Percent	Number		
Do you think you need treatment?					
Yes	397	27%	108		
No		73%	289		
Prior Treatment Experience					
1. Ever been in treatment:					
Yes	424	36%	153		
No		64%	271		
If you have been in treatment before:					
2. Time in treatment				Mean	Mode
1 day - 28 days	107	19%	20	264 dys	180 dys
1 mo. - 3 mos.		31%	33		
4 mos.- 1 year		35%	37		
More than 1 year*		14%	15		
Range 1 day-5 years					
3. Prior treatment outcome					
Still in treatment	131	32%	42		
Relapsed		27%	35		
Program problems		21%	28		
Completed treatment		20%	26		
Social Influence					
Knew someone who stopped using drugs?					
Yes	405	76%	308		
No		24%	97		
Family Drug Use:					
Have a family member who uses DRUGS?					
Yes	429	27%	114		
No		73%	315		
If you have a family member using drugs:					
Who in family?					
Parent	109	22%	24		
Other family member**		78%	85		
Did that family member seek treatment?					
Yes	91	53%	48		
No		47%	43		

* Anything over 36 months may be AA/NA versus treatment.

** A sibling, aunt, uncle.

	n	Percent	Number
Family alcohol use:			
Do you have a family member who abuses alcohol?			
Yes	335	32%	106
No		68%	229
If you have a family member who abuses alcohol			
Who in the family abuses alcohol?			
Parent	101	47%	47
Other family member		54%	54
Did that family member seek treatment for alcohol use?			
Yes	89	39%	35
No		61%	54
Peers' Use:			
Friends get high?			
Yes	405	43%	175
No		57%	230
Lover an IDU?			
Yes	395	4%	17
No		96%	378
Do you live with someone who abuses ALCOHOL?			
Yes	428	6%	26
No		94%	402
Do you live with someone who uses DRUGS?			
Yes	427	10%	43
No		90%	384
Requested Treatment			
Yes	488	14%	70
No		86%	418

Appendix 6- A

Discussion of the Debilitation Index

Further exploration of several of the key drug use variables was done. Of interest was to see how select variables might combine: drug of choice, years of use, age of first use, frequency of use (days used in the past month), feelings of dependency, mode of use (for cocaine and heroin), and quantity used for alcohol (number of drinks per occasion in the past month). These variables were compiled into a "Debilitation Index" with three levels of severity: "high" that would translate into the addictive use of the substance; "mid" range that would be labeled abusive use of the substance; and a "low" level of severity that would be casual or social use. "Don't Use" would be a fourth category for each substance included in the Index. The Index was compiled based on the literature, for the four primary drugs used by the TRP population (heroin, "crack", cocaine and "pot"), and alcohol.

Degree of debilitation (from drugs or alcohol) is a way to describe the extent of the TRP clients' drug using behavior. It can be conceptualized by four questions:

o How often does the client use a particular substance ("frequency of use")?

o How long has the client been using their substance ("years of use")?

o How old were they when they started using drugs or alcohol ("age of first use")?

o Does the client think s/he is dependant on the particular substance?

Imposed over these four questions is the particular drug of choice. In addition, for heroin and cocaine, a distinction is made between sniffing and injection drug use (IDU) ("mode of use"); and, for alcohol, the number of drinks per occasion ("quantity of use") is an additional measure.

In creating the "Debilitation Index" this researcher considered each of the major substances used by the TRP population (heroin, (including methadone) cocaine, "crack" and

"pot") including alcohol. Each substance has a different set of parameters for the qualifying indices. For example, "Opiate use is a conditioned response whose tendency becomes stronger as a function of the quality, number and size of reinforcements." (McAuliffe & Gordon, 1980) Therefore, as the years of using heroin increased, so did the "degree of debilitation"; and as the "frequency of use" for heroin became greater than 15 days in the past month, "degree of debilitation" also increased. (Note: for methadone use, "years of use" of methadone exceeding one year was scored "high" for it presumes a history of heroin use, prior to going on methadone.)

Clients enrolled in treatment whose primary drug was "crack": 1) started drug use at 15; 2) used "pot" first then used at least one illicit drug on a daily basis; 3) 94% used "pot"; 49% used heroin; 44% used PCP; 4) more than half the sample used four or more illicit drugs; 5) 19% reported also injecting drugs; 6) most were in treatment for the first time; and 7) had sought treatment within a year of first using "crack" (Rainone, Frank, Kott and Maranda, 1987). This same study found that the "typical" "crack" addict in treatment was: 1.) female; 2.) younger (18-25); 3.) black; 4.) unemployed; 5.)with no prior experience with treatment. Thus, "crack" use seems to become problematic after one year; and again, as frequency of use of "crack" increased (15 days in the past month) so does the individual's score on the Debilitation Index. Addiction to cocaine (the problematic use of cocaine) however, is estimated by NIDA to develop after three or four years of use (Time Magazine, 1989). For cocaine use then it would be three years or more of use that would be labeled "high" or addictive use of cocaine.

"Most of those who used marijuana several times a week used other drugs as well (hence greater potential for debilitation) and the earlier marijuana is used the more likely it is that other drugs will be used."... "Retrospective studies of drug histories of heroin addicts, in

which marijuana use was found to characterize every respondent, gave rise to the controversial "stepping stone" theory of drug addiction in which use of marijuana was assumed inevitably to lead to the use of hard drugs, especially heroin.". . ."About 50% of marijuana users try some other (illicit) drug" (Kandel, 1991). Today the "stepping stone" or "gateway" theory is largely refuted however, looking at stages and sequences of drug involvement, it is clear that alcohol and marijuana are integral parts of the sequence. Kandel (1975) specified that the progression of drug use (in an adolescent population) was: 1) beer or wine; 2) cigarettes or hard liquor; 3) marijuana; 4) other illicit drugs. The use of the "lower" drugs may be a necessary but not sufficient condition for progression to a higher stage of involvement with more serious drugs however marijuana is the most frequently abused illicit psychoactive drug in our society" (NIDA, 1993). For the Debilitation Index, marijuana usage, ("years of use") in excess of ten years was seen as "high" or addictive use, and if "days used" exceeded 25 days in the month, which would be nearly daily usage.

For alcohol, according to Vallient (1985) a low level of alcohol use would be less than one drink in a month. Mid-range or medium use of alcohol would be two to three drinks per day or one to 13 drinks per week. The "heavy" use of alcohol would be more than three drinks per day, coupled with a history of drinking for five years or more. Another way to conceptualize alcohol use is in terms of the effect (or consequence) from use. "Social drinking is the occasional use of alcohol (maximum of two drinks per day) with no misuse (no intoxication) and no evidence of an alcohol-related problem. Abusive drinking is the habitual misuse with frequent intoxication and evidence of alcohol-related problems" (DAAA, 1986). For alcohol, the prime measure was used for the Debilitation Index the number of drinks, with three or more drinks per occasion being "days used" exceeding 15 days (in the past month) being labeled "high" or the addictive use of alcohol.

The earlier "age of first use" predicts continued use of drugs, the more frequent current use of drugs, and the more serious the use of drugs will become (Bucholz and Robins, 1989). It was found that marijuana use beginning at age 20 or later (in their sample of young black men) was typically infrequent, mild and involved no other drugs use (Murphy, 1967). In compiling the Debilitation Index, for each of the substances, included, starting to use the substance before age 15 was classified as "high" or Level 3; starting at age 16 to age 19 was "mid" range (Level 2 usage); and if the individual started to use a substance after age 20, it was characterized as "low" level use (social or casual use) (Level 1 Usage).

Considering cocaine and heroin, the mode of use was another parameter that was considered. Cocaine and heroin can be sniffed or injected.[4] When the person moves from sniffing to injecting it is indicative of a progression to a more serious (i.e. addictive) use of the substance. The longer the addictive use continues, the more likely it is that the frequency of injection will increase (Ingold and Ingold, 1989). Therefore, if the TRP participant indicated that their mode of use was IDU (for either heroin or cocaine) the Debilitation Index score would be in the "high" range.

The last measure included on the Debilitation Index was "Dependent Upon". This measure was included for each of the substances used and was phrased as a "yes/no" response. The question on the TRP client survey was: "Do you feel dependant upon"... and was placed alongside the list of substances. A "Yes" response to this question could indicate either "high" or "mid" range use. A "No" would place the person in the "Low" range of use, given their responses on the other indices. "Dependency" for alcohol use was indicated by a "yes" response to the question: "Do you think alcohol is a problem for you? "A negative

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[4] Smoking heroin is not common in New York City or among the TRP population; smoking cocaine is subsumed under "crack". This study did not delineate between smoking "crack" and free-basing cocaine.

response would classify the person as Level 1. Appendix 6 - B presents the index parameters for each substance and the criteria for each level of severity.

Analysis:

Using the TRP data set, two separate runs were done, with each of the substances. First, selecting for each substance separately, each index category was created for each substance. A series of "If" statements were used i.e.: "If heroin use (HEROIN) equals one (yes) or methadone (METHADON) equals one, and HEROINA (years of use) is greater than or equal to five or METHA (years of using methadone) is greater than or equal to one and age of first use of drugs or alcohol is less than or equal to 15 (years of age); or mode of use is injecting (IDU) and days used (in the past month) (frequency of use) is greater then or equal to 15 (days) or the respondent indicated they felt they were dependent upon the particular substance (e.g. HEROINB (dependency on heroin) equals one (yes)) then heroin use (HUSE) is "high" or equals a score of three. The last category "Don't use" for heroin as an example, was created by selecting if heroin (or methadone) use equaled zero meaning the person indicated that they did not use that particular substance.

Results:

(Note: For the purpose of this study, only peripheral work was done on the Debilitation Index. Validation of the Index as an instrument to be used in diagnostics will be considered in future studies.)

First, each substance, within each category of the Debilitation Index was run separately. Regardless of drug of choice those at the low level (Level 1) of debilitation had started using after age 20, had used only a couple of times in the past month, and had been using drugs for only a year. "Crack" users were more likely to turn up in the "high" or addictive category (42% (n=52)); all other users (those using heroin, cocaine and/or "pot") were likely to fall

into the "mid" (abusive) range of use (50% of cocaine users, 52% of heroin users, and 45% of marijuana users). (See Appendix 6-C) These using alcohol largely fell into either the "low" range (40%) or the "high" range (38%) in terms of "years of use", 57% (n=73) of those smoking "crack" indicated they had been using "crack" for two years or more (the problematic use of "crack"); 13% had been using "crack" for less than two years; 30% of the "crack" smokers declined to answer the question concerning "years of use." (See Appendix 6-D). Among the cocaine users, 31% (n=63) had been using cocaine for three or more years; 29% (n=59) had been using cocaine for less than tree years; 40% (n=80) declined to answer the question concerning "years of use." Thirty percent (n=73) of those smoking marijuana had done so for ten years or more; 36% (n=86) had been smoking less than ten years; 32% (n=76) declined to answer the question.

Because the numbers in the cells were relatively small when all of the Index parameters were included, the Debilitation Index was re-run using only two parameters: 1) the substance used; and 2) the duration of use. Thus if the person indicated they used heroin (or methadone) and had done so for five years or more (or used methadone for one year or more) the new index variable (HUSE) would be equal equaled 3, indicating a high level of debilitation from heroin. This process was repeated for each substance included in the Debilitation Index. With less strictures, this run provided somewhat larger numbers in some categories of use. "Crack" users still predominated in the "high" level of usage (57%) only now 51% of the cocaine users also scored "high", as did 42% of the marijuana users and 38% of those who drank alcohol. Heroin users dominated the "mid" range of use; 44% of those who drank were in the "low" level of alcohol use as were about of third of each of the other substance users. (See Appendix 6-E).

Treatment seeking:

Part two of this sub-study was to run the two Debilitation Index parameters against the dependant variable - requesting treatment - to see if the level of debilitation might be predictive of treatment seeking. "Crack" use seemed to produce the greatest debilitation with 57% (n=59) of the "crack" users fulfilling the criteria for a "high" level of debilitation. The two parameters used for the "crack" index also proved to be significant in terms of the TRP participant requesting treatment. (See Appendix 6-F) Thirty-four percent (n=20) of those "crack" users scoring at the high end of the Index requested treatment compared to only 9% (n=3) of those scoring at the low end of the Index. The parameters for alcohol use was also statistically significant, with 20% (n=10) of those at the high end of the scale (Level 3) requesting treatment versus 8% (n=10) at the low end (Level 1). Neither the indices for heroin use or cocaine use or the use of marijuana were significant in terms of predicting an individual seeking treatment.

Nearly a third of each group of Level 3 users requested treatment (31% of the Level 3 heroin users, 34% of the Level 3 "crack" users, and 26% of Level 3 cocaine users). At the "mid" level of debilitation, a slightly larger number of Level 2 "crack" users requested treatment (25%, n=13) than Level 2 heroin, cocaine or marijuana users (21% of Level 2 heroin users, 15% of Level 2 cocaine users, and 16% of Level 2 marijuana users requested treatment).

Appendix 6-B

Actual Debilitation Index

: Characteristics	High (3):	Mid (2):	Low (1)	Don't Use (0)
Drug of Choice:	**Heroin**	**Heroin**	**Heroin**	
Years of Use:	GE 5	LE 4	EQ 1	
Mode of Use:	IV	IV or sniff	Sniff	
Age lst Use:	LE 15	16-19	GE 20	
Dependent Upon:	Yes	Yes	No	
Frequency of use: Days used	GE 15	LE 12	LE 2	
Drug of Choice:	**Crack**	**Crack**	**Crack**	
Years of Use:	GT 1	EQ 1	EQ 1	
Age lst Use :	LE 15	16-19	GE 20	
Dependent Upon:	Yes	Yes	No	
Frequency of use: Days used	GE 15	LE 12	LE 2	
Drug of Choice:	**Cocaine**	**Cocaine**	**Cocaine**	
Years of Use:	GE 3	LE 2	EQ 1	
Mode of Use:	IV	Sniff	Sniff	
Age lst Use :	LE 15	16-19	GE 20	
Dependent Upon:	Yes	Yes	No	
Frequency of use: Days used	GE 15	LE 12	LE 2	
Drug of Choice:	**Pot**	**Pot**	**Pot only**	
Years of Use:	GE 10	LE 9	LE 5	
Age lst Use :	LE 15	16-19	GE 20	
Dependent Upon:	Yes	Yes	No	
Frequency of use: Days used	GE 25	LE 15	LE 4	

	Characteristics High (3):	Characteristics: Mid (2):	Characteristics: Low (1)	Don't Use (0)
Drug of Choice:	**Alcohol**	**Alcohol**	**Alcohol**	
Age 1st Use :	LE 15	16-19	GE 20	
Dependent Upon:	Yes	Yes	No	
Frequency of use:				
Days used	GE 15	LE 12	LE 2	
Number of drinks:	GE 3	EQ 3	LE 2	

Appendix 6-C

Debilitation Index using all index parameters

	High (3):		Mid (2)		Low (1)		Tot.	Don't Use (0)		Total
	n	%	n	%	n	%		n	%	
Heroin	15	20%	39	52%	21	28%	n=75	371	83%	446
Crack	52	42%	52	42%	19	15%	n=123	302	71%	425
Cocaine	12	11%	54	50%	41	38%	n=107	228	68%	335
Marijuana	62	32%	88	45%	47	24%	n=197	191	39%	388
Alcohol	95	38%	55	21%	101	40%	n=251	127	34%	378

Appendix 6-D

Years of Use for Crack, Cocaine, and Marijuana

Years of Use	Range	Number	Percent	n
Crack	1 - 25 yrs.	73	57%	129
2 or more				
All else		17	13%	
Missing*		39	30%	
Cocaine	1 - 29 yrs.			
3 or more		63	31%	202
All else		59	29%	
Missing		80	40%	
Marijuana				
10 or more	1 - 35 yrs.	73	30%	240
All else		86	36%	
Missing		76	32%	

* Missing is either the client did not answer the question, or the client did not report the use of the particular substance.

Appendix 6-E

Debilitation Index Using only Two Parameters

	High (3): n	%	Mid (2) n	%	Low (1) n	%	Tot.	Don't Use (0) n	%	Total
Heroin	16	24%	29	44%	21	32%	n=66	371	85%	437
Crack	59	57%	12	12%	32	31%	n=103	302	75%	405
Cocaine	62	51%	21	17%	38	31%	n=121	228	65%	349
Marijuana	70	42%	72	43%	26	16%	n=168	191	53%	359
Alcohol	99	36%	55	20%	119	44%	n=273	49	15%	322

Appendix 6-F

Debilitation Index Variables and Treatment-Seeking

Heroin:

High (3): Req. Rx				Mid (2): Req. Rx.				Low (1) Req. Rx.				Don't Use (0) Req. Rx.					
Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.	Sig
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
5	31%	11	69%	16	24%	10	35%	19	66%	29	44%	3	14%	18	86%	21	32%	51	14%	320	86%	371	.26

Crack:

Req. Rx						Req. Rx.						Req. Rx.						Req. Rx.					
Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.	Sig.
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
20	34%	39	66%	59	57%	1	8%	11	92%	12	12%	3	9%	29	91%	32	31%	37	12%	265	88%	302	01

Cocaine:

Req. Rx						Req. Rx.						Req. Rx.						Req. Rx.					
Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.	Sig.
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
16	26%	46	74%	62	51%	6	29%	15	71%	21	17%	5	13%	33	87%	38	31%	30	13%	198	87%	228	.25

Pot:

Req. Rx						Req. Rx.						Req. Rx.						Req. Rx.					
Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.	Sig.
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
15	21%	55	79%	70	42%	10	14%	62	86%	72	43%	2	8%	24	92%	26	16%	32	17%	159	83%	191	.21

Alcohol:

Req. Rx						Req. Rx.						Req. Rx.						Req. Rx.					
Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.		Yes		No		Tot.	Sig.
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
20	20%	79	80%	99	31%	4	7%	51	93%	55	17%	10	8%	109	92%	119	37%	14	29%	35	71%	49	.00

Appendix 7-A

Discussion of Comparison Between TRP, DUF and NIDA Populations

When constructing the TRP survey, this researcher included several questions that had been asked of both the Drug Use Forecast (DUF) population (in New York City) and those interviewed for NIDA's Household Survey on Drug Use. There were questions pertaining to the use of alcohol, heroin, cocaine, "crack" and marijuana, as well as the age, gender and race of each sample population, and questions pertaining to problems the person might be having as a result of alcohol or drug use.

The TRP population numbered 488 subjects; drawn from those arrested in Manhattan for first time misdemeanor drug offenses. The Drug Use Forecast (DUF) group were a sample (n=1,293) of those arrested in New York City, in 1990, charged with the sales or possession or drugs. The NIDA Household Survey was administered in 1993 to 26, 489 "civilian residents in U.S. households", aged 12 or older. It was of interest to see how the TRP population differed from (or was similar to) a clearly criminal population (the DUF population) and then the "general public" represented by the NIDA study. While exact parallels could not be drawn (for example the TRP survey is much more current than either the NIDA or DUF study), some very general comparisons could be made.

Results:

Demographics: The DUF population was markedly younger than the TRP population. Whereas 65% of the DUF population was under 30, 71% of the TRP population was over 30 years of age. It was difficult comparing the NIDA population as they used different age

categories, but 47% were under age 26. In terms of race, the TRP population had a larger portion of whites than the DUF study (36% compared to 9%) but somewhat less than the NIDA group (47% of whom were white). The TRP had slightly less blacks than the DUF group (41% compared to 52%) but more than were sampled by the NIDA study (23%). The DUF population had more Hispanics (38%) than either the TRP group (21%) or the NIDA population (26%) (See Appendix 7-B).

Drug Use: The DUF population reported earlier use of alcohol and marijuana (age 13 for drinking alcohol and 13 or 14 for using "pot") than either the TRP population (age 15 for alcohol, 18 for "pot") or the NIDA population (age 15 for alcohol and 15 to 16 for "pot"). In terms of "hard" drugs, the TRP population indicated a slightly older "age of first use" for "hard" drugs (heroin , cocaine or "crack") than the NIDA group (17 to 20 years of age). However, the NIDA population surveyed a group that included much younger people than the TRP population. This may explain the overall younger "age of first use" for drugs among the NIDA group.

a. Alcohol Use: A somewhat greater portion of both the DUF population and the TRP population used alcohol (84% for the DUF population and 74% for TRP group) compared to the NIDA population (67% reported the use of alcohol). Seventy-five percent of the TRP population reported using alcohol in the past month compared to 50% of the NIDA population and 50% of the DUF group. Nine percent of the TRP population reported heavy use (more than five drinks per occasion) compared to 5% of the NIDA population reporting the same. In each of the populations, a greater portion of males reported using alcohol than females however, the percentage difference between males and females in the DUF population was negligible. There was greater variance between the males and females using alcohol among the TRP population.

b. Heroin Use: Twenty-eight percent of the TRP population reported having "ever used" heroin, compared to 1% of the NIDA population. Male heroin users predominated in the TRP population (31% compared to 17% male heroin users in the DUF population and 1% in the NIDA population). The percent of female heroin users was nearly similar for the TRP population and the DUF population (28% compared to 24%) but much less in the NIDA population (1%). White males exceeded black males in terms of heroin use in both the DUF and the TRP populations, but usage in the NIDA population was uniformly low regardless of ethnicity, as was injecting drug use (IDU). Sixteen percent of the TRP population reported injection drug use compared to 1% found in the NIDA study. This statistic was not reported for the DUF population.

c. Cocaine Use: The TRP population and the NIDA population were vastly dissimilar in the amount of overall cocaine use (41% of the TRP population used cocaine compared to 11% of the NIDA population). The DUF study for 1990 did not delineate between cocaine use and the use of "crack". Forty-one percent of blacks in the TRP population used cocaine compared to 57% of whites and 48% of Hispanics. For the DUF group, 71% of the blacks used cocaine (or "crack"), as did 63% of the whites and 50% of Hispanics. In the NIDA study the percentage of use of cocaine by race was nearly equal, with 12% of whites, 9% of blacks and 10% of Hispanics reporting cocaine use. In the TRP population, more males than females reported cocaine use (49% compared to 39%). Within the DUF population, the percentage of males and females using cocaine was fairly similar (64% of males and 65% of females) but in the NIDA study nearly twice as many males as females reported using cocaine (15% of males compared to 9% of the females).

d. "Crack" Use: Twenty-six percent of the TRP population reported having used or using "crack" compared to 2% of the NIDA population. Within the TRP population, "crack"

use was definitely a "black phenomenon" (39% of blacks reported "crack" use compared to 26% of whites and 25% of Hispanics) and this was true in the NIDA population as well, albeit with much smaller percentages. In the NIDA population, there were more males than females using "crack" (3% compared to 1%). In the TRP population, 31% of the females reported "crack" use compared to 30% of the males.

e. Marijuana Use: 34% of the NIDA population reported marijuana use (present or past), compared to 49% of the TRP population. Eighteen percent of the DUF males reported marijuana use compared to 60% of the TRP males and 39% of the NIDA males; 10% of the DUF females reported marijuana use compared to 38% of the TRP females; and 29% of the NIDA females.

The NIDA and TRP surveys also included measures for "problems with drugs or alcohol," including a measure for "dependency". For drinkers only, in the NIDA study, 1% had lost a job (because of their drinking); this was 28% for the TRP sample (lost a job because of either alcohol or drugs use). Seven percent reported that someone (close to them) had asked them to stop (drinking); this was 57% for the TRP population. Four percent had experienced "loss of control" ("found it difficult to stop"); 46% of the TRP population reported loss of control ("Drinking or drug use is no longer under my control.") Eight percent of the NIDA group had a fight with someone "close to them"; 26% of the TRP population reported having had a fight with "someone they care about". Twelve percent of the NIDA group were experiencing problems as a result of their alcohol or drug use; 13% of the TRP population thought alcohol was a problem for them; 41% thought drugs were a problem for them.

The NIDA survey reported measures of dependency for cocaine users only. The TRP survey asked about dependency for each substance (except alcohol) that the person reported

using and also asked the client about attempts they had made at stopping the use of drugs or alcohol. Forty-three percent of the NIDA study who were "frequent" cocaine users reported having tried to stop using cocaine; 83% of the TRP population reported an attempt to stop using drugs in general; 9% of the "frequent" cocaine users in the NIDA study felt dependent (on cocaine); 20% of the TRP population using cocaine said they felt dependent upon cocaine. For alcohol, 50% of the NIDA population who were "frequent" alcohol users (i.e. drank five or more drinks on five or more occasions, in the past month) had tried to stop; 47% of the TRP population reported having tried to stop using alcohol.

Appendix 7 - B

	TRP Pop. 1996	DUF* 1990	NIDA 1993	
Age				
15-20	8%	19%	12-17	26%
21-25	8%	21%	18-25	21%
26-30	12%	25%	26-34	31%
31-35	22%	14%	35+	21%
36+	49%	21%		
Race				
Black	41%	52%	23%	
White	36%	9%	47%	
Hispanic	21%	38%	26%	
Age of First Use				
Alcohol	15	13	15	
Pot	18	13-14	15-16	
"Hard" drugs	21	NA	17-20	
Ever Used:	Alcohol	Alcohol	Alcohol	
Total Pop.	74%	84%	67%	
Gender				
Males	71%	94%	72%	
Females	59%	90%	62%	
Drug Use				
In past mo.	75%	50%	50%	
No Use	26%	NA	NA	
Heavy use**	9%	NA	5%	

*For Manhattan
** Five or more

	Heroin	Heroin	Heroin
Overall Gender	28%	NA	1%
Males	31%	17%	1%
Females	28%	24%	1%
Race			Overall
Black males	18%	17%	2%
White males	42%	30%	1%
Hispanic males	36%	31%	1%
IDU(IVDU)	16%	NA	1%
	Cocaine	Cocaine	Cocaine
Ever used Gender	41%	NA	11%
Males	49%	64%	15%
Females	39%	65%	9%
Race			
Blacks	41%	71%	9%
Whites	57%	63%	12%
Hispanics	46%	50%	10%

	Crack		Crack
Ever Used	26%		2%
Gender			
Males	30%		3%
Females	31%		1%
Race			
Blacks	39%		3%
Whites	26%		2%
Hispanic	25%		2%
	Marijuana	Marijuana	Marijuana
Used:	49%	NA	34%
Gender			
Males	60%	18%	39%
Females	38%	10%	29%
Problems from the use of drugs			
or alcohol:			Drinkers only
Lost job	28%		1%
Asked to stop	57%		7%
Loss of control	46%		4%
Had a fight	26%		8%
Problem with:			**Problems with**
Alcohol a problem	13%		12%
Drugs a problem	41%		
			Frequent
Dependency			Cocaine users
Tried to stop drugs	83%		43%
Dependent on cocaine	20%		9%
			Frequent users
Tried to stop alcohol	47%		50%

Table 1 Bivariate Statistics

	n	Requested Treatment* Yes Percent	Number	No Percent	Number	Overall Population** Percent	Number	Sig.	mean	Std. dev.	Test
Step 1: Problem Identification											
Level of awareness											
Do you think drugs are a problem for you?											
Yes	407	***27%	44	73%	121	40%	165	0.00			
No		8%	19	92%	223	59%	242				
Do you think alcohol is a problem for you?											
Yes	410	19%	10	81%	42	13%	52	0.36			
No		13%	48	87%	310	87%	358				
Interpersonal Consequences: MAST Measures											
Someone close to you has asked you to stop using drugs or alcohol	407	20%	46	80%	187	57%	233	0.00			
Drinking or drug use is no longer under your control	395	22%	40	78%	143	46%	183	0.00			
Lost a job because of drug/alcohol use	414	25%	29	75%	85	28%	114	0.00			
Had a fight with someone you care about as a result of alcohol or drugs	411	22%	24	78%	83	26%	107	0.01			
Someone close to you has suggested you seek alcohol or drug treatment	413	22%	34	78%	122	38%	156	0.00			
Ever attended a self- help meeting (AA/NA):											
Yes	417	32%	34	69%	74	38%	160	0.01			
No		9%	25	91%	264	62%	257				
If attended AA/NA: Attended in the last 30 days											
Yes	150	16%	8	84%	42	33%	50	0.43			
No		23%	23	77%	77	67%	100				

* Percent based on row numbers.

** Percents given are column percents.
*** Unless otherwise indicated, for categorical variables, Chi Square Test is reported.

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test
Step 2: Motivators											
A. External Factors											
Criminality:											
First Arrest?											
Yes	440	14%	41	87%	262	69%	303	0.25			
No		18%	25	82%	112	31%	137				
Self-reported Priors:											
1 prior arrest	133	13%	6	88%	42	36%	48	0.29	3	2	MW
2 priors		15%	6	85%	35	31%	41				
3 or more		21%	9	80%	35	33%	44				
Arrest charge:											
CPCS*	475	14%	60	86%	382	93%	425	0.02			
Trespassing		30%	10	70%	23	7%	33				
Social Status											
Education:											
Less than HS	448	9%	11	91%	111	27%	122	0.24			MW
HS grads		20%	32	80%	130	36%	162				
Any college or vocational school		15%	25	85%	139	36%	164				
Employment status											
Employed F/T	440	13%	22	88%	154	40%	176	0.46			
Employed P/T		18%	7	82%	31	9%	38				
Not employed		16%	37	84%	189	51%	226				
Occupation**											
Clerical	236	21%	13	79%	49	26%	62	0.66			
Laborer		19%	6	81%	26	14%	32				
Trained Professional		17%	6	83%	29	15%	35				
Artist		17%	5	83%	25	13%	30				
Unskilled		12%	7	88%	50	24%	57				
Executive		0	0	100%	10	4%	10				
Race											
White	488	11%	20	89%	155	36%	175	0.42			
Black		16%	32	84%	170	41%	202				
Hispanic		17%	17	83%	85	21%	102				
Other		11%	1	89%	8	2%	9				

* Criminal Possession of a controlled substance.

** Occupational categories are composites: Trained Professional is teacher, SW, RN

Laborer is skilled trade and construction: Unskilled is a maintenance worker or mechanic

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test
Gender:											
Male	488	14%	53	86%	338	80%	391	0.4			
Female		18%	17	83%	80	20%	97				
Age *											
Mean		35.8		35.8							
under 20	417	20%	5	80%	20	6%	25	0.98	36	10	tTEST
21-29		12%	9	88%	65	18%	74				
30-39		19%	37	81%	156	46%	193				
Over 40		13%	16	87%	109	30%	125				
Insurance											
Medicaid/Medicare	443	14%	17	86%	106	28%	123	0.19			
Private Insurance		11%	14	89%	111	28%	125				
None		19%	36	82%	159	44%	195				
Social Stability											
Marital status:											
Single	440	12%	27	89%	207	53%	234	0.04			
Married or living with girl/boyfriend:		17%	20	83%	97	27%	117				
Divorced/Widowed:		22%	20	78%	69	20%	89				
Have children:											
Yes	436	18%	34	82%	158	44%	192	0.23			
No		13%	32	87%	212	56%	244				
If client has children: Are they living with client?											
Yes	181	14%	12	86%	72	46%	84	0.57			
No		19%	18	81%	79	54%	97				
Social Influence											
Significant Other Live with someone who abuses alcohol?											
Yes	428	19%	5	81%	21	6%	26	0.76			
No		15%	60	85%	342	94%	402				
Live with someone who uses drugs?											
Yes	427	26%	11	74%	32	10%	43	0.08			
No		14%	54	86%	330	90%	384				

* Where T-Test is done, mean and standard deviation is included.

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test
Lover an IDU?											
Yes	395	18%	3	82%	14	4%	17	1.00			
No		16%	59	84%	319	96%	378				
Peers' Use:											
Friends get high?											
Yes	405	20%	35	80%	140	43%	175	0.00			
No		10%	22	90%	208	57%	230				
Family drug/alcohol use:											
Family Alcohol use:											
Do you have a family member who abuses ALCOHOL?											
Yes	335	13%	14	87%	92	32%	106	0.82			
No		15%	34	85%	195	68%	229				
Who in family?											
Parent	101	6%	3	94%	44	47%	47	0.09			
Other family member*		19%	10	82%	44	54%	54				
Family Drug Use:											
Do you have a family member who uses DRUGS?											
Yes	429	16%	18	84%	96	27%	114	0.88			
No		15%	46	85%	269	73%	315				
Who in family?											
Parent	109	17%	4	84%	20	22%	24	0.20			
Other family member		14%	12	86%	73	78%	85				
B. Internal Factors											
1. Degree of debilitation											
Any drug use**	451	16%	64	84%	343	90%	407	0.34			
No illegal drug use		9%	4	92%	40	10%	44				
Drug of Choice:											
Uses "crack"***	431	22%	28	78%	101	30%	129	0.02			
Doesn't use "crack"		12%	37	88%	265						
Uses Heroin	430	19%	27	81%	112	32%	139	0.11			
Doesn't use heroin		13%	38	87%	253						

*Sibling, aunt, uncle.
** A computed variable for those who checked off the use of coke, "crack", pot, heroin or methadone.
***Drug of choice is not mutually exclusive. Someone could smoke "crack" and pot.

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test
Uses Cocaine	430	17%	35	83%	167	47%	202	0.28			
Doesn't use heroin		13%	30	87%	198						
Smokes "Pot"	431	14%	33	86%	207	56%	240	0.47			
Doesn't smoke "pot"		17%	32	83%	159						
Uses Methadone	431	23%	14	77%	48	14%	62	0.11			
Doesn't use Methadone		14%	51	86%	318	86%	369				
Uses Other drugs	431	19%	12	81%	52	15%	54	0.48			
Doesn't use Other drugs		14%	53	86%	314	85%	367				
Years of Use:*											
For those who said they used:											
Heroin											
1 year	100	14%	3	86%	18	21%	21	0.95	8	9	MW
2-4 years		34%	10	66%	19	29%	29				
5 or more		24%	12	76%	38	50%	50				
Cocaine											
1 year	122	13%	5	87%	33	31%	38	0.11	5	6	MW
2 years		29%	6	71%	15	17%	21				
3 or more		26%	16	74%	46	57%	62				
"crack"											
1 year	90	12%	2	88%	15	19%	17	0.09	5	4	MW
2 years		18%	3	82%	14	19%	17				
3 years or more		34%	19	66%	37	62%	56				
Marijuana											
1-2 years	159	6%	2	94%	34	23%	36	0.07	9	7	MW
3-4 years		23%	3	77%	10	8%	13				
5-9 years		16%	6	83%	31	23%	37				
10 or more		21%	15	80%	58	46%	73				
Dependency											
Among those who used:											
Heroin											
Felt dependent upon:		84%	97	26%	25	76%	122		0.25		
Did not feel dependent upon:		16%	19	90%	21	24%	40				
Cocaine											
Felt dependent upon:		26%	41	27%	11	20%	52		0.18		
Did not feel dependent upon:		16%	18	74%	115	84%	133				

* Not computed for alcohol.

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test
"crack"											
Felt dependent upon:		85%	60	27%	16	47%	76	0.73			
Did not feel dependent upon:		22%	39	46%	50	78%	89				
"Pot"											
Felt dependent upon:		17%	34	18%	6	14%	40	0.55			
Did not feel dependent upon:		16%	26	83%	168	85%	184				
Age of First Use: of DRUGS											
15 or under	361	18%	22	82%	102	34%	124	0.77	21	9	MW
16-19		14%	13	86%	80	26%	93				
over 20		16%	23	84%	121	40%	144				
Age of first use: of ALCOHOL											
15 or under	342	15%	28	85%	154	53%	182	0.65	15	4	MW
16-19		14%	18	86%	109	37%	127				
over 20		12%	4	88%	29	24%	33				
Frequency of Use: In the past month: Days of use of drugs											
No Use	345	9%	9	91%	89	28%	98	0.00	8	10	MW
1 or 2		8%	4	92%	47	15%	51				
3-10 days		12%	13	88%	98	32%	111				
14-31 days		33%	28	67%	56	24%	84				
Days of use of alcohol											
No Use	332	18%	20	82%	93	31%	113	0.28	6	8	MW
1 or 2		14%	9	86%	57	18%	66				
3-14 days		11%	15	89%	122	38%	137				
15-31 days		14%	7	85%	42	13%	49				
Mode of Use: *											
IDU	344	15%	5	85%	28	10%	33	0.22			
Sniff		14%	26	86%	156	55%	182				
Smoke		22%	28	78%	101	38%	129				
Quantity (of alcohol) Number of drinks per occasion (For those who drank in the past month)											
None	332	20%	17	80%	69	26%	86	0.85	3	3	MW
1 to 2		8%	7	92%	83	18%	90				
3 to 4		10%	8	90%	72	16%	80				
5 or more		21%	16	79%	60	16%	76				

* A computed variable: IDU are those indicating injecting heroin use; "Sniff" are those using cocaine;

"Smoke" are those using "crack".

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test	Mode
2. Treatment Receptive												
Think you need treatment?												
Yes	397	32%	34	69%	74	27%	108	0.00				
No		9%	25	91%	264	72%	289					
Prior treatment outcome												
Relapsed	131	34%	12	66%	23	27%	35	0.12				
Still in treatment		17%	7	83%	35	32%	42					
Program Problems		18%	5	82%	23	21%	28					
Completed treatment		12%	3	89%	23	20%	26					
Want to stop using: ALCOHOL												
Yes	299	15%	17	86%	101	40%	118	0.44				
No		11%	19	90%	162	60%	181					
Have tried to stop using: ALCOHOL												
Yes	312	15%	21	86%	125	47%	146	0.39				
No		10%	16	90%	150	53%	166					
Clean time: from ALCOHOL												
None	175	0	0	100%	2	1%	2	0.62	2	4.3	MW	
1 day to 3 mos.		18%	11	83%	52	36%	63					
4 to 11 mos.		10%	3	90%	28	18%	31					
1 year or more		15%	12	84%	67	45%	79					
Want to stop using: DRUGS												
Yes	338	16%	45	84%	234	83%	282	0.24				
No		9%	5	91%	51	17%	56					
Have tried to stop using: DRUGS												
Yes	369	16%	50	84%	255	83%	307	0.2				
No		8%	5	92%	57	17%	62					
Clean time: from DRUGS												
None	298	0	0	100%	3	1%	3	0.01	2	5.1	MW	
1 day to 3 mos.		20%	20	80%	80	34%	100					
4 to 11 mos.		25%	20	75%	59	27%	79					
1 year or more		9%	10	91%	106	39%	116					
Step 3: Delivery System												
1. Exposure to model	488					100%	488					
2. Proximity of Consequence: Length of time between sentencing and attending the TRP												
Seen within 1 week	416	15%	26	85%	152	43%	178	0.87	21dy.	22dy.	MW	
Waited up to 2 weeks		14%	8	86%	49	14%	57					
Waited up to 1 mo.		16%	11	84%	58	17%	69					
Waited up to 2 mo.		15%	12	85%	70	20%	82					
Waited up to 3 mo.		10%	3	90%	27	7%	30					

	n	Requested Treatment: Yes Percent	Yes Number	No Percent	No Number	Overall Population Percent	Overall Population Number	Sig.	mean	Std. dev.	Test	Mode
3. Perception of Ability Prior Treatment Experience												
Ever been in treatment:												
Yes	424	20%	30	80%	123	36%	153	0.09				
No		13%	35	87%	236	64%	271					
For those who have been in treatment												
Time in treatment (prior to TRP):												
Range: 1 day to 6 years												
1 day - 28 days	107	20%	4	83%	16	19%	20	0.1	264	1.2yr.	MW	180 dy.
1 mo. - 3 mos.		24%	8	76%	25	31%	33					
4 mos.- 1 year		14%	5	87%	37	35%	37					
MT 1 year		7%	1	93%	14	14%	15					
Likelihood that you'll continue to use drugs:												
Very Unlikely	197	16%	9	84%	48	29%	57	0.22			MW	
Somewhat Unlikely		20%	14	80%	55	35%	69					
Likely to Continue		17%	12	83%	59	36%	71					
Knew someone who stopped using drugs												
Yes	405	17%	53	83%	255	76%	308	0.02				
No		7%	7	92%	90	24%	97					
Did family member with drug/alcohol problem seek treatment?												
For drugs?												
Yes	91	19%	9	81%	39	53%	48	0.86				
No		16%	7	84%	36	47%	43					
For alcohol?												
Yes	89	9%	3	91%	32	39%	35	0.62				
No		15%	8	85%	45	61%	54					

Table 2

Requesting treatment Among those "Drinkers" Reporting a Problem with Alcohol

	Overall Population			Requested Treatment YES		NO		
	n	%	Number	%	Number	%	Number	Sig.**
For those who drink*								
Do you think alcohol is a problem?								
YES	251	15%	37	22%	8	78%	29	0.09
NO		85%	214	10%	22	90%	192	

* Those who reported drinking at least one day in the past month.
**Chi Square Test used.

Table 3 Requesting Treatment by Age and Gender

		Males Requested Treatment		Females Requested Treatment		Sig.
		Yes	No	Yes	No	
Age						
under 20	R	60%	84%	40%	16%	.04*
	C	6%	11%	12%	9%	
		n=3	n=36	n=2	n=7	
21-29		67%	91%	33%	9%	
		11%	18%	18%	8%	
		n=6	n=59	n=3	n=6	
30-39		70%	73%	30%	27%	
		49%	34%	65%	53%	
		n=26	n=114	n=11	n=42	
40+		95%	84%	5%	16%	
		34%	37%	6%	30%	
		n=18	n=123	n=1	n=24	
Mean		38		27		

* MW used.

Table 4 Seeking treatment by gender for those with children

	Requested Treatment				
	Yes		No		
	%	No.	%	No.	Sig.
Have children:					
Males	18%	26	82%	118	0.11
Females	17%	8	83%	40	0.62

Table 5 Quantity of Alcohol Consumed among Drinkers*Requesting Treatment

	Requested Treatment					
	Yes		No			
	%	Number	%	Number	Sig.	Test
Number of drinks per occasion for those who drank in the past month						
					0.01	MW
1 - 2	8%	7	92%	78		
3 - 4	8%	6	90%	69		
5 or more	21%	15	79%	56		

* Those who reported drinking at least one day in the past month.

Table 6
Treatment Receptive Variables and Seeking Treatment among those who drink or use drugs

	Overall Population		Requested Treatment Yes		No			
	n	%	No.	%	No.	%	No.	Sig.
For those who drank Want to stop using ALCOHOL,								
Yes	207	35%	73	16%	12	84%	61	0.23
No		65%	134	10%	13	90%	121	
Tried to stop using ALCOHOL,								
Yes	222	46%	101	17%	17	83%	84	0.08
No		55%	121	8%	10	92%	111	
For those using drugs Want to stop using DRUGS:								
Yes	205	87%	178	20%	35	80%	143	0.20
No		13%	27	7%	2	93%	25	
Tried to stop using DRUGS:								
Yes	221	85%	187	19%	35	81%	152	0.46
No		15%	34	12%	4	88%	30	

Table 7 Treatment Seeking Model Variables

Variable	Sig.
Step 1: Problem Identification	
1. Level of awareness:	
Drugs are a problem	.00
Alcohol is a problem (for those who drank at least one drink in the past month)	.09
2. Interpersonal consequences	
MAST items	
Someone has asked you to stop using	.00
Your use is no longer under control	.00
Lost a job because of alcohol or drug use	.00
Had a fight because of alcohol or drugs	.01
Someone close to you has suggested treatment	.00
Ever attended an AA or NA meeting	.01
Step 2: Motivators	
A. External Factors	
Criminality	
Arrest Charge	.02
Social Status	
Have medical insurance	.19
Age and gender	.04
Social Stability	
Marital Status	.04
Having children for men	.11

Social Influence:	
a. Significant Other	
Living with someone who uses drugs	.08
b. Peer Influence	
Friends get high (once a week or more)	.00
c. Family drug or alcohol use:	
Parent or other family member uses drugs	.20
Parent or other family member uses alcohol	.09
B. Internal Factors:	
1. Degree of Debilitation	
Drug of choice	
Heroin	.11
"Crack"	.02
Methadone*	.11
Years of Use:	
For those using:	
Cocaine	.11
"Crack"	.09
"Pot"	.07
Feelings of Dependency	
For those using: Cocaine	.18
Frequency of use:	
of drugs	.00
Quantity of alcohol	
(For those who drank in the past month):	.01

* Because of the implied overlap between heroin use and methadone use, and their same level of significance, only one will be used in the regression equation

2. Treatment Receptive:	
Think you need treatment	.00
Prior treatment outcome	.12
Want to stop using **DRUGS**	
(For those who used drugs in the past month)	.20
Tried to stop using **DRUGS** (among current users)	.20
Clean time from **DRUGS**	.01
Tried to stop using **ALCOHOL** (For those who drank in the past month)	.08
Step 3: **Delivery System**	
Perception of Ability:	
Ever been in treatment	.09
Time spent in treatment (For those who have been in treatment)	.10
Know someone who stopped using drugs	.02

Table 8 Computer Printout of Correlation Coefficients

	HEROIN	CRACK	COCAINE	METHADON	MARIJ
HEROIN	1.0000	.0720	.0475	.0343	.0465
	(488)	(431)	(430)	(431)	(431)
	P= .	P= .136	P= .326	P= .477	P= .336
CRACK	.0720	1.0000	-.1032	.0641	.0425
	(431)	(431)	(430)	(431)	(431)
	P= .136	P= .	P= .032	P= .184	P= .379
COCAINE	.0475	-.1032	1.0000	.0313	.0631
	(430)	(430)	(430)	(430)	(430)
	P= .326	P= .032	P= .	P= .517	P= .192
METHADON	.0343	.0641	.0313	1.0000	.0463
	(431)	(431)	(430)	(431)	(431)
	P= .477	P= .184	P= .517	P= .	P= .338
MARIJ	.0465	.0425	.0631	.0463	1.0000
	(431)	(431)	(430)	(431)	(431)
	P= .336	P= .379	P= .192	P= .338	P= .

(Coefficient / (Cases) / 2-tailed Significance)

" . " is printed if a coefficient cannot be computed

Table 9 Testing of Treatment Seeking Model Elements (Computer Printout)

I. Step 1: Problem Identification

Variables in the Equation

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
DRG2ROB3	-.0064	.0049	1.6770	1	.1953	.0000	.9936
INT_1	.5197	.4281	1.4738	1	.2248	.0000	1.6815
EVERAA2	-.0039	.0091	.1823	1	.6694	.0000	.9961
ASK3	-.0015	.0071	.0435	1	.8348	.0000	.9985
CONTROL3	-.0076	.0073	1.0716	1	.3006	.0000	.9925
LOSTJB3	.0023	.0080	.0824	1	.7741	.0000	1.0023
FIGHT3	.0046	.0067	.4673	1	.4942	.0000	1.0046
SUGRX3	.0075	.0073	1.0483	1	.3059	.0000	1.0075
Constant	-1.7689	.1557	129.1477	1	.0000		

II. Step 2: Motivators

A.

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
ARRCH3	-.0322	.0406	.6294	1	.4276	.0000	.9683
NONE	.6080	.2691	5.1039	1	.0239	.0879	1.8368
AGE3	.6963	.2699	6.6543	1	.0099	.1077	2.0063
MAR3	.6890	.3088	4.9803	1	.0256	.0862	1.9918
INT_1	-.0030	.0068	.1954	1	.6585	.0000	.9970
LIVWTHD3	-.0091	.0064	2.0295	1	.1543	-.0086	.9909
FRHIGH3	.0077	.0043	3.2451	1	.0716	.0557	1.0077
WHOAL3	-.0906	.5705	.0252	1	.8738	.0000	.9134
WHODR2	.0063	.5929	.0001	1	.9915	.0000	1.0063
Constant	-2.5038	.2697	86.1606	1	.0000		

B.

---------- Variables in the Equation ----------

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
HEROIN	-.0154	.0479	.1031	1	.7481	.0000	.9847
CRACK	.0132	.5804	.0005	1	.9818	.0000	1.0133
COKEA4	-.0085	.0033	6.4756	1	.0109	-.1106	.9915
CRACKA3	-.0095	.0062	2.3296	1	.1269	-.0300	.9905
MARIJA3	.0035	.0033	1.1293	1	.2879	.0000	1.0035
COKEB2	.2780	.4327	.4127	1	.5206	.0000	1.3204
DAYSDR	.4606	.3090	2.2218	1	.1361	.0246	1.5851
NODRK	.3127	.3877	.6505	1	.4199	.0000	1.3671
SOCIAL	-1.0398	.5042	4.2537	1	.0392	-.0785	.3535
MED	-.8725	.4899	3.1719	1	.0749	-.0566	.4179
HEAVY	.2475	.4049	.3737	1	.5410	.0000	1.2808
Constant	-.8426	.7418	1.2905	1	.2560		

III. Delivery System

NEEDRX3	-.0013	.0039	.1022	1	.7492	.0000	.9987
RXOUT1	.9507	.3265	8.4786	1	.0036	.1271	2.5874
INT_1	.0012	.0068	.0294	1	.8638	.0000	1.0012
INT_2	.0119	.0080	2.1881	1	.1391	.0217	1.0120
SMCLTD	.5791	.3370	2.9526	1	.0857	.0487	1.7844
INT_3	.0044	.0053	.6933	1	.4050	.0000	1.0045
Constant	-2.4476	.3134	60.9768	1	.0000		

Table 10 Logistic Regression: Computer Printout of All Significant Treatment-Seeking Variables

-2 Log Likelihood 282.872
Goodness of Fit 346.046

	Chi-Square	df	Significance
Model Chi-Square	82.715	36	.0000
Improvement	82.715	36	.0000

Classification Table for REQRX2

Observed		Predicted .00 (0)	Predicted 1.00 (1)	Percent Correct
.00	0	358	8	97.81%
1.00	1	51	14	21.54%
			Overall	86.31%

---------- Variables in the Equation ----------

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
DRGPROB3	-.0036	.0074	.2372	1	.6262	.0000	.9964
ALCPROB4	-.0048	.0063	.5826	1	.4453	.0000	.9952
ASK3	-.0079	.0124	.4043	1	.5249	.0000	.9922
CONTROL3	-.0180	.0108	2.7603	1	.0966	-.0456	.9821
FIGHT3	.0104	.0105	.9789	1	.3225	.0000	1.0105
LOSTJB3	-.0037	.0128	.0826	1	.7738	.0000	.9963
SUGRX3	.0086	.0104	.6775	1	.4104	.0000	1.0086
EVERAA2	-.0029	.0149	.0383	1	.8448	.0000	.9971
ARRCH3	-.0380	.0635	.3593	1	.5489	.0000	.9627
NONE	.3459	.3281	1.1111	1	.2918	.0000	1.4132
AGE3	.6525	.3308	3.8919	1	.0485	.0719	1.9204
MAR3	.8156	.3907	4.3591	1	.0368	.0803	2.2606
LIVWTHD3	-.0104	.0102	1.0487	1	.3058	.0000	.9896
FRHIGH3	.0122	.0074	2.7577	1	.0968	.0455	1.0123
WHOAL3	-.8627	.7441	1.3444	1	.2463	.0000	.4220
WHODR2	.7248	.6587	1.2108	1	.2712	.0000	2.0644
HEROIN	-.0087	.0656	.0176	1	.8944	.0000	.9913
CRACK	-.1664	.6306	.0696	1	.7919	.0000	.8467
COKEA4	-.0101	.0038	6.8846	1	.0087	-.1156	.9900
CRACKA3	-.0132	.0069	3.6013	1	.0577	-.0662	.9869
MARIJA3	.0043	.0038	1.2675	1	.2602	.0000	1.0043
COKEB2	.1242	.5109	.0591	1	.8080	.0000	1.1322
DAYSDR	.6413	.3719	2.9740	1	.0846	.0516	1.8989
NEEDRX3	.0073	.0070	1.0829	1	.2980	.0000	1.0073
RXOUT1	1.5829	.5169	9.3775	1	.0022	.1421	4.8690
SMCLTD	.9736	.5703	2.9144	1	.0878	.0500	2.6473
WNTSTD3	.0055	.0056	.9783	1	.3226	.0000	1.0056
TRYSTPD3	.0087	.0079	1.1867	1	.2760	.0000	1.0087
TRYAL4	.0110	.0043	6.3757	1	.0116	.1094	1.0110
KNOW	.0212	.0102	4.2971	1	.0382	.0793	1.0214
SMTMRX	-1.2745	.5051	6.3678	1	.0116	-.1093	.2796
EVRINRX3	-.0228	.0107	4.5264	1	.0334	-.0831	.9775
CHILD3	-.0214	.0119	3.2598	1	.0710	-.0587	.9788
SEX2	-.4936	.4134	1.4258	1	.2325	.0000	.6104
DAYSAL	-.7709	.4272	3.2559	1	.0712	-.0586	.4626
HEAVY	1.1672	.4501	6.7239	1	.0095	.1137	3.2130
Constant	-2.0509	1.0607	3.7382	1	.0532		

Table 11 Logistic Regression: Computer Printout of Initial Ten Significant Variables

-2 Log Likelihood	348.629
Goodness of Fit	471.817

	Chi-Square	df	Significance
Model Chi-Square	52.667	10	.0000
Improvement	52.667	10	.0000

Classification Table for REQRX2

		Predicted .00 0	Predicted 1.00 1	Percent Correct
Observed .00	0	415	3	99.28%
1.00	1	61	9	12.86%
			Overall	86.89%

---------- Variables in the Equation ----------

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
AGE3	.7189	.2849	6.3686	1	.0116	.1043	2.0521
MAR3	.8620	.3233	7.1098	1	.0077	.1128	2.3679
COKEA4	-.0076	.0030	6 1439	1	.0132	-.1016	.9925
CRACKA3	-.0106	.0033	10.4232	1	.0012	-.1449	.9895
RXOUT1	1.2037	.4469	7.2544	1	.0071	.1144	3.3325
TRYAL4	.0117	.0033	12.5693	1	.0004	.1623	1.0117
KNOW	.0011	.0048	.0546	1	.8153	.0000	1.0011
SMTMRX	-.7696	.4172	3.4036	1	.0651	-.0591	.4632
EVRINRX3	-.0095	.0059	2.5517	1	.1102	-.0371	.9906
HEAVY	.6714	.3727	3.2444	1	.0717	.0557	1.9570
Constant	-1.5172	.4181	13.1683	1	.0003		

Table 12 Logistic Regression: Computer Printout of Final Treatment-Seeking Model Variables

-2 Log Likelihood	357.970
Goodness of Fit	490.659

	Chi-Square	df	Significance
Model Chi-Square	43.326	6	.0000
Improvement	43.326	6	.0000

Classification Table for REQRX2

		Predicted .00 (0)	Predicted 1.00 (1)	Percent Correct
Observed .00	0	415	3	99.28%
	1	63	7	10.00%
			Overall	86.48%

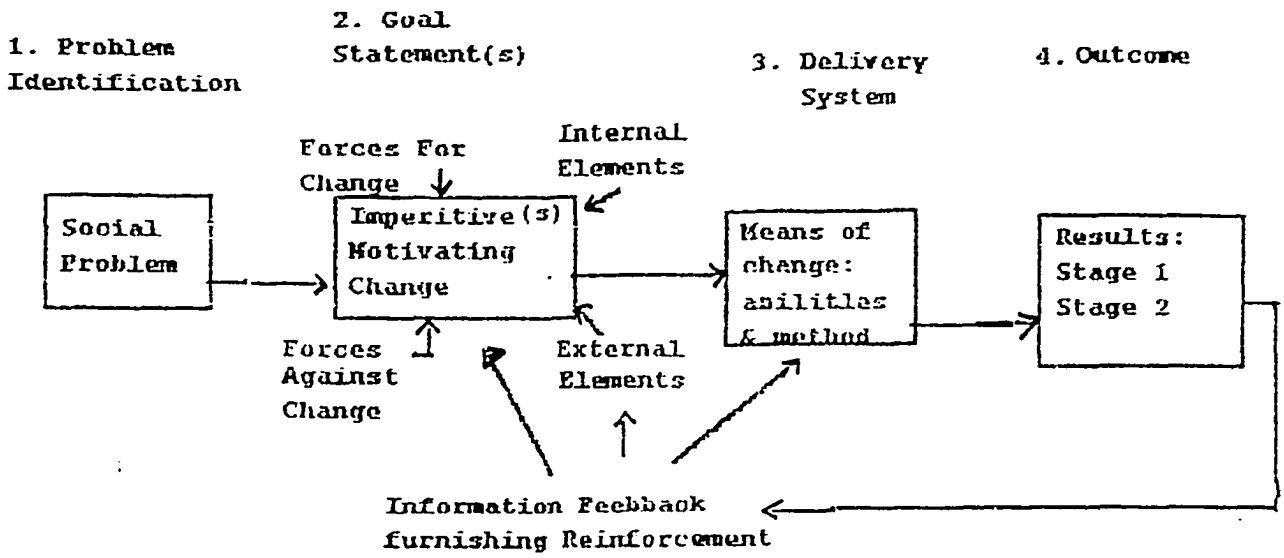
---------- Variables in the Equation ----------

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
AGE3	.6586	.2761	5.6882	1	.0171	.0959	1.9321
MAR3	.8271	.3161	6.8464	1	.0089	.1099	2.2868
COKEA4	-.0086	.0030	8.4621	1	.0036	-.1269	.9914
CRACKA3	-.0098	.0032	9.6231	1	.0019	-.1378	.9903
RXOUT1	.7715	.3427	5.0673	1	.0244	.0874	2.1631
TRYAL4	.0088	.0029	9.1555	1	.0025	.1335	1.0088
Constant	-1.4297	.3855	13.7525	1	.0002		

Table 13 Odds Ratio for TRP Model Variables

Imperatives Motivating decision to seek treatment:	Odds Ratio
A. External	
Age (30-39)	1.9
Divorced	2.3
B. Internal	
1. Degree of Debilitation	
Used cocaine in excess of 3 years	.99
Used "crack" for more than a year	.99
2. Treatment Receptive	
Relapsed	2.1
Attempted to stop using alcohol	1.0

Figure 1: Generic Model for Change



Steps

1. Problem Identification

2. Goal statements
Included are: a. Imperative **motivating** change: change agents

environment	external forces
physical condition	internal forces

b. Force Field - working for or against change: culture, environment, values

3. Delivery Systems -here meaning the MEANS for change, both person's abilities (skills), methods used, including knowledge and attitudes.

4. Outcome - Results of behavior change, including the idea of staged change, where ability to achieve stage 1 feeds into **perceived self-efficacy** to achieve stage 2, etc.

All of these go into

5. Feedback loop - furnishing the **reinforcement(s)** to continue toward and maintain change. This is equivalent to experience.

I. Problem Identification

1. Drugs are a problem
   Alcohol a problem

2. *Interpersonal Consequences*:
   Asked to stop
   Loss of control
   Lost a job
   Had a fight
   Someone suggested rx

III. Delivery System

1. *Perception of Ability*
   Ever been in treatment
   Time in treatment
   Prior treatment outcome
   Likelihood of continuing use
   Know someone who stopped

2. Exposure to model

3. Proximity of consequence

Requested Treatment

II. Motivators:

External:

1. Criminality

2. Social Status

3. Social Stability

4. Social Influence
Significant Other
Living with someone
who uses drugs

Peer influence

Family Influence

Internal:

1. *Degree of Debilitation*
   Drug of choice
   Frequency of Use
   Years of use
   Dependency
   Quantity of alcohol
   Age of 1st Use
   Mode

2. *Treatment Receptive*
   Need treatment
   Treatment Outcome
   Want to stop
   Tried to stop
   Clean time

Figure 2: TRP Treatment-Seeking Model

Figure 3: Flow Chart of the Processing of TRP Clients

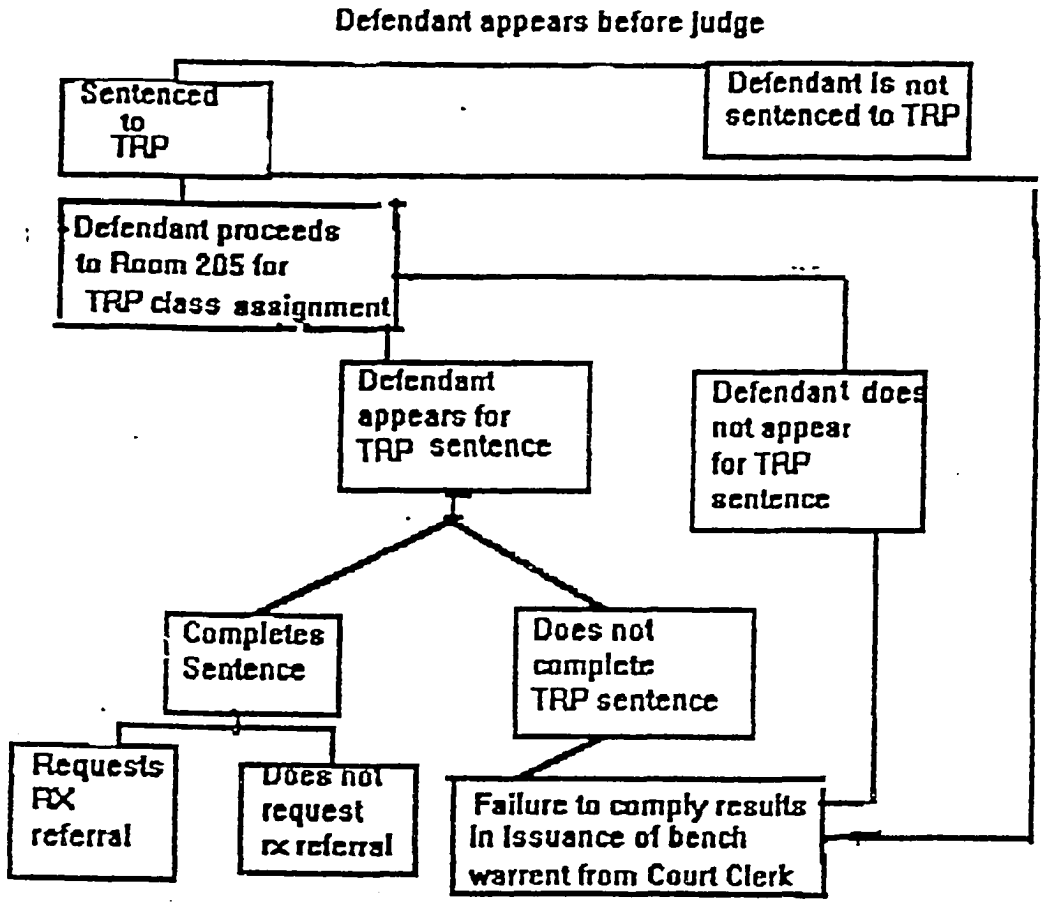


Figure 4: TRP Treatment-Seeking Model with Significant Variables

I. Problem Identification
1. Drugs are a problem
   Alcohol a problem
   for drinkers

2. *Interpersonal Consequences:*
Asked to stop
Loss of control
Lost a job
Had a fight use
Someone suggested rx

III. Delivery System
1. *Perception of Ability*
Ever been in treatment
Time in treatment
Know someone who stopped

Requested Treatment

II. Motivators:

External:

1. Criminality
Arrest charge

2. Social Status

3. Social Stability

4. Social Influence
Significant Other
Living with someone who uses drugs
Peer influence
Friends use drugs

Family Influence
Parent uses alcohol
Parent uses drugs

Internal:

1. *Degree of Debilitation*
Drug of choice: **Quantity**
Heroin of alcohol
Crack for drinkers
Methadone

Years of use: **Frequency of Use:**
For those using: of drugs
Cocaine
Crack **Dependency:**
Pot for those using cocaine

2. *Treatment Receptive*
Need treatment
Treatment Outcome
Want to stop using drugs
Tried to stop using drugs
Tried to stop using alcohol
"Clean time" from drugs

Figure 5: Revised TRP Treatment-Seeking Model

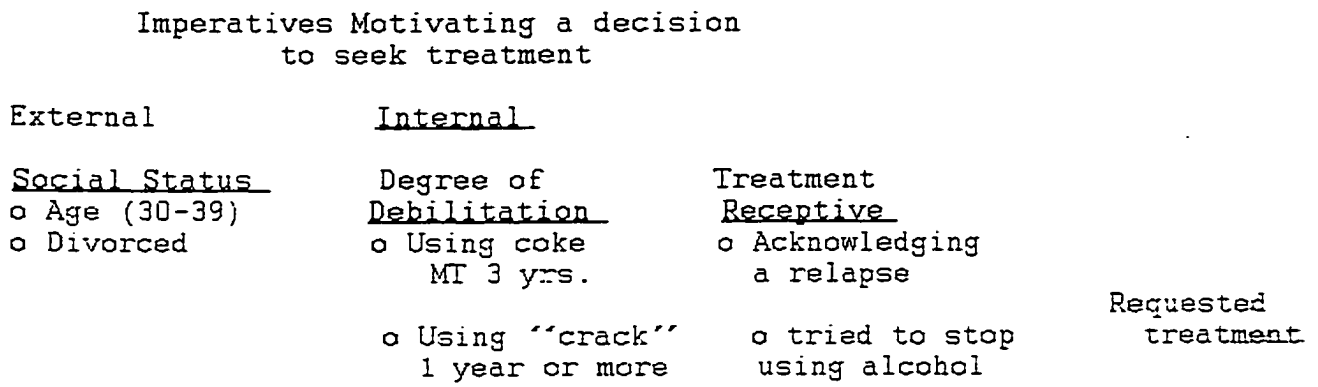


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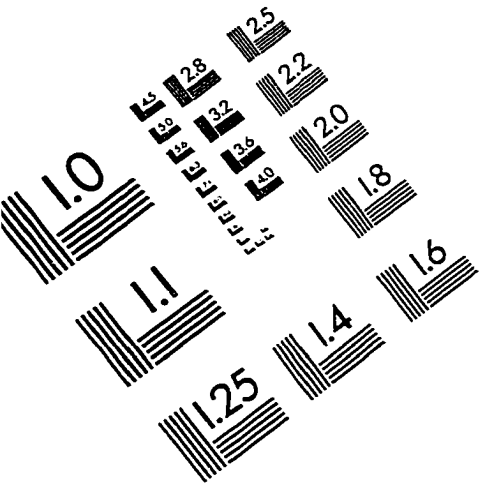
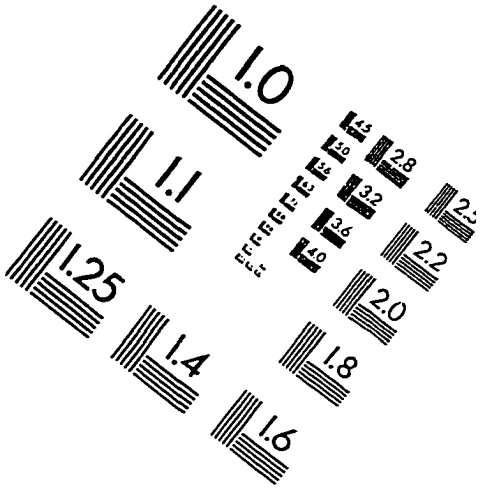
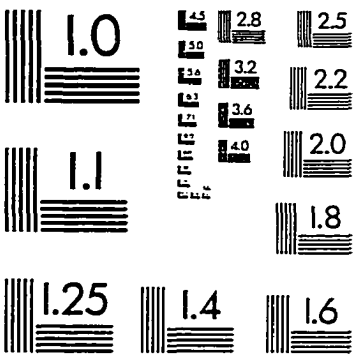
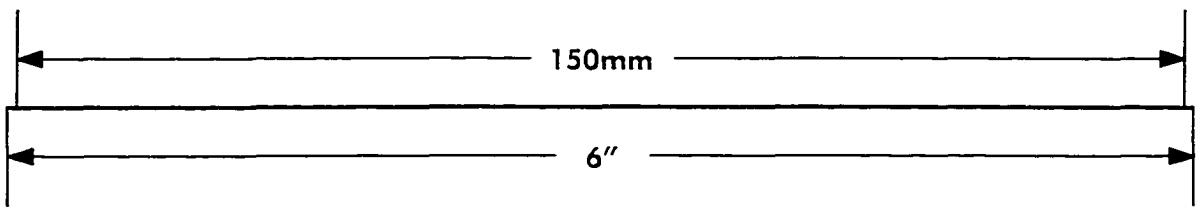
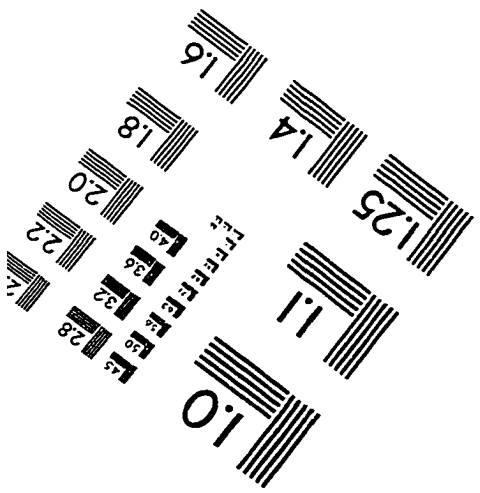
IMAGE EVALUATION TEST TARGET (QA-3)

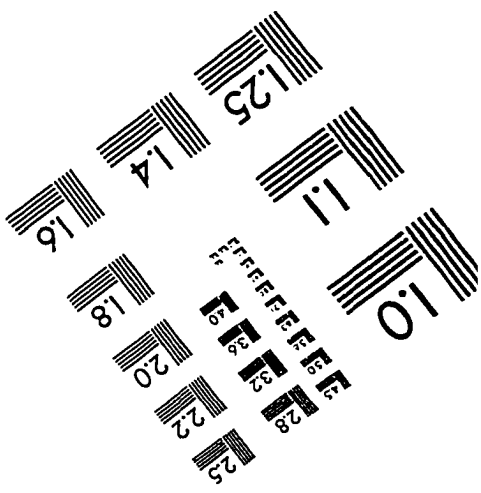












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