ATTRIBUTIONAL PROCESSES AND RELAPSE FOLLOWING SUBSTANCE ABUSE TREATMENT

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ABSTRACT

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One hundred adult graduates of a 28-day residential drug treatment program served as subjects in this retrospective telephone survey. The interviews centered on program graduates' attributions for current drinking/drugging status, attributions for any slips that occurred, and various behavioral characteristics associated with recovery. A set of introductory questions placed subjects into one of four groups: Abstainers, Never-Abstainers, Slip-Abstainers, and Slip-Relapsers.

It was hypothesized that subjects' causal attributions of their slips and of their current drinking or drugging status, described along dimensions of internal-external, stable-unstable, global-specific, and controllable-uncontrollable, would differ according to groups. Also, slip-abstainers and slip-relapsers would differ according to type of self-blame that would characterize the reasons for their slips, behavioral or characterological (Janoff-Bulman, 1979).

As predicted, abstainers (Abstainers and Slip-abstainers) tended to attribute causes for their current drinking/drugging status to internal, stable, global, and controllable factors. Nonabstainers (Never-abstainers and Slip-relapsers) also made internal attributions as expected, but tended to attribute their current status to more specific, unstable and controllable causes than predicted. Results of MANOVA test of differences in mean attribution scores and discriminant

function analysis for these two groups were statistically significant across all four attribution dimensions.

Regarding causal attributions for slips, slip-abstainers had lower Abstinence Violation Effect scores (Marlatt & Gordon, 1985) than slip-relapsers as predicted, and engaged in more behavioral self-blame (more external, specific, unstable, and controllable attributions). Slip-relapsers engaged in more characterological self-blame. All but the global-specific dimension contributed to statistically significant discriminations between these two groups.

Another finding with important implications for clinical practice was the lack of differences between alcoholics and drug users on attributions for current status and substance used in their initial slip. Most cocaine addicts (70%) slipped with alcohol while no alcoholics slipped with cocaine. If one assumes that attributions promote behaviors and not the other way around, results of this study imply that clinical practices that address causal attributions may ultimately lead to significantly higher rates of success in the treatment of substance abusers.

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Chapter 1

INTRODUCTION

Millions of Americans are consistent abusers of alcohol and various other addictive chemicals. Recent statistics show that as many as 23 percent of all American workers use dangerous drugs while on the job (Thompson, 1987). Substance abuse and alcoholism cost industry and the American collective billions of dollars each year. Nationally, the economic costs were estimated at nearly $50 billion annually in 1977 (Mayer, 1983). More recent data show the cost to employers at a staggering $60 billion a year in lost production, increased absenteeism, workplace accidents, rising medical costs and thefts (Thompson, 1987). The sequelae of alcoholism and substance abuse are not only medical or physical symptoms, but also psychological, social, spiritual, vocational and legal problems in living. In economic terms, the cost of these addictive disorders to society may be greater than that of any other public health problem (Costello, 1982; Bratter & Forrest, 1985).

Statement of the Problem

A common phenomenon in the treatment of substance use disorders is that of relapse, or return to substance use after an apparent period of recovery. An evaluation of treatment effectiveness in a recent review of alcohol treatment by Miller and Hester (1980) found that for treated alcoholics only 26% remained abstinent, that is, alcohol free, one year after treatment. The Rand Report (Polich, Armor, & Braiker, 1980)

found an even smaller percentage (7%) of patients maintaining complete and successful abstinence from the onset of treatment. Hunt, Barnett, and Branch (1971) found that in treatment programs for alcoholics and heroin addicts about two-thirds of all relapses occur within the first ninety days following treatment. It seems that in spite of extensive research aimed at evaluating the treatment of substance abuse, very little is known about the factors that contribute to or mediate successful outcome.

Need for the Study

The empirical evidence of treatment outcome suggests that our understanding of the processes of recovery and relapse that continue after the termination of formal treatment for substance abuse falls far short of need. Although there is considerable agreement on relapse as a problem in substance use disorders, there is considerable disagreement concerning the causes of relapse and the differences between those who relapse and those who do not.

In recent years there has been increasing emphasis on commonalities in the addictive disorders. The Hunt, Barnett, and Branch (1971) study, cited earlier, found similar patterns of relapse in alcoholics, heroin addicts and smokers. Marlatt and Gordon (1985) found similar patterns of relapse a decade later. Expert panels assembled by two government agencies provided support for the notion of commonalities in the addictions. The National Institute on Drug Abuse (NIDA) found both conceptual and practical similarities in the areas of alcoholism, obesity, smoking and drug abuse (NIDA, 1979). Similar conclusions appeared in a report by the National Academy of Sciences

(Levison, Gerstein, & Maloff, 1983). Both agencies' reports noted the importance of relapse and suggested the utility of combining perspectives from different areas of the addictions. The notion of commonalities in the addictions suggests there are common psychological adaptations to different physiological pressures (Brownell, Marlatt, Lichtenstein, & Wilson, 1986). This view does not suggest that all treatment should be the same; rather, the underlying constructs leading to relapse appear to be similar.

The return to substance use following a period of abstinence is a major problem encountered by health care professionals working in the field of substance abuse treatment. Theories attempting to explain relapse phenomena have been advanced from a number of diverse perspectives ranging from a medical-disease-physiological approach to a behavioral-learning model. The former, traditional view, places the determinants of relapse within the individual and utilizes two key constructs originally proposed by Jellinek (1960); namely, craving and loss of control. Craving is the physiological or "tissue" need that motivates the alcoholic to take his/her first drink, and loss of control is the inevitable process that ensues after the first drink that compels him/her to continue drinking. Drinking is considered a symptom of the disease of alcoholism, and any use of alcohol is considered pathologic for the alcoholic.

The behavioral-learning approach, at the other extreme, places the determinants of relapse in the environment. Such competencies as stress management, problem solving and social skills may mediate relapse. A substance abuser who has not learned to skillfully refuse substance use offers or demands or has not developed effective and

appropriate leisure-time skills may be at higher risk for relapse (Daley, 1987). The behavioral-learning approach has been criticized for its relative reluctance to acknowledge the possible influence that physiological factors exert on substance abuse and relapse.

Rather than fostering a philosophical and theoretical clash, one other approach is to assume that neither position is completely correct or inclusive, and each may contribute to our further understanding of the relapse process. As it stands now, the status of treatment effectiveness regardless of theoretical orientation has not resolved the high incidence of return to substance abuse following a period of abstinence. Therefore, there is a need for further empirical guidance as to the factors that contribute to or mediate successful outcome following substance abuse treatment.

Purpose of the Study

The cognitive approach has received a lot of attention in recent years in the field of substance abuse relapse. Research by Marlatt (1985), Marlatt and Gordon (1979), Vuchinich, Bordini, Tucker, and Sullwold (1982), and Curry, Marlatt, and Gordon (1987) demonstrates the importance of the cognitive aspect in relapse prevention and the role of causal attributions for substance abuse behavior. The present study's emphasis is on the role of cognition in the relapse process, and within that, the part that causal attributions play. The point needs to be made that the intention is not to abandon the contributions of other factors of relapse, but to focus on one factor, the cognitive aspect, that recent research has shown to be important and in need of further investigation.

The Abstinence Violation Effect proposed in Marlatt and Gordon's (1985) model of addictive behavior relapse is operationalized as a combination of internal, stable, global and uncontrollable causal attributions for initiating drug use following a period of abstinence. The purpose of this study is to investigate this aspect of the cognitive component in the multivariate approach to relapse; namely, attributional differences between successful recovering substance abusers and non-successful recovering substance abusers in order to guide the development of more effective substance abuse treatment.

A multivariate approach to alcoholism is emerging which incorporates both person and situational variables. Alcoholism is seen as a set of behaviors, biologically and psychologically induced, that collectively produce different types of problems that contribute to the maintenance of or result from drinking behavior (Donovan & Chaney, 1985). As the boundaries of the two extreme models become less distinct, extracting and incorporating important factors from each may help to serve an emergent position that recognizes both physical and psychological components. Lindesmith (1968) proposed such an approach with regard to the process of drug addiction. He argued that neither physiological nor cognitive-psychological factors alone were sufficient to explain drug addiction. Rather, the process of addiction appears to be an interaction between learning in a situation involving physiological events as they are interpreted, labeled and given meaning by the individual. Thus both physiological and cognitive elements are taken into consideration.

Recent psychological investigations into addictive problems have implicated cognitive variables in general and attributional processes

in particular as determinants of excessive substance use (Marlatt, 1978; Tucker, Vuchinich, & Sobell, 1981; Vuchinich & Tucker, 1980). A major assumption of Marlatt and Gordon's (1985) Relapse Prevention Model is that the cognitive reaction (Abstinence Violation Effect) to the first slip after a period of abstinence, particularly the attribution for the cause of the slip, exerts a significant influence that may determine whether or not the slip is followed by a full return to the former behavior.

Further, Janoff-Bulman's (1979) work into the attributional processes of depressed and non-depressed people has distinguished between two types of self-blame, behavioral and characterological, which appear to be a useful elaboration of attributional research with implications for relapse and substance abuse. The present study is an investigation of the attributional process of substance abusers following formal treatment with a focus on whether the consequences of attributions of self-blame can be distinguished between behavioral and characterological types.

Definition of Terms

One of the many difficulties that researchers in the field of substance abuse are confronted with is a lack of agreement on the definitions of basic terms such as "alcoholism", "substance abuse", "abstinence", "relapse", and "successful outcome". Some have cited the inadequacy of definitions as the primary reason for lack of success in developing adequate diagnostic, prognostic and prevention endeavors. More information is needed about the natural history of drug-related disorders in order to formulate more adequate definitions of classes

and subclasses of the disorder. This study will utilize the following definitions for the major constructs of the study. The first two definitions are suggested by the third edition of the Diagnostic and Statistical Manual (American Psychiatric Association, 1980).

1. Alcoholism, or alcohol dependence and substance dependence: A pattern of pathological alcohol or substance use or impairment in social or occupational functioning due to alcohol or substance use with a duration of disturbance of at least one month, and either tolerance (need for markedly increased amounts of the substance to achieve the desired effect, or markedly diminished effect with regular use of the same amount), or withdrawal (a specific syndrome following cessation of or reduction in intake of the substance).
2. Alcohol abuse and substance abuse: Refers to use that meets the above criteria with the exception that there is no tolerance change or withdrawal syndrome associated with such use.

For purposes of this study, the term "substance abuse" will be used to describe all these clinical disorders. In practice, individuals admitted to and discharged from residential alcohol and drug treatment programs will have been given some substance dependence diagnosis. However, they are usually referred to as "substance abusers", "alcoholics", "drug addicts", "cross-addicted alcoholics" or "chemically dependent" individuals. The term "substance abusers" will be used in this study.

The criteria of pathological alcohol use and social or occupational impairment due to alcohol use includes such factors as

need for daily use of alcohol for adequate functioning, inability to cut down or stop drinking, repeated efforts to control or reduce excess drinking by "going on the wagon", binges, restricting drinking to certain times of the day, blackouts, violence while intoxicated, absence from or lateness at work, loss of job, legal difficulties (arrest for intoxicated behavior, traffic accidents while intoxicated), and arguments or difficulties with family or friends because of excessive alcohol use (American Psychiatric Association, 1980).

3. Substance or Drug: A mood-altering chemical.
4. Use or using: The act or action of taking drugs.
5. Relapse: The process of returning to substance abuse following a period of at least 30 days of abstinence.
6. Slip: An initial use of the substance following a period of at least 30 days of abstinence. A slip may or may not lead to relapse.
7. Abstainer: A person who has maintained abstinence since discharge from the residential treatment program.
8. Slip-Abstainer: A person who (a) has exceeded a 30 day period of abstinence since discharge from the residential treatment program, (b) has had some slips since treatment and (c) has not used within the past month.
9. Never-Abstainer: A person who has not exceeded a 30 day period of abstinence since discharge from the residential treatment program.
10. Slip-Relapser: A person who (a) has exceeded a 30 day period of abstinence since discharge from the residential treatment program, (b) has had some slips since treatment and (c) has used within the past month.

11. Successful recovering substance abuser: A person who has either maintained abstinence since completion of treatment (abstainer), or has had some slips (following periods of at least 30 days of abstinence) and has not used within the past month (slip-abstainer).

12. Non-successful recovering substance abuser: A person who has not had a period of at least 30 days of abstinence since completion of treatment (never-abstainer), or has had some slips (following periods of at least 30 days of abstinence) and has used within the past thirty days (slip-relapser).

13. Abstinence Violation Effect (AVE): An individual's cognitive-affective reaction to an initial slip. The intensity of the AVE is increased when causal attributions for a slip focus on internal, stable, and global factors that are perceived to be uncontrollable (e.g., lack of willpower). The intensity of the AVE is decreased by external, unstable, specific and controllable causal attributions (e.g., failure to use appropriate coping skills in a specific situation).

14. Behavioral self-blame: Self-blame that is control related; that is, it involves attributions to a modifiable source (i.e., one's behavior) and is operationalized as a combination of external, unstable, specific and controllable causal dimensions (Janoff-Bulman, 1979). This combination is identical to a decreased AVE.

15. Characterological self-blame: Self-blame that is esteem related; that is, it involves attributions to a relatively non-modifiable source (i.e., one's character or disposition) and is operationalized as a combination of internal, stable, global and

uncontrollable causal dimensions (Janoff-Bulman, 1979). This combination is identical to an increased AVE.

16. Characterological self-congratulations: This is the converse of behavioral self-blame on all dimensions except controllability. Whereas self-blame refers to attributions for the cause of a negative event (failure), self-congratulations refers to attributions for the cause of a positive event (success). It is operationalized as a combination of internal, stable, global and controllable causal dimensions (Schoeneman, Cheek, Fischer, Hollis, & Stevens, 1985). The key difference with characterological self-blame is that characterological self-congratulations attributes causes for the success to dispositional factors that are perceived to be controllable.

Research Questions

The following are the major questions to be addressed in this study.

1. Do substance abusers who relapse after an initial slip (slip-relapsers) report more intense AVEs than those who regain abstinence (slip-abstainers)? Using self blame terminology this translates to:
2. When compared to relapsed substance abusers (slip-relapsers), are successfully recovering substance abusers who slip (slip-abstainers) more likely to engage in behavioral self-blame for the slip than characterological self-blame?
3. Do successfully recovering substance abusers (abstainers and slip-abstainers) more often engage in characterological

self-congratulations (for their current abstinence) while non-successful recovering substance abusers (never-abstainers and slip-relapsers) engage in characterological self-blame (for their current non-abstinence)?

The second set of research questions is a secondary focus of the study. Anticipated questions include the following:

4. Are there any differences in the drugs of choice between successful and non-successful substance abusers?
5. Are there any differences between slip-abstainers and slip-relapsers in the drugs of choice used in the initial slip?
6. Are there any differences in lengths of time of abstinence between successful and non-successful substance abusers?
7. Are there any differences between slip-abstainers and slip-relapsers in the manner in which the initial slip was done, with respect to location, time of day, premeditation or effort?
8. Can self-blame be assessed with two directed questions rather than a 12-item scale?

Since there is modest empirical evidence for considering the two addiction and treatment processes (alcohol and drug) to be the same, another feature of this dissertation will be to provide a post hoc analysis of cognitive attributions, to further investigate the extent to which these groups are similar.

9. Are there any cognitive attributional differences between alcoholics and drug users?

Summary

Substance abuse is a major problem in our society. The high incidence of relapse is a major problem facing health professionals who treat substance abusers. Cognitive variables in general and attributional processes in particular have been implicated as some of the determinants of excessive substance use. Research in the area of self-blame has distinguished between two types, behavioral and characterological, which appear to provide a useful elaboration of attributional research with implications for relapse and substance abuse. The present study is an investigation of the attributional process of substance abusers following formal treatment. The role of cognitions, specifically, causal attributions for past and present events, and how they affect behavior following treatment is a primary focus of this study.

Chapter 2

LITERATURE REVIEW

Introduction

This chapter reviews the literature pertinent to this study. Studies included in this review focus on (a) facets of cognitive factors in the relapse process, (b) attribution theory, or (c) self-blame. An ERIC computer search and a manual search of the literature using Psychological Abstracts from 1975 to the present were done. The review will begin with a discussion of limitations in the scope of the study. Cognitive factors in the relapse process will then be discussed. This will be followed by a review of attribution theory and key constructs. A review of the literature on self-blame will then be presented, together with a conceptual model illustrating the relationships between causal attributions, success\failure and abstinence\relapse.

Limitations in the Scope of the Study

Noncognitive factors. This investigation will examine the impact of a single set of variables (cognitive attributions) on the incidence of relapse following substance abuse treatment. Attributions are but one of a multitude of variables that have been shown to influence the incidence of relapse. Major reviews of the literature of other factors (noncognitive) influencing substance abuse (e.g., Miller, 1985; Cooper, 1983; Leigh, 1985) are typically summarized under the following major categories: cultural, environmental, intrapersonal and biological.

Cultural factors influencing substance abuse include customs and mores, whether they be for the society at large or a subculture. These variables set the tone and feeling regarding alcohol or drug use and can have an influence on individual consumption levels. For example, in France and in Italy, the drinking of wine has been considered an integral part of the family meal, while in Sweden drinking has been used primarily in connection with visiting friends (Leigh, 1985).

Environmental factors influencing substance abuse include but are not limited to the effects of learning (Fawzy, Coombs, and Gerber, 1983; Lied & Marlatt, 1979; Cooper, 1979), life events (Donovan & O'Leary, 1975; Krueger, 1981), and familial factors (Jacob, Favorini, Meisel, & Anderson, 1978; Frances, Timm, & Buckley, 1980). Annis (1974), for example, found that distinct patterns emerged in the use of similar drugs by a mother and daughter, or a father and son, suggesting a modeling effect in learning how to use specific drugs. Such factors appear to have a broad influence on fostering the development and maintenance of substance abuse. Consideration of these factors and their impact on the individual would seem important then in understanding the etiology of the abuse and any future relapse that may occur.

Intrapersonal factors include the effects of personality (Barnes, 1980; Steer, McElroy, & Beck, 1983; Carlin & Stauss, 1977), ego development (Khantzian,1980), affect and cognition (Marlatt, 1978; Donovan & Marlatt, 1980), and gender differences (Midanik, 1983; McKenna & Pickens, 1983). Boothroyd (1980), for example, found that women who had experienced broken homes before the age of ten were more likely to become heavy drinkers than men with the same life history.

As with the cultural and environmental factors, these intrapersonal factors may contribute to the development and maintenance of substance abuse in the individual.

Biological factors influencing substance abuse include effects of biochemistry (Tewari & Carson, 1982), neurophysiology (Blum, 1982), and genetics (Murray & Stabenau, 1982). Goodwin (1985), for example, found that sons of alcoholics were more likely to be alcoholic than were sons of nonalcoholics, whether raised by their own biological parents or by nonalcoholic foster parents.

Other theoretical perspectives. Although this study gives some consideration to the behavioral viewpoint, it is grounded primarily in the cognitive perspective. The adoption of a different theoretical point of view probably would have prompted different research questions, different types of analyses or different interpretations of the findings. Other theoretical accounts of substance abuse in relapse cited in the literature include: physiological, learning, and psychological formulations.

Metabolic theories (Wikler,1980; Dole & Nyswander, 1967) share the premise that drugs modify the metabolism in some way, making subsequent drug ingestion physiologically necessary. In a comparable vein, the central premise of the medical-disease model (Jellinek, 1960) is that there is always an organic basis for addiction.

Operant conditioning theories posit that drugs are powerful positive reinforcers (Goldstein, 1972) or are reinforcing primarily because they postpone negative withdrawal symptoms (Lindesmith, 1968; Wikler, 1973). In a recent review of the literature on opiate addiction, Alexander and Hadaway (1982) made a case for the adaptive

orientation to addiction, that is, the view that addiction is an attempt to adapt to severe distress through habitual use of drugs. They concluded that a comprehensive understanding of addiction considers drug and setting; physiological and cognitive factors; tolerance and physical dependence; and personality, social, and genetic influences.

Psychodynamic formulations are based on the premise that alcoholics or drug users have unresolved developmental crises in childhood which lead to the formation of an immature, orally fixated personality (Cooper, 1983). Personality trait theorists have focused on identifying the characteristic attributes of an "addictive" personality (Rose, 1960).

Cognitive Factors in Relapse

In recent years, several investigators' works have implicated cognitive variables in general and attributional processes in particular as potential determinants of excessive substance use (Marlatt, 1978; Tucker, Vuchinich, & Sobell, 1981; Vuchinich & Tucker, 1980).

Marlatt (1985) has been at the forefront of research into the role of cognitive factors in the relapse process. He viewed relapse as a transitional process, a series of events that may or may not be followed by a return to baseline levels of the target behavior. He claimed three interrelated cognitive mediators play important roles in this process; self-efficacy, outcome expectancies, and attributions of causality.

Self-efficacy. Bandura (1977) has investigated the concept of self-efficacy as an important cognitive mediator of behavior. It is considered a cognitive process since it is concerned with perceived judgments people make about their competency to perform adequately in a specific task situation. According to Bandura, there are four means by which efficacy beliefs are acquired and modified: one's own performance accomplishments, vicarious experiences, external persuasion and states of emotional arousal. Regarding the process of relapse, the most important source of information for inferring self-efficacy judgments concerns the individual's performance accomplishments: his/her experiences of success and failure in coping with high-risk situations.

With respect to the relapse process, self-efficacy refers to the individual's perception of his/her ability to cope with prospective high-risk situations. A high-risk situation is any situation that poses a threat or risk to the individual's perception of control. Successful coping with a variety of high-risk situations increases one's sense of self-efficacy and decreases the probability of relapse, whereas failure experiences have the reverse effect (Marlatt, 1985). If the individual's inability to cope with a high-risk situation is associated with a perception of decreased efficacy, then the likelihood of being attracted to the old "coping crutch" of drugs or alcohol increases. The individual at this point may be experiencing feelings of helplessness or loss of control. Response patterns from prior experiences in situations that evoked similar affective responses may give rise to urges to seek relief in the form of substances that alter one's perception of ordinary reality. Marlatt believed that this increase in temptation is mediated by the second cognitive factor in

the relapse process, positive outcome expectancies for the effects of the substance. Before moving on to the discussion of outcome expectancies, a brief review of some recently published studies is in order.

Condiotte and Lichtenstein (1981) conducted a study with individuals from a smoking cessation program. Measures of self-efficacy were taken pre- and post-treatment. Comparison of the two measures showed an increase in self-efficacy at the conclusion of the program. Results also showed a statistically significant relationship between an increased level of perceived self-efficacy at the completion of treatment and the probability that subjects would remain abstinent throughout the follow-up period or would remain abstinent for longer periods of time prior to relapse. The results of this study, along with the findings of two other studies (DiClemente,1981; McIntyre, Lichtenstein, & Mermelstein, 1983) suggest that the construct of self-efficacy can be used as a predictor of relapse in ex-smokers.

Rist and Watzl (1983) conducted a study with female alcoholics in which they found that specific self-efficacy ratings in high risk situations were predictive of posttreatment functioning. Relapsed subjects had rated risk situations at pretreatment as more difficult to abstain from than did abstinent subjects.

A study by Cooney, Gillespie, Baker, and Kaplan (1987) compared alcoholics in treatment with nonalcoholics from the community. All subjects were exposed to a neutral stimulus and to their favorite alcoholic beverage. Subjects were allowed to hold and smell the beverage, but not to consume it. Results showed that following alcohol cue exposure both groups had increased desires to drink, increased

expectations of pleasant alcohol effects, decreased expectations of arousal, and decreased expectations of behavioral impairment from drinking. Alcoholic subjects reported increased physical symptoms, decreased confidence about coping with future temptations, and increased guilt. The researchers concluded that their findings were "consistent with Marlatt's hypothesis that an alcoholic in a high-risk relapse situation experiences an increase in positive outcome expectations and a decrease in self-efficacy" (Cooney et al., 1987, p. 150).

Outcome expectancies. Drugs are expected to reduce tension, eliminate or minimize negative affective states, and enhance social interaction. The outcome of consuming alcohol or drugs, often perceived by the individual as being reinforcing and serving some instrumental function, serves to strengthen further the expectancies and their influence on drinking and drugging (Donovan & Marlatt, 1980). Marlatt (1985) noted the importance of distinguishing between the actual effects of a drug and the expected effects of a drug. Regarding his relapse model, positive outcome expectancies are more important than the actual effects experienced after the drug is consumed. The study by Cooney et al. (1987) cited above found support for the notion of positive outcome expectations with regard to drinking. Eastman and Norris (1982) found that alcoholics who reported positive expectancies for drinking had a higher probability of relapse than those with negative expectancies. An earlier study by Cooney, Baker, Pomerleau, and Josephy (1984) using the measurement of salivary secretions in the presence of alcohol cues also supported this concept. This study focused on the relationships between desire to drink ratings,

expectations about drinking, and salivation during alcohol cue exposure. Results showed that salivation in the presence of alcohol cues was significantly correlated with positive drinking outcome expectations, such as feelings of stimulation, pleasure from the taste of the beverage and disinhibition. In contrast, correlations between salivation and desire to drink ratings or expectations of behavioral impairment were not significant.

Attribution of causality. If the substance abuser then proceeds to use, the third factor, attribution of causality, becomes important in determining whether the first use or slip precipitates a full blown relapse. According to Marlatt, the degree of the substance abuser's reaction to the first slip will be determined in part by whether the individual attributes the "cause" of the slip to internal (self-related) or external (situational) factors. That is, persons who make internal attributions will go on to use and persons who make external attributions will not. Marlatt has termed the cognitive attribution that follows a transgression to an absolute rule the Abstinence Violation Effect (Marlatt & Gordon, 1979).

Attribution Theory-Concepts

Attribution theorists study the process of how individuals attempt to explain the causes of a given behavior. Weiner (1974) has been one of the leading researchers who has applied the principles of social perception and attributional processes to human motivation, particularly with regard to achievement motivation. He described three causal dimensions used by attribution theorists to organize the causal concepts of the layperson.

The first dimension, locus of causality, refers to the internal versus external description of causes originally described by Rotter (1966) in his analysis of locus of control. With regard to the substance abuser's explanation for his/her using the first time and breaking the period of abstinence, one considers: Is the cause (for using) due to something about him/herself (internal attribution) or something about the situation (external attribution)?

Several review articles (Hinrichsen, 1976; Rohsenow & O'Leary, 1978) on locus of control studies among alcoholics have noted methodological flaws with many studies reporting alcoholics to be more internal in locus of control. Such flaws included not matching samples on important demographics such as age and social class or using norms not based on alcoholic samples. Hinrichsen (1976) concluded that "most of the studies, even if some are methodologically flawed, suggest that alcoholics are not grossly external and some appear to be internally oriented". Rohsenow and O'Leary (1978), on the other hand, thought that in better controlled studies the trend suggested no difference or more external locus of control for alcoholics. The authors also stated that one reason for the difficulty in obtaining clear-cut relationships between various measures and alcoholism may be the probable nonhomogeneity of alcoholics as a group. They agreed with Wanberg and Knapp's (1970) conclusion that comparing "alcoholics" as a group to "normals" is fruitless, and a better approach would be to utilize groups of alcoholics differentiated according to certain dimensions. The investigation described in this report does just that.

Stability, the second dimension, characterizes perceived causes along a continuum ranging from stable (invariant) to unstable

(variant). With regard to the substance abuser's explanation for his/her slip, one asks: Is the cause for the initial use something that changes over time (unstable attribution), or is the explanation unchanging over time (stable attribution)? If the individual thinks the slip was produced by stable factors that are not easily controlled, the person is likely to give up after deciding that subsequent slips are inevitable. However, if the person perceives the cause of the slip as due to unstable and controllable factors, they are likely to try again to resume abstinence. Empirical support for these hypotheses will be discussed more in a later section.

Weiner called the third dimension controllability and refers to causes that are perceived as being either under volitional control or uncontrollable. Regarding the substance abuser's explanation for his/her slip, one asks: Is the substance abuser's cause for the initial 'slip' perceived as something that is potentially controllable by him/her or other people, or potentially uncontrollable by him/her or other people?

Other theorists have suggested additional causal dimensions. Abramson, Seligman, and Teasdale (1978) suggested the addition of a global-specific dimension, described as independent of the locus of causation and stability factors. A global attribution for the initial use implies that the cause influences other areas of the substance abuser's life, (e.g., anger might be cited as a cause of the person's slip which also causes problems in other areas of the person's life) whereas a specific attribution implies that the cause for the initial use is something that just influences drinking or drugging.

Incorporating the dimensions of attribution theory, Marlatt's reformulated Abstinence Violation Effect (1985) is assumed to occur when the individual is personally committed to an extended or indefinite period of abstinence and a slip occurs during this time period. The AVE is a cognitive-affective reaction to an initial slip that influences the probability that the slip will become a full blown relapse. It is a dimensional construct (the greater the AVE the greater the probability of relapse) consisting of two components: A cognitive attribution as to the perceived cause of the slip and an affective reaction to this attribution. An increased AVE is postulated to occur when the individual attributes the cause of the slip to internal, stable, and global factors that are perceived to be uncontrollable. If, however, the individual attributes the cause of the slip to external, unstable (changeable) and specific factors that are perceived to be controllable, the AVE will be minimal or decreased and the individual will retain a perception of control.

There are some empirical findings that provide support for these dimensions. Depressed individuals have been shown to make internal, global and stable attributions for failure on various experimental tasks; success experiences are more likely to be attributed to external, specific and unstable attributions (Hammen & Krantz, 1976; Klein, Fencil-Morse, & Seligman, 1976). Vuchinich, Bordini, Tucker, and Sullwold's (1982) study showed that alcoholics tend to make greater internal attributions for their own drinking than do non-alcoholic control subjects. Twenty alcoholics and 20 non-alcoholics made causal attributions for a recent personal drinking episode. Results showed that alcoholic subjects, when rating the causes of their personal

drinking episode, more strongly endorsed three internal causes (drinking to receive an effect from alcohol, drinking because of bad feelings about one's self, and drinking because of the disease) than did the non-alcoholic subjects.

Criteria for successful recovering and non-successful recovering substance abusers were given earlier. However, at this time attention is drawn to the point that both successful and non-successful substance abusers could have experienced some slips. Those persons that regain abstinence following slips presumably attribute the cause of the slip differently than those persons who slip and do not regain abstinence. Curry, Marlatt, and Gordon (1987), in an analysis of relapse episodes in smokers, found that persons who relapsed made more internal, characterological attributions for the slip than smokers who slipped and regained abstinence. Therefore, it is hypothesized that successful recovering substance abusers, including those who remained totally abstinent since completing formal treatment and those persons who have had some slips but are not currently using, will attribute slips and current abstinent status differently than non-successful recovering substance abusers. The specific dimensions of attribution which are hypothesized to differ will be delineated after the following distinction is made.

Self-blame

Of particular relevance for translating this conceptual model into clinical interventions is the distinction between characterological and behavioral causal attributions (Janoff-Bulman, 1979). Behavioral self-blame is control related; that is, it involves attributions to a

modifiable source (i.e., one's behavior), and is associated with a belief in the future avoidability of a negative outcome. Characterological self-blame is esteem related; that is, it involves attributions to a relatively non-modifiable source (i.e., one's character) and is associated with a belief in personal deservingness for past negative outcomes.

Translating these two types of self-blame into dimensions of causal attributions involves some extension of attribution theory beyond its literal translation. Although behavioral and characterological causal attributions are considered internal in that they both refer to the individual (self-blame), the differences between them are consistent with the external-internal dimension included in the conceptual analysis of the AVE (Curry, Marlatt, & Gordon; 1987). Thus, behavioral self-blame is seen to parallel the external dimension of causality while characterological self-blame parallels the internal dimension of causality.

Studies have given support to distinguishing between characterological and behavioral self-blame and their relationship to attribution theory. Janoff-Bulman (1979) had depressed and non-depressed subjects imagine themselves in four scenarios with negative outcomes. Responses were made on 6-point scales with endpoints 'not at all' and 'completely'. The 120 subjects were asked to rate how much of the blame was due to the "kind of person you are" (characterological), "what you did" (behavioral), chance, other people, and the environment. Parallel attributional and self-blame measures were summed across the four scenarios; for example, a score for characterological self-blame was derived by adding the individual responses to each of the four

questions (one following each scenario) that asked about characterological self-blame. Depressed subjects reported the characterological blame higher than did non-depressed subjects. Behavioral self-blame did not differ between the two groups. Anderson, Horowitz, and French (1983) found that lonely and depressed people tend to attribute their interpersonal failures more to unchangeable aspects of their characterological make-up (lack of ability, poor personality traits) and less to changeable aspects of their behavioral attempts (lack of effort, inappropriate strategy) than did non-lonely non-depressed people.

Schoeneman and his co-workers (1985) conducted a study that incorporated dimensions of attribution with characterological and behavioral self-blame. They investigated people's attributions for success and failure following smoking cessation treatment. In extensive telephone interviews of 61 subjects one to two years after treatment they asked questions about current smoking status, circumstances and attributions for initial lapse (if any), attributions for present smoking or non-smoking, and perceived likelihood of smoking in three months. Subjects were classified as Abstinent (never smoked after treatment), Never-Abstinent (never quit), Slip-Relapse (abstinent after treatment, but relapsed), or Slip-Abstinent (abstinent, lapsed, and returned to abstinence). They predicted that Slip-Relapse subjects would display characterological self-blame by attributing slips to internal, stable, global and uncontrollable causes. Slip-Abstinent subjects were predicted to display behavioral self-blame for their slips by making attributions that are internal, unstable, specific and controllable. However, based on the distinction made earlier,

Schoeneman et al. may have erred by considering behavioral self-blame as having an internal rather than external dimension of causality.

Compared to slip-relapse subjects, there were marginally significant tendencies for the relatively small number of slip-abstinent subjects (n = 7) to attribute slips to causes that were more changeable (unstable) and personally controllable (i.e., failure of effort versus wrong mood or personality). Because of the small sample size the authors regarded their predicted differences as promising but not conclusive. The slip-relapse subjects (n = 17) less clearly demonstrated characterological self-blame, but their slip attributions were internal and less changeable (more stable) than those of the slip-abstinent group suggesting an increased abstinence violation effect.

Results also showed that ex-smokers (abstinent and slip-abstinent) rated likelihood of future smoking significantly lower than did smokers (never abstinent and slip-relapse). Ex-smokers' attributions for their non-smoking status, compared to smokers' attributions for their smoking status, put significantly more emphasis on personality and ability, and were more stable, global, and personally controllable. These studies seem to suggest the viability of distinguishing between two types of self-blame, characterological and behavioral. Therefore, it is hypothesized that successful recovering substance abusers will engage in behavioral self-blame by attributing slips to external, unstable, specific and controllable causes, while non-successful recovering substance abusers will engage in characterological self-blame by attributing their slips to internal, stable, global and uncontrollable causes.

The diagrammatic model on the following page (see Figure 1) was developed by the author and illustrates the relationships between causal attributions, success/failure and abstinence/relapse. The model starts from the point of people exiting from the residential treatment program. Four pathways are postulated representing the four groups: Abstainers, Slip-abstainers, Slip-relapsers, and Never-abstainers. Abstainers perceive the ongoing event of abstinence as a success and attribute the cause of it to internal, stable, global and controllable factors. Slip-abstainers have two events with which to be concerned. The first is a slip which is perceived as a failure. Causal attributions for their slip are along external, unstable, specific and controllable factors. This is behavioral self-blame and a reduced Abstinence Violation Effect. They do not "own" their slip, in that they blame it on something outside of themselves, that does not always occur, and does not happen in every area of their life. They also feel they are still in control. The second event that Slip-abstainers perceive is their ongoing abstinence after the slip. Similar to Abstainers they perceive their post slip abstinence as a success and make internal, stable, global and controllable causal attributions, that is, they see themselves as winners and engage in a form of characterological self-congratulations.

Slip-relapsers also have two events with which to be concerned. The first is a slip which is perceived as a failure. Causal attributions for their slip are along internal, stable, global and uncontrollable factors. This is characterological self-blame and a heightened Abstinence Violation Effect. They blame themselves for the slip, that is, they give the reason for it happening as something about

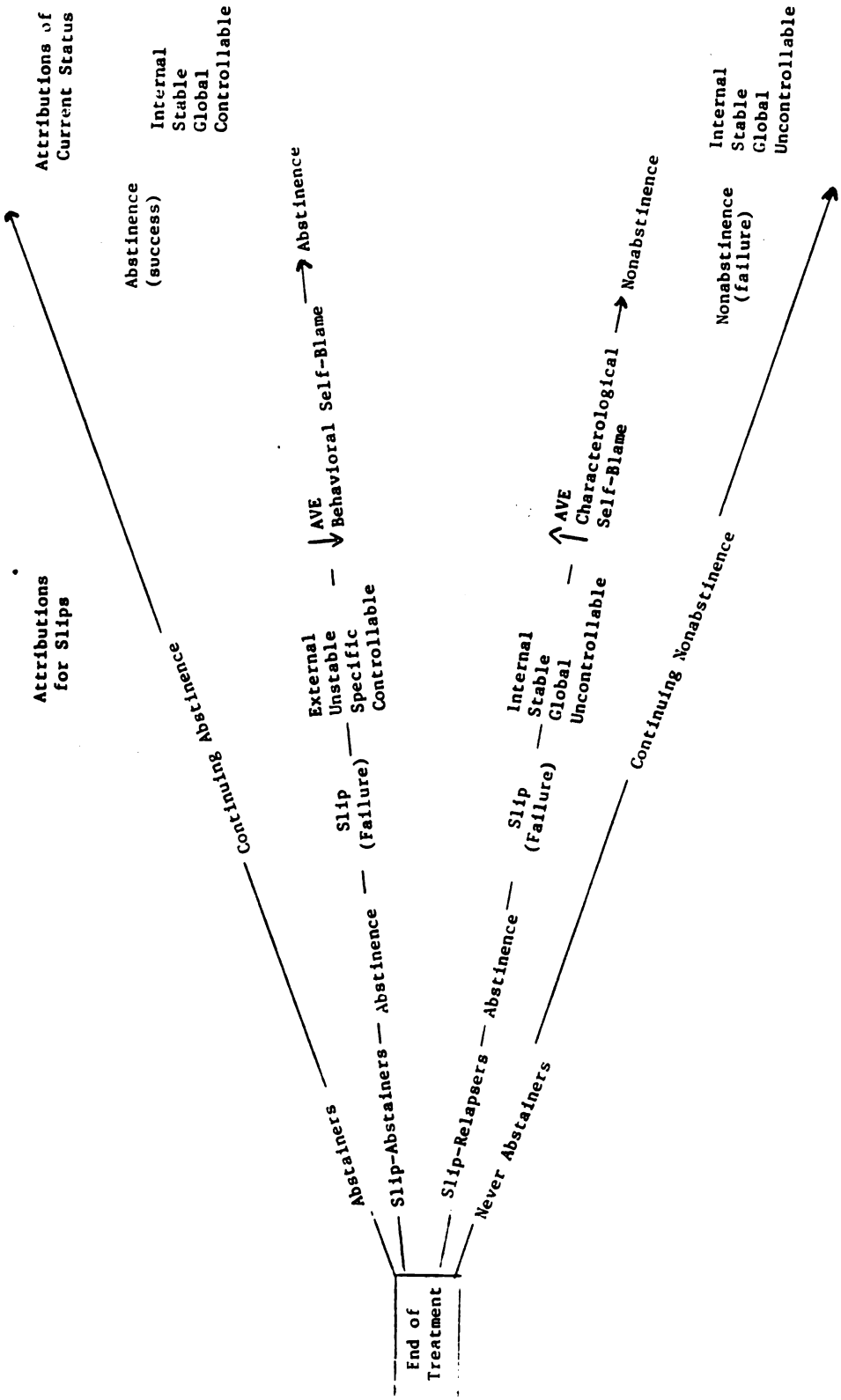

Figure 1. Model of Relapse & Attributions

themselves, that always occurs, in all areas of their life, and they feel they have no control over it. The second event that Slip-relapsers perceive is their ongoing non-abstinence which is perceived as a failure. Causal attributions given for their current non-abstinence are along internal, stable, global and uncontrollable factors. Never-abstainers also perceive their current non-abstinence as a failure and make similar causal attributions; internal, stable, global and uncontrollable factors. This is characterological self-blame.

The recognition of two types of self-blame may have therapeutic implications. Helping people to focus on behaviors that are changeable, rather than on relatively non-modifiable, more global aspects of their character may increase perceived future avoidability of negative events, such as return to substance use, and perceived control in general. Furthermore, clinical interventions which help individuals attribute personal responsibility to controllable behavioral factors (e.g., a lack of coping skills that can be learned and practiced) rather than to uncontrollable characterological deficits (e.g., a weak will) might help individuals who slip to avoid making self-defeating internal, stable and global causal attributions associated with relapse. Increasing one's awareness of two types of self-blame might also change one's perception of what is or is not changeable; that is, it may increase a person's ability to discriminate between what is and is not within their control, an important element of the Serenity Prayer quoted frequently in the Alcoholics Anonymous fellowship.

Chapter 3

METHODOLOGY

Overview of Design

This study was a retrospective telephone survey of 100 adult subjects who completed the Insight, Inc. residential drug treatment program in 1986. The interview asked program graduates to describe their current use of chemical substances, any slips that may have occurred since the end of the treatment program, and their thoughts about their experience of substance abuse recovery.

Each interview began with a set of introductory questions that placed subjects into one of four groups: Abstainers, Never-Abstainers, Slip-Abstainers, and Slip-Relapsers.

Group 1: ABSTAINERS (A)

Have not drunk or used drugs at all since the completion of the residential treatment program.

Group 2: NEVER-ABSTAINERS (NA)

Have not exceeded a 30 day period of abstinence since the completion of the residential treatment program.

Group 3: SLIP-ABSTAINERS (SA)

Have exceeded a 30 day period of abstinence since the completion of the residential treatment program, experienced a slip, and have been abstinent within the past thirty days.

Group 4: SLIP-RELAPSERS (SR)

Have exceeded a 30 day period of abstinence since the completion of the residential treatment program but have

been drinking or using drugs within the past thirty days.

Following the introductory questions, a 12-item attributional scale was administered to obtain participants' perceptions of the causes of their current abstinent or nonabstinent status and slips (if any) since the end of the residential treatment program. It was hypothesized that subjects' attributions of causes, described along four attribution dimensions - internal-external locus of control, stable-unstable, global-specific, and controllable-uncontrollable - would differ in predictable ways across groups. A set of demographic questions concluded the interview schedule.

Development of the Instrument

Overview of the Interview Schedule. The entire interview schedule consisted of the following parts: (a) A preliminary set of questions which placed each subject into one of four groups; (b) for the two slip groups, a set of questions addressing the specific dynamics of their initial slip (e.g., "What was the first thing you drank or used after the treatment program?") followed by a 12-item attributional scale and a two item self-blame scale addressing the initial slip; (c) for all four groups, a 12 item attributional scale and two item self-blame scale addressing their current abstinent or nonabstinent status; (d) a set of demographic questions; and (e) a debriefing section. (See Appendix E - I for complete interview schedules)

Independent and Dependent Variables. The independent variable throughout all analyses in this study was patterns of drug use since program graduation. These patterns were defined as: totally abstain; never abstain; slip, but then abstain; and slip, then not abstain. The

dependent variables of primary concern were measures of attributions of causes described in Chapter 2: internal-external, stable-unstable, controllable-uncontrollable, and global-specific. These variables served as the focus of hypotheses 1 through 3. Dependent variables of secondary concern were behavioral characteristics of program graduates (e.g., attendance at A.A. meetings, use of Antabuse). These served as the focus of hypotheses 4 through 6.

Measures of Attributions. The Causal Dimension Scale (CDS) developed by Russell (1982) was used to assess the first three attribution dimensions: internal-external, stable-unstable, and controllable-uncontrollable. Three items developed by the author were added to the CDS to measure the global-specific dimension.

The Causal Dimension Scale (Russell, 1982) is a measure of how individuals perceive causes in a particular situation. It consists of nine items assessing three causal dimensions; locus of causality, stability and controllability. The CDS is similar in format to the Attributional Style Questionnaire (ASQ) (Seligman, Abramson, Semmel & Von Baeyer, 1979), but differs in one important respect. Whereas the CDS is designed to measure attributions for one specific event, the ASQ is designed to measure a cross-situational attributional style.

The rationale for selecting the CDS rather than the ASQ for this study is grounded in the results of two studies by Cutrona, Russell and Jones (1985). These studies critically evaluated the concept of an attributional style as operationalized by the Attributional Style Questionnaire. The results provided weak support for cross-situational consistency in attributions for hypothetical events, and virtually no support for consistency in attributions for actual life events. The

authors concluded that a more promising approach for future research lies in exploring causal attributions for specific life events using measures that yield reliable assessments of attributions for a single event, such as the Causal Dimension Scale.

This study employed the CDS to measure substance abusers' perceptions of causes regarding their slips, if any, and drinking/drugging status. The scale was modified for oral presentation and changed from a nine-point scale to a five-point scale to make it easier for participants to recall the response categories when presented orally. Despite this change, the key words and word stems were all kept intact. However, transitional phrases and additional examples were added for purposes of explaining and administering the instrument to subjects over the phone.

The CDS is based on dimensional properties of causes identified by Weiner (1974): locus of causality, stability and controllability. Russell (1982) reported high levels of internal consistency for the measure's internality, stability and controllability subscales (coefficient alphas ranging from .73 to .88) and confirmed the three-factor structure of the CDS through factor analyses.

Design of a Measure of the Abstinence Violation Effect. In addition to Weiner's (1974) three attributional dimensions, the operational definition of the Abstinence Violation Effect includes the global-specific dimension suggested by Abramson et al. (1978). Three items tapping the global-specific dimension were, therefore, developed by the author and added to the CDS to provide a measure of the Abstinence Violation Effect.

The final section of the interview dealing with attributions asked two direct questions that tapped both characterological and behavioral self-blame. These two questions were derived from Janoff-Bulman's (1979) study of self-blame. The author's intent in asking these questions was to determine if this relatively straightforward way of assessing attributions would provide a reliable measure of self-blame.

The nine-item Causal Dimension Scale (Russell, 1982) is presented below in its original nine-point scale format. A three-item subscale assessing the global-specific dimension follows. It is also presented in a nine-point format to show the similarity in subscales. These 12 items converted to a five-point orally administered scale constituted the measure of attributions used in this study.

1. Is the cause something that:
   Reflects an aspect of yourself 9 8 7 6 5 4 3 2 1 Reflects an aspect of the situation

2. Is the cause:
   Controllable by you or other people 9 8 7 6 5 4 3 2 1 Uncontrollable by you or other people

3. Is the cause something that is:
   Permanent 9 8 7 6 5 4 3 2 1 Temporary

4. Is the cause something:
   Intended by you or other people 9 8 7 6 5 4 3 2 1 Unintended by you or other people

5. Is the cause something that is:
   Inside of you 9 8 7 6 5 4 3 2 1 Outside of you

6. Is the cause something that is:
   Stable over time 9 8 7 6 5 4 3 2 1 Variable over time

7. Is the cause:
   Something about you 9 8 7 6 5 4 3 2 1 Something about others

8. Is the cause something that is:
   Unchanging 9 8 7 6 5 4 3 2 1 Changeable

9. Is the cause something for which:
   Someone is responsible 9 8 7 6 5 4 3 2 1 No one is responsible

High scores on these subscales indicate that the cause is perceived as internal (items 1,5,7), stable (items 3,6,8) and controllable (items 2,4,9). The following three items assess the global-specific dimension and were included with the above scale.

1. Is the cause something that:
   Influences your behavior in all situations 9 8 7 6 5 4 3 2 1 Influences your behavior in just this situation

2. Is the cause something that is:
   Important to you in all situations 9 8 7 6 5 4 3 2 1 Important to you in just this situation

3. Is the cause something that:
   Relates to your behavior in all situations 9 8 7 6 5 4 3 2 1 Relates to your behavior in just this situation

High scores on these items indicate that the cause is perceived as global.

Behavioral Characteristics of Program Graduates. Subjects from the four groups were also asked a set of questions that addressed specific dynamics surrounding their patterns of drug use since program graduation. Some of the questions focused on potential differences between members of the two slip groups; others dealt with possible differences between successful and nonsuccessful recovering substance abusers (Abstainers and Slip-abstainers vs. Never-abstainers and Slip-relapsers). Such details as the time of day, location and specific drug used in the initial slip were provided by those in the two slip groups in an effort to gain a better understanding of the initial slip process. Such details as likelihood of future use and drugs of choice

were provided by successful and nonsuccessful recovering substance abusers in an effort to learn more about the process of relapse. The author is unaware of any research addressing any of these variables across the population of substance abusers. However, some of these questions were taken and modified from Schoeneman et al.'s (1985) study of smokers and ex-smokers. Unfortunately, results from that study did not include any data from those questions. Thus, the hypotheses that there would be differences among the four groups were based more on clinical intuition than research literature.

The eight questions focusing on potential differences in behavioral characteristics of slip-abstainers and slip-relapsers were:

1. What was the first thing you drank or used after the treatment program?

   alcohol.....1 minor tranquilizers.....5

   pot.....2 opioids.....6

   cocaine.....3 psychedelics.....7

   amphetamines.....4 other - specify_____....8

2. About how long after the treatment program at Fifth Avenue did you first drink\use?

   less than one week...1 4-6 months.....4

   1-4 weeks.....2 7-9 months.....5

   1-3 months.....3 10-12 months.....6

   more than one year...7

3. Where were you when you first drank\used after the treatment program?

   home.....1

   work.....2

friend's or relative's house.....3

bar or restaurant.....4

car.....5

other specific place -.....6

Describe:_____

4. What time of day was it?

morning.....1

afternoon - noon to 5 pm.....2

evening - 5 to 11 pm.....3

night - 11 pm to 6 am.....4

5. When you first drank\used after the treatment program, were you:

alone.....1

with other people.....2

6. How did you get it? Did:

someone offer it to you without you asking.....1

you buy it.....2

you ask for it from another person.....3

or did you get it somewhere else.....4

7. Had you been thinking about drinking\using earlier that day?

Yes.....1

No.....2

8. About how long before having that first drink\use did you make a decision to drink\use?

no conscious decision to drink\use.....1

seconds.....2

minutes.....3

hours.....4

days.....5

The five questions dealing with potential differences in behavioral characteristics of successful and nonsuccessful recovering substance abusers were:

1. What is your drug of choice?

   alcohol.....1 minor tranquilizers.....5

   pot.....2 opioids.....6

   cocaine.....3 psychedelics.....7

   amphetamines.....4 other - specify_____....8

2. Are you currently taking Antabuse? Yes.....1 No.....2

3. Are you currently involved in A.A., N.A., or C.A.?

   Yes.....1

   No.....2

4. Have you been in any detox treatments since Insight?

   Yes.....1 (If yes,)

   No.....2 About how many months ago?_____

5. What is your best guess of the likelihood you will be drinking\using three months from now?

   very unlikely.....1 very likely.....4

   unlikely.....2 maybe or I don't know.....5

   likely.....3

Pilot Test. An informal pilot test of the entire interview schedule was conducted on five subjects who had completed a residential

drug treatment program similar to the one that served as the focus of this study. The purpose of the pilot interviews was to check for potential problems in interpretation or understanding of the questionnaire. No problems of this type were noted by any of the subjects. However, the pilot did serve a useful purpose in alerting the researcher to the need to slow his speaking rate while administering the instrument over the phone.

Dimensionality of the Attribution Measures. Two factor analyses were conducted in an effort to confirm the four dimensions of the Abstinence Violation Effect suggested by the work of Curry et al. (1987) with smokers. The first focused on the factor structure of measures of attributions of current status (n = 100) and the other centered on attributions for slips (n = 50). The measures of attributions of current status were 12 items (see #26 - #37 in Appendix H) which were asked of all subjects (n = 100) addressing their current drinking/drugging status. The measures of attributions for slips were the 12 items (see #12 - #23 in Appendix H) which were presented to the 50 subjects who had experienced slips (slip-abstainers and slip-relapsers).

Because the intent of both analyses was to confirm the four factor structure inherent in the design of the 12-item measures of attributions, a principal components analysis calling for four extracted factors was conducted, employing an oblique (oblimin) rotation. The four factor solution for attributions of current status accounted for 80.3% of the total variance of attribution scores; the four factor solution for attributions of slips accounted for 78.8% of

the variance. The factor loadings derived from these analyses are described in Tables 1 and 2 found on pages 84 and 85.

Ideally, the factor loadings described in these two tables should conform to a pattern in which the three items in the internal-external subscale load highest on one factor, the three items in the controllable-uncontrollable subscale align with another factor, the three items in the stable-unstable subscale load highest on a third factor, and the three items from the global-specific subscale load highest on the fourth factor. The results of the factor analyses for measures of attributions of slips (Table 1) came close to conforming to this hypothesized pattern. The three items in the internal-external subscale, for example, all had their highest loadings on factor 1 and the three items in the stable-unstable subscale all aligned with factor 2. Likewise, two of the three items in each of the other two subscales - global-specific and controllable-uncontrollable - aligned with a single factor. However, the third item in each of these subscales - item #22 in the global-specific subscale and item #13 in the controllable-uncontrollable subscale (see Appendix H) - did not have its highest loading on the factor to which it should have been assigned.

Although it was tempting to omit each of these items from its respective subscale prior to testing Hypothesis 2, the author ultimately decided not to do so for two reasons. First, the second highest factor-loading for each of these items was on the factor to which it should have been assigned. Second, the results of a factor analysis of attributions of current status indicated that neither of these items functioned in this same troublesome way in the context of current status. Thus, it is possible that the failure of these two

items to conform to the four-dimensional model of attributions in this particular context (attributions of slips) was due to the ways these items functioned with this particular sample of respondents and not to some inherent weakness in the items themselves.

In contrast to the results for attributions of slips, the pattern of factor loadings for attributions of current status (Table 2) were less clear. On the one hand, the three items in the stable-unstable subscale all had their highest loadings on a single, distinct factor. The same was true for the three items in the controllable-uncontrollable subscale. But, the items in the other two subscales clearly did not conform to the pattern suggested by the four-dimensional model of attributions. The global-specific subscale developed by the author, for example, was not clearly delineated from the others. Rather, the three items in this subscale appeared to merge with the stable-unstable and controllable-uncontrollable dimensions, without detracting from scores on these two dimensions. Moreover, as might be expected from the analyses of internal consistency described earlier, item #31 (see Appendix H) did not group with the other two items in the internal-external subscale. Rather, during the oblique rotation, this item factored out as a distinct factor.

Correlations among the four factors are also shown in Tables 1 and 2. These correlations ranged from .07 to .50 for attributions of current status, and from .00 to .27 for attributions of slips. In other words, the four factors in the oblique rotation for slips were less highly correlated with one another than was true for attributions of current status.

It is not clear why the items in the global-specific and internal-external dimensions did not conform to the four-dimensional model in regard to attributions of current status. Since this set of items did not function in these ways in the factor analysis of attributions of slips, it is possible that one or more of them are simply not suitable measures of attributions in this more general context. In the absence of clear and consistent evidence that the results of the factor analysis did or did not portray a true picture of the dimensionality of the attribution measures, the author elected to maintain the three item measures of all four dimensions as suggested by the Curry et al. (1987) model. However, the author will bear the results of this factor analysis in mind when interpreting the results of tests of Hypothesis 1, particularly in regard to the global-specific and internal-external dimensions.

Measures of Internal Consistency of the Four Attribution Subscales. Reliability coefficients (Cronbach's coefficient alpha) for the four subscales are summarized in the diagonals of Table 3 found on page 86. As these data indicate, three of the four subscales had relatively high reliabilities, .86 to .90. However, the internal-external subscale reliability coefficient was marginally acceptable at .55. Subsequent analyses indicated that the exclusion of item #31 (see Appendix H) from this scale would have raised the reliability coefficient to .69. Nevertheless, the decision was made to retain this item in all subsequent analyses in order to maintain three-item measures of all four attribution dimensions.

The Sample

Sampling plan. The population from which the sample was drawn consisted of individuals who had completed a 28-day residential drug treatment program located in a mid-size city in Michigan, between the period April, 1986, and March, 1987. Each member of this population had a primary DSM-III (American Psychiatric Association, 1980) diagnosis of alcohol or drug dependence.

A confidential letter was sent to each of the 386 prospective subjects inviting them to participate in a research study endorsed by the treatment center. The letter (see Appendix A) contained no reference to substance abuse and was sent in a confidential envelope along with a stamped, self-addressed postcard (see Appendix B). The respondent was asked to check one of two boxes on the postcard; either agreeing or not agreeing to participate in the study. If they were interested in participating, they were asked to provide a phone number and convenient times to be called, to sign their name, and to mail the card back to the researcher. This procedure was designed to maximize assurances of confidentiality for all participants.

The 386 letters were sent out in batches of 50, randomly selected, one week apart for the first mailing. Because of the low response rate (possibly due to the failure to put the letter of invitation on the treatment center's letterhead), a second mailing was conducted with all letters going out at once (see Appendix C for follow-up letter). This mailing included all of the original materials plus a follow-up letter on the center's letterhead. In total, 126 postcards were returned with 122 individuals agreeing to participate. Three people indicated no interest in the study and one postcard noted the drug-related death of

the individual. There was also a phone message left by the mother of an individual who had died six months prior in an alcohol-related car accident. There were 51 envelopes returned with no forwarding address. The final response rate was 32.0% of the original population or 37.5% of those within the population who were accessible. Although lower than desired, this rate is consistent with that reported by others who have surveyed the general and substance abuse populations (H. Perlstadt, personal communication, December 1986; H. Schuman, personal communication, May 1987).

In summary, 386 letters were sent out to all persons who were graduates of a residential drug treatment program during the specified time period. Fifty-one envelopes were returned with no forwarding address. A total of 126 postcards were returned. Three of these postcards were from individuals who indicated no interest in participating in the study, and one postcard noted the drug-related death of the individual. There was one other death noted by a phone call from the person's mother. Thus, there were 122 individuals who expressed interest in participating in the study. Calls were made as postcards filtered in. The design of the study called for 25 individuals to be assigned to each of the four groups. After only 108 interviews this goal was reached and no further interviews were done. The data from eight interviews were not used, because that would have resulted in unequal "n's" across the four groups.

Sample characteristics. The sociodemographic characteristics of the 100 individuals who participated in this study are summarized in Table 4 found on page 87. As these data indicate, most participants were male (90%), high school graduates (73%), with a family income of

less than $30,000 per year (74%) and between the ages of 30 and 40 (62%). Virtually all (96%) had jobs, but 25% were laid-off at the time of the interviews.

The data in Table 4 also describe the results of Chi-square tests of differences between substance abusers who have successfully abstained and those who have not across each of the sociodemographic variables considered in this study. Collectively, the results of these analyses indicate that abstainers were more likely to come from somewhat higher SES backgrounds than was true of their nonabstaining counterparts. A higher percentage of abstainers than nonabstainers ($p < .05$) (a) attended a college or vocational school (24% vs. 4%), (b) had family incomes above $30,000 (36% vs. 16%), and/or (c) were married (56% vs.26%). On the other hand, even though the proportion of nonabstainers who were under thirty years old or who were laid-off was more than double that of abstainers (30% vs. 14% and 34% vs. 16%, respectively), Chi-square tests of differences between successful and non-successful substance abusers were not statistically significant ($p > .05$) in regard to age, gender, employment status, or length of time since program completion.

Representativeness of the sample. The application for admission to the residential treatment program that serves as the focus of this study asked the applicants to describe their age and gender. As a partial test of the representativeness of the sample, the age and gender of the group of 100 respondents was compared with the group of 286 non-respondents in the population. The mean ages of the two groups were 35.0 for respondents and 35.6 for non-respondents. Ninety percent of the respondents and 84% of the non-respondents were male. The

sample, therefore, appears to be representative of the general population on these two variables.

Conduct of the Interviews

During the interview participants were asked about current drinking or drugging, circumstances, outcomes, and attributions for initial 'slip' (if any), attributions for current abstinence or non-abstinence, and perceived likelihood of drinking or drugging during the next three months. The introduction to the interview (see Appendix D) addressed the potential sensitivity of some subjects to some of the questions asked (e.g., questions on current drinking or drugging) and invited subjects to refrain from answering questions they considered to be too sensitive.

This narrative was followed by a set of questions (see Appendix E) which determined participants placement in one of the following four groups: Abstainers, Never-Abstainers, Slip-Abstainers, and Slip-Relapsers. After the subjects were placed in one of the four groups they were asked the set of questions from the appropriate packet (Appendix F - I).

The average length of the 108 interviews was about 20 minutes. All interviews were conducted by the author in a standardized manner during the months of January and February, 1988.

Hypotheses

Hypotheses Focusing on Attributions

1. When compared with nonabstainers (Never-Abstainers and Slip-Relapsers), current abstainers (Abstainers and Slip-Abstainers)

will be ...

(a) more likely to credit their current status to controllable factors (nonabstainers will be more likely to attribute their status to uncontrollable factors), and

(b) equally likely to credit their status to internal, stable, and global factors. (Moreover, both groups will have relatively high scores on all three of these dimensions).

2. When compared with slip-relapsers, slip-abstainers will ...

(a) report a smaller Abstinence Violation Effect (AVE)

(b) display more "behavioral self-blame" and less "characterological self-blame" (i.e., will be more likely to attribute their slips to external, unstable, specific and controllable causes).

3. The cognitive attributions of alcoholics will not differ from those of drug users.

Research Questions Centering on Behavioral Characteristics

4. Do slip-abstainers differ from slip-relapsers in ...

(a) drug used in the initial slip?

(b) period of abstinence?

(c) manner in which the initial slip was done with respect to ...

- location
- time of day
- social context (alone or with others)
- how drugs were obtained
- premeditation
- impulsivity?

5. Do current abstainers differ from nonabstainers in ...

   (a) drugs of choice?

   (b) use of Antabuse?

   (c) membership in support groups such as A.A.?

   (d) admission to a detox program since leaving the residential program?

   (e) reported likelihood of using three months from now?

6. Will alcoholics differ from drug users in the drug used in the initial slip?

7. Will two directed questions provide a measure of self-blame that will be highly correlated with total scores on the 12-item attribution scale?

Chapter 4

RESULTS

Preliminary Analyses:

As the preliminary step in testing hypotheses one and two, a Multivariate Analysis of Variance (MANOVA) test was conducted. MANOVA tests assume that the dimensional constructs are modestly correlated with one another. Support for use of the MANOVA in this study came from Russell's (1982) confirmation of the three-factor structure of the Causal Dimension Scale (Russell, 1982) and his finding that the three subscales (internality, stability and controllability) were only moderately related to one another, the correlations ranging from .19 to .28. Data from this study (reported in Table 3 on page 86) suggest that these intersubscale correlations may be higher than desired for attributions of current status, ranging from .23 to .76. However, intersubscale correlations for attributions of slips are modest, ranging from -.03 to .45.

The MANOVA test focusing on hypothesis 1 considered between-group differences in means across all four attribution dimensions. Group means and standard deviations for each dimension are summarized in Table 5 found on page 89, together with Hotelling's F-Ratio. As a cursory inspection of these data suggests, means for the four groups differed across all four dimensions in a relatively consistent pattern. Means for the two groups of "abstainers" (Abstainers and Slip-Abstainers) were similar to one another and differed from the means for the two groups of "nonabstainers" (Never-Abstainers and Slip-Relapsers)

which were also similar to one another. Because the results of the MANOVA test were statistically significant ($p < .001$), a discriminant function analysis was conducted to ascertain the role of each attribution dimension in contributing to these between-group differences.

Three functions emerged during the discriminant function analysis. The first was statistically significant X^2 (12) = 150.89, $p < .001$, and accounted for 80% of the variance. The other two functions were not significant X^2 (6) = 11.37, $p > .05$, and, X^2 (2) = 2.26, $p > .05$, respectively. The four group centroids for the first function are shown in Table 6 found on page 90, together with the discriminant function equation and the percent of successful predictions of group membership using this equation. As the coefficients in the discriminant function equation indicate, all four dimensions played a significant role in predicting group membership. The accuracy of these predictions clearly exceeded chance across all four groups.

Most important, the pattern of group centroids conformed to the hypothesized difference between successful recovering substance abusers (Abstainers and Slip-Abstainers) and nonsuccessful recovering substance abusers (Never-Abstainers and Slip-Relapsers). As this pattern indicates, the discriminant function successfully distinguished between the general groups of successful and nonsuccessful recovering substance abusers, but did not discriminate between the two subgroups within each of these categories. Given these results, it was reasonable to test the first hypothesis.

Test of Hypothesis 1: Differences in Attributions of Current Status of Successful and Non-Successful Substance Abusers

The results of the MANOVA test of differences in mean attribution scores between abstainers and nonabstainers are summarized in Table 7 found on page 91, together with the Hotelling's F-Ratio. The data reveal a pattern of higher mean scores on all four attribution dimensions for abstainers compared with nonabstainers. Since the results of the MANOVA test were statistically significant ($p < .001$), a discriminant function analysis was conducted to determine the extent to which each of the attributional dimensions was contributing to these between-group differences.

Only one function emerged during the discriminant function analysis. Statistically significant, X^2 (4) = 139.27, $p < .001$, this function accounted for 77% of the variance. Table 8, on page 92, summarizes the two group centroids along with the percent of successful predictions of group membership using the discriminant function equation, which is also given in Table 8. As the coefficients in this equation indicate, all four attribution dimensions contributed to predictions of group membership with an overall mean of 95% accuracy.

Results of the MANOVA test of differences in mean attribution scores and the discriminant function analysis for abstainers and nonabstainers summarized in Tables 7 and 8 showed mixed support for part (a) and lack of support for part (b) of hypothesis 1. As predicted, abstainers had substantially higher group mean scores than nonabstainers on the controllable-uncontrollable dimension, where a high score indicated that the cause was perceived as controllable (M Abstainers = 4.78; M Nonabstainers = 3.01). However, the

nonabstainers did not attribute their current status to uncontrollable factors as predicted. Rather, the mean scores for this group fell midway between the controllable and uncontrollable endpoints of the continuum.

Part (b) of hypothesis 1 was rejected. Contrary to the author's prediction, abstainers had somewhat higher mean scores than nonabstainers on the internal-external dimension (M Abstainers = 4.71; M Nonabstainers = 4.13), and substantially higher scores than those for nonabstainers on the other two dimensions, global-specific (M Abstainers = 4.60; M Nonabstainers = 2.46) and stable-unstable (M Abstainers = 4.59; M Nonabstainers = 2.07). In fact, the scores for nonabstainers were relatively low rather than relatively high on these two dimensions.

Test of Hypothesis 2: Differences in Attributions of Slip-Abstainers and Slip-Relapsers

The results of the MANOVA test of differences in mean attribution scores between slip-abstainers and slip-relapsers are summarized in Table 9 found on page 93, together with the mean Abstinence Violation Effect (A.V.E.) scores and Hotelling's F-Ratio. The data indicate that slip-abstainers had lower mean scores on all but one of the attribution dimensions, that is, the controllable-uncontrollable dimension. The mean A.V.E. scores were thus lower for this group than for the slip-relapsers. Since the results of the MANOVA test were statistically significant ($p < .001$), a discriminant function analysis was conducted to determine the extent to which each attribution dimension contributed to these between-group differences.

Only one function emerged during the discriminant function analysis. This function was statistically significant X^2 (3) = 35.70, $p < .001$, and accounted for 54% of the variance. The two group centroids for this function are shown in Table 10 found on page 94, along with the discriminant function equation and the percent of successful predictions of group membership using this equation. Three of the four attribution dimensions contributed to a 92% accuracy rate of predicting group membership. Results of the discriminant function analysis thus indicate that slip-abstainers and slip-relapsers are not differentiated on the global-specific attribution dimension, but are differentiated on the internal-external, controllable-uncontrollable, and stable-unstable dimensions.

Results of the MANOVA test of differences in mean attribution scores and the discriminant function analysis for slip-abstainers and slip-relapsers summarized in Tables 9 and 10 supported both parts of hypothesis 2. When compared with slip-relapsers, slip-abstainers had substantially lower mean group A.V.E. scores. Furthermore, slip-abstainers displayed more behavioral self-blame and less characterological self-blame than slip-relapsers.

Test of Hypothesis 3: Similarities in Attributions for Current Status of Alcoholics and Drug Users

A MANOVA test was conducted to determine if there were differences between alcoholics and drug users in mean scores across the four attribution dimensions. Group means and standard deviations are summarized in Table 11 found on page 95, together with Hotelling's F-Ratio. As a cursory inspection of these data indicates, means and

standard deviations for the two groups were very similar across all four dimensions. Since the results of the MANOVA test were not statistically significant ($p > .05$), a discriminant function analysis was unnecessary. Results of these tests showed support for the hypothesis.

Test of Hypothesis 4: Differences in Behavioral Characteristics of Slip-Abstainers and Slip-Relapsers

The results of Chi-square tests of independence focusing on differences in behavioral characteristics of slip-abstainers and slip-relapsers across each of the eight dependent variables cited in hypotheses 4 (a) through 4(c) are summarized in Table 12 found on page 96. As these data indicate, the response patterns of the two groups were similar across seven of the eight variables. Whereas slip-relapsers were more likely to slip at home or at a friend's house (80%), slip-abstainers were almost equally likely to slip at home, a friend's house, work, a bar or restaurant. However, as the results of the Chi-square tests indicate, even these differences were not statistically significant ($p > .01$). Collectively, the results showed no support for the hypothesis and indicated there were no significant differences between these two groups with regard to ...

1. drug used in initial slip. About 80% of the members of both groups used alcohol in the initial slip.
2. period of abstinence. Only 26% of the total sample exceeded three months of abstinence following discharge from the residential treatment program, a figure consistent with the findings of Hunt, Barnett, and Branch (1971).

3. time of day of initial slip. Nearly one-half of the total sample slipped during the evening hours (5:00 pm - 11:00 pm).
4. being alone or with others during the initial slip. Most of the sample (70%) had their first use in the company of other people.
5. how the drugs were obtained for the initial slip. The drugs were mostly bought or offered by others (90%); rarely did the person ask for them.
6. premeditation. Most of the sample (78%) thought about drinking or using earlier in the day.
7. impulsivity. A little over half of the total sample (52%) either did not make a conscious decision or decided to use just seconds before the initial slip.

In an attempt to identify some of the antecedent factors that lead up to the slip, a simplified classification of the reasons for slips was done for these two groups. The reasons each participant cited (in their own words) are listed in Figure 2 on the following page as well as the summary of classifications for each group. Results showed no clear differences between slip-abstainers and slip-relapsers in antecedents to slips. For both groups, the emotions of anger, boredom, and depression were most often cited as major reasons for the slip. Peer pressure was also given as a primary cause for slipping by both groups of subjects.

Test of Hypothesis 5: Differences in Behavioral Characteristics of Abstainers and Non-Abstainers

The results of Chi-square tests of differences between abstainers and nonabstainers across each of the variables stated in hypotheses

Slip-Abstainers	Slip-Relapsers
1) resentments, angry	was upset
2) angry and upset	upset at old lady
3) in wrong place	pressure and stress
4) tired and bored	bored and upset
5) bored at work	let my guard down, planned it, off Antabuse
6) depressed	uptight, felt like getting high
7) let my guard down	friend gave it to me
8) peer pressure	pressure from friends
9) angry at friend	had a craving
10) denial of my addiction	wasn't on Antabuse
11) poor coping	denial that I can't handle drinking
12) pressure - birthday drink	pressure from friends
13) resentments	had fight with wife
14) disgusted and depressed	pressure from friends
15) depression	like to drink, didn't want to stop
16) angry	angry at myself
17) fight with wife, angry	friend gave it to me
18) pressure from friends	sad and depressed
19) not going to AA meetings	wanted it, friends gave it to me
20) stopped my Antabuse	depressed
21) at friend's - set-up	friends gave it to me
22) depressed	depressed
23) not using higher power	wanted to get high
24) angry with girlfriend	pressure from friends
25) bored at work	wasn't on Antabuse

Summary of classifications:

	Slip-Abstainers	Slip-Relapsers
Anger	7	5
Boredom	3	1
Depression	4	4
Peer pressure	6	8
Not on Antabuse	1	3
Other	4	4

Figure 2. Antecedents To Slips

5(a) through 5(e) are summarized in Table 13 found on page 98. Observed differences between the two groups were found to be statistically significant ($p < .01$) for four of the five variables.

The only variable for which the two groups did not differ was drug of choice. A majority of both groups (56%) selected alcohol as their primary drug of choice; slightly over one third (37%) selected cocaine.

In contrast, abstainers used more supports (e.g., Antabuse and A.A.), had fewer detox admissions, and were more confident of remaining abstinent in the future than their nonabstaining counterparts. A higher percentage of abstainers than nonabstainers (a) were taking Antabuse (28% vs. 4%), (b) were attending support groups like A.A. (78% vs. 8%), and (c) expressed confidence they would not be using three months from now (98% vs. 38%). Conversely, a higher percentage of nonabstainers were admitted to a detox program after completing the residential program (30% vs. 4%).

Results of Chi-square tests of differences between abstainers and nonabstainers across each of the five variables cited above showed support for four of the five parts in this hypothesis. The only variable for which the two groups did not differ in a statistically significant manner was drug of choice.

Test of Hypothesis 6: Similarities in Drug Used During the Initial Slip Between Alcoholics and Drug Users

Table 14 on page 99 describes the percentages of alcoholics and drug users in the two slip groups who used alcohol, cocaine or pot during their initial slip. These data indicate that both groups were

most likely to use alcohol. Eighty percent of the total sample slipped with alcohol, 12% slipped with pot and 8% slipped with cocaine.

Table 14 also shows the results of a Chi-square test of differences between alcoholics and drug users prompted by Hypothesis 6. Results of this test show no significant differences between alcoholics and drug users in the drug used for the initial slip. Because of the current interest in cocaine usage, Table 14 also describes drugs used in the initial slip among individuals who reported cocaine as their primary drug of choice. Interestingly, most of these individuals (70%) slipped with alcohol while only 20% slipped with cocaine. In summary, results of Chi-square tests supported the hypothesis that alcoholics would not differ from drug users in the drug used in the initial slip.

Test of Hypothesis 7: Two-item Self-Blame Scale Can be Substituted for the 12-Item Attribution Scale

Pearson product moment correlation coefficients of scores on the four attribution dimension subscales and total scores on the 12-item scale are summarized in Table 15 found on page 100. The correlation between scores on the two-item self-blame scale and the total 12-item attribution scale are also shown. These analyses considered two different 12-item attribution measures. The first were measures of attributions for slips among the 50 subjects in the slip-abstainer and slip-relapser groups. The second 12-item attribution scale was presented to all the subjects (n = 100) and addressed current drinking/drugging status. According to hypothesis 7, one would expect that the correlations between the self-blame scale and two 12-item scales would be as high or higher than correlations between any of the

across both sets of analyses, the correlation between scores on three of the four attribution dimensions and total scores on the 12-item measure were higher than the correlation between the self-blame scale and the 12-item scale. This was the case for measures of attributions of slips and attributions of current status. These results therefore did not support the hypothesis.

Chapter 5

Discussion

This chapter presents a discussion of the results of the hypothesis tests and their relevance to attribution theory, self-blame theory, and the relapse process. The limitations of the study are then discussed with an emphasis on external and internal validity issues. The chapter concludes with a discussion of the implications of the results of this study for future research and clinical practice. The interpretations and implications discussed in this chapter are presented provisionally, pending replication and extension of these findings.

Discussion of Results of Hypotheses Tests

To set the stage for the discussion, each hypothesis will be presented in its entirety prior to review.

Hypothesis 1

1. When compared with nonabstainers (Never-Abstainers and Slip-Relapsers), current abstainers (Abstainers and Slip-Abstainers) will be ...
   (a) more likely to credit their current status to controllable factors (nonabstainers will be more likely to attribute their status to uncontrollable factors), and
   (b) equally likely to credit their status to internal, stable, and global factors (moreover, both groups will

have relatively high scores on all three of these dimensions).

Results of the MANOVA test of differences in mean attribution scores and the discriminant function analysis for abstainers and nonabstainers summarized in Tables 7 and 8 showed mixed support for part (a) and lack of support for part (b) of hypothesis 1. As predicted, abstainers had substantially higher group mean scores than nonabstainers on the controllable-uncontrollable dimension, where a high score indicated that the cause was perceived as controllable (M Abstainers = 4.78; M Nonabstainers = 3.01). However, the nonabstainers did not attribute their current status to uncontrollable factors as predicted. Rather, the mean scores for this group fell midway between the controllable and uncontrollable endpoints of the continuum.

Part (b) of hypothesis 1 was rejected. Contrary to the author's prediction, abstainers had somewhat higher mean scores than nonabstainers on the internal-external dimension (M Abstainers = 4.71; M Nonabstainers = 4.13), and substantially higher scores than those for nonabstainers on the other two dimensions, global-specific (M Abstainers = 4.60; M Nonabstainers = 2.46) and stable-unstable (M Abstainers = 4.59; M Nonabstainers = 2.07). In fact, the scores for nonabstainers were relatively low rather than relatively high on the latter two dimensions.

These results portray important differences in how successfully recovering substance abusers perceive the causes of their recovery compared with nonsuccessfully recovering substance abusers. Successful abstainers were much more likely to attribute the reasons for their

current status to factors that are (a) global - also impact other areas of their life, b) stable - are relatively long-lasting, c) internal - have something to do with themselves, and d) controllable.

Because these findings are merely correlational, they leave important questions of causality unanswered. One wonders, for example, if the attributions promote abstinence or if abstinence promotes certain attributions. In other words, is an abstainer achieving his/her success by thinking properly, or does success bring about positive thinking? Similarly, is a nonabstainer continuing to drink or use drugs because of the way he/she thinks, or is drinking or drugging affecting the way one thinks? It is also possible that these relations are reciprocal whereby attributions promote abstinence which, in turn, reinforces the original attributions. The answers will have a direct bearing on clinical implications. If attributions promote abstinence, then treatment focusing on modifying cognitions should increase the probability of success. If abstinence promotes attributions, then treatment would be directed toward behavioral changes for the purposes of achieving abstinence.

The interpretation of results of tests of part (a) of hypothesis 1 needs clarification. Although the differences in mean scores of abstainers and nonabstainers were statistically significant and fell in the predicted direction on the controllable-uncontrollable dimension, mean scores for nonabstainers were higher than expected and suggest that many of the members of this group perceived the cause of their nonabstinence as within their control. These results are similar to the findings of Schoeneman et al. (1985) in their study of smokers and ex-smokers. In that study, ex-smokers' attributions of their present

abstinence were significantly more in the direction of control than smokers' attributions, but smokers' also attributed a relatively high degree of control for the causes of their smoking.

What do the relatively high control scores for nonabstainers mean? One might quickly surmise that there is a greater degree of free will, perceived volition or intent in the process of addiction than is generally assumed. This may be the case, but to base it on the present data is likely to be a misinterpretation of the findings. It is important to keep in mind that the present study focused on subjects' perceptions of their world, rather than the world itself. The notion that those involved in the addictive process do not necessarily see themselves as out of control is not too surprising. It may not be consistent with the predictions of attribution theory, but it does seem reasonable for the population of substance abusers. Denial is the primary psychological defense system with this population. Perhaps what we are seeing in these results is a manifestation of the nonabstainers denial systems.

Support for this notion comes from a review of locus of control studies by Hinrichsen (1976). Although the present discussion concerns itself with the controllable-uncontrollable dimension and not the internal-external dimension, the idea is similar. Hinrichsen differentiated between "defensive internals" and genuine or "congruent internals". He wrote, "Maintaining the 'illusion of control' of their drinking might provide some alcoholics with a subjective basis for the denial of their drinking problem, for the purposes of maintaining self-esteem" (Hinrichsen, 1976, p. 913).

Interpretation of the results of part (b) of hypothesis 1 follows the same line of reasoning. On average, the nonabstainers scored toward the specific end of the global-specific dimension and toward the unstable end of the stable-unstable dimension. Perhaps too these responses are manifestations of a psychological defense structure of denial. Attributing one's status to specific and unstable causes is likely to be a form of denial in which individuals fail to acknowledge that the causes of drinking or drugging affect all areas of their life (is global) and is likely to persist rather than to change within the near future (is stable). Why mean scores for the nonabstainers on the internal-external dimension did not follow this same pattern is unclear. If members of this group did adopt a "defensive internal" position one would have expected their scores to be toward the external rather than the internal end of this continuum.

Hypothesis 2

2. When compared with slip-relapsers, slip-abstainers will ...
   (a) report a smaller Abstinence Violation Effect (AVE)
   (b) display more "behavioral self-blame" and less "characterological self-blame" (i.e., will be more likely to attribute their slips to external, unstable, specific and controllable causes).

Results of the MANOVA test of differences in mean attribution scores and the discriminant function analysis for slip-abstainers and slip-relapsers summarized in Tables 9 and 10 supported both parts of hypothesis 2. When compared with slip-relapsers, slip-abstainers had substantially lower mean AVE scores. Furthermore, slip-abstainers

displayed more behavioral self-blame and less characterological self-blame than slip-relapsers.

These results provide relatively clear support for Marlatt and Gordon's (1985) construct of the AVE. Marlatt and Gordon's model of the relapse process assumes that one's cognitive reaction to the initial slip is an important determinant of whether the slip will result in a full blown relapse. The model suggests that the AVE is an intermediate step between having that first drink or using a substance (a slip) and return to regular alcohol or drug use. According to attribution theory, the AVE is decreased when causal attributions for a slip focus on external, specific, unstable and controllable factors. Findings from this study support this premise. Differences in mean attribution scores of slip-abstainers and slip-relapsers were substantial and in the direction predicted for three of the four components of the AVE. The only exception was the global-specific dimension. Although slip-abstainers had relatively low scores on this subscale as predicted (indicating specificity), these scores were almost equivalent to those for slip-relapsers. As might, therefore, be expected, results from the discriminant function analysis indicated that the global-specific dimension did not play a significant role in differentiating between the two groups of slippers.

This finding contradicts the results of Curry et al.'s (1987) study of attributions of ex-smokers. Curry and her colleagues found that the global-specific dimension did differentiate between smokers and ex-smokers. Since, to the author's knowledge, Curry et al.'s study is the only one which parallels this investigation, there is a clear

need for further research focusing on the global-specific component of the AVE.

In the absence of more definitive research, there are at least two plausible explanations for the lack of differentiation observed in this study. First, there may, in fact, be no difference between the way slip-abstainers and slip-relapsers attribute causes for their slips on the global-specific dimension. Slip-abstainers and slip-relapsers may think about the specificity or generality of their reasons for slipping in much the same way. If this is true, the notion of a global-specific continuum of causal attributions may not be relevant when asking individuals to explain the causes of a substance abuse slip. In other words, the global-specific dimension would not contribute much to the operational definition of the AVE in this particular context.

A second plausible explanation is that the global-specific attributions of the two groups did, in fact, differ, but the items used to measure this AVE component did not have sufficient discrimination to reveal this difference. As noted earlier, the results of the factor analysis of measures of attributions of slips (Table 1) suggested that the global-specific dimension was the weakest of the four dimensions as identified through factor analysis. This may have been due to the low discrimination levels of some of the items or to the failure of this measure to function as expected when used with this particular population.

The results of this study also lend support for the notion that there are two types of self-blame. When self-blame was operationalized in the attributional dimensions of locus of causality, stability, generality and controllability, the findings were consistent with

Janoff-Bulman's (1979) distinction between behavioral and characterological types. Behavioral self-blame was operationally defined as a combination of external, unstable, and specific causal attributions that are perceived to be controllable. Characterological self-blame was defined as a combination of internal, stable, and global causal attributions that are perceived to be uncontrollable.

Results summarized in Tables 9 and 10 support Janoff-Bulman's distinction. As predicted, slip-abstainers displayed more behavioral self-blame than slip-relapsers and slip-relapsers displayed more characterological self-blame than slip-abstainers. However, the slip-relapsers did not display as high a level of characterological self-blame as was expected due to the fact that scores for this group were more specific than expected on the global-specific dimension. Possible interpretations for this finding have already been discussed.

Janoff-Bulman (1979) proposed that the most significant dimension distinguishing between these two types of self-blame is perceived controllability (i.e., modifiability through one's own efforts). The results of the discriminant function analysis indicated that the controllable-uncontrollable dimension did contribute to between-group differences of slip-abstainers and slip-relapsers, however, the discrimination coefficient for this variable was not clearly higher than the coefficients for the other two dimensions.

Collectively, the results of these analyses suggest that there are clear differences between slip-abstainers and slip-relapsers in the causal attributions they advance for their slips along three of the four dimensions considered in this study. Once again, these differences raise important questions about causality. Do one's causal

attributions for slipping promote subsequent abstinence or relapse, or do one's behaviors following the slip determine the ways one thinks about the reasons for that slip? The answers to these questions have clear implications for clinical practice which will be discussed in the final section of this Chapter.

Hypothesis 3

3. The cognitive attributions of alcoholics will not differ from those of drug users.

Results of a MANOVA test of differences in mean attribution scores for alcoholics and drug users summarized in Table 11 support this hypothesis. Mean scores on all four attribution subscales were quite similar for these two groups. Although this finding relates only to cognitive attributions and is based on a relatively small sample (n = 100), it clearly supports the position that advocates for the removal of lines of demarcation between alcoholics and drug users. For years now clinical rehabilitation programs have been treating substance abusers as a general population without distinguishing between drugs of choice. The results of this study suggest that alcoholics and drug users are similar with regard to causal attributions.

Hypothesis 4

4. Do slip-abstainers differ from slip-relapsers in ...

   (a) drug used in the initial slip?

   (b) period of abstinence?

   (c) manner in which the initial slip was done with respect to ...

- location
- time of day
- social context (alone or with others)
- how drugs were obtained
- premeditation
- impulsivity?

The results of Chi-square tests of independence focusing on differences in behavioral characteristics of slip-abstainers and slip-relapsers across each of the eight variables cited above and summarized in Table 12 show no support for this hypothesis.

Unlike the first three hypotheses that were grounded in the literature, this hypothesis was based on the author's conjecture that differences in cognitive attributions would yield differences in behavioral characteristics. However, as we see from the results summarized in Table 12, this conjecture was clearly not supported. What is interesting is not the lack of differences, but that there were similarities in behaviors and differences in cognitions between these two groups.

The eight dependent variables from hypothesis 4 dealt with behaviors surrounding the initial slip. The absence of statistically significant differences suggests that both groups reported they engaged in similar behaviors with respect to their initial slip. However, the causal attributions for their slip were quite different. The question, therefore, arises, for these two groups (slip-abstainers and slip-relapsers), " Why is there similarity in behaviors surrounding the initial slip and differences in causal attributions"?

Returning to Marlatt and Gordon's (1985) model of relapse might be helpful at this point. Both groups may have used the same path (behavioral characteristics) to get to the point of slipping, but once having slipped their similarities ended. Both groups blamed themselves for what happened but in different ways. Slip-abstainers engaged in behavioral self-blame and were able to separate out their mishap (slip) from themselves. They maintained a perception of control, re-evaluated and began reapplying the skills they had learned that enabled them to achieve abstinence. Slip-relapsers, on the other hand, engaged in characterological self-blame and had trouble differentiating the mishap of the slip from themselves. They perceived themselves to be out of control and perhaps engaged in self-denigration which made reapplication of previously learned coping skills difficult.

Hypothesis 5

5. Do current abstainers differ from nonabstainers in ...

   (a) drugs of choice?

   (b) use of Antabuse?

   (c) membership in support groups such as A.A.?

   (d) admission to a detox program since leaving the residential program?

   (e) reported likelihood of using three months from now?

Results of Chi-square tests of differences between abstainers and nonabstainers support this hypothesis for four of the five variables. The only variable on which the two groups did not differ significantly was drugs of choice. As described earlier, a majority of both groups (56%) chose alcohol as their preferred chemical substance; slightly

over one-third (37%) selected cocaine. In retrospect, the author recognizes that he should have predicted that current abstainers would not differ from nonabstainers on this variable. As noted in the earlier discussion of Hypothesis 3, there is growing concensus among practitioners that alcoholism and drug abuse should be viewed as two sides of the same coin. The prediction that the two groups would not differ on this aspect would have, therefore, been consistent with this emerging perpsective and with the stated predictions in Hypothesis 3 and 6.

Inspection of the four dependent variables on which current abstainers and nonabstainers did differ indicates that three of them relate to specific behaviors of substance abuse recovery and the fourth, likelihood of using, relates to a level of confidence in remaining abstinent. Common sense seems to suggest that as a group abstainers would (a) use more supports to maintain abstinence, such as Antabuse and/or Alcoholics Anonymous type meetings, (b) have fewer detox admissions since the residential treatment program, and (c) express more confidence in remaining abstinent in the future than their nonabstaining counterparts. For this sample (n = 100) at least, the author's common sense conjectures were supported.

Schoeneman et al. (1985) found similar results with smokers and ex-smokers with respect to the likelihood of using question. Ex-smokers (abstinent and slip-abstinent) rated likelihood of future smoking significantly lower than did smokers (never-abstinent and slip-relapse). Regarding literature on the other four parts of this hypothesis, to the author's knowledge, no one has compared the behavioral characteristics of substance abusers who have successfully

abstained with those who have not. Rather, all other studies involving contrasts across these four variables have compared substance abusers with the general population (see, for example, Saxe, Dougherty, & Esty, 1985). To show that these differences exist between two subgroups of substance abusers on four of these variables may, therefore, represent an important finding of this study.

Parenthetically, it is also important to note that these two subgroups of substance abusers also differed in SES backgrounds (see Table 4). Collectively, the results indicate that abstainers were more likely to come from somewhat higher SES backgrounds than was true of their nonabstaining counterparts.

Hypothesis 6

6. Will alcoholics differ from drug users in the drug used in the initial slip?

Results of Chi-square tests of differences between alcoholics and drug users across the initial slip drug are summarized in Table 14 and show support for this hypothesis. This finding is consistent with the results of tests of hypothesis 3 and part (1) of hypothesis 5 that suggest that commonalities are more prevalent than differences between alcoholics and drug users.

Results described in Table 14 reveal that 80% of the total sample of alcoholics and drug users slipped with alcohol, 12% slipped with pot and only 8% slipped with cocaine. The most interesting finding is displayed in the Cocaine Users column from the table. Here we find that 70% of the cocaine addicts slipped with alcohol; only 20% slipped

with cocaine. None of the alcoholics in the sample slipped with cocaine.

These findings support the current clinical practice in some residential drug treatment programs of administering Antabuse to cocaine addicts. The argument for this practice has generally been that alcohol is a more readily available drug and might lead the cocaine addict back to his drug of choice. Thus, preventing a cocaine addict from ingesting alcohol with the use of Antabuse (Antabuse is a prescription drug that is inert, except in the presence of alcohol in which case it causes a severe physical reaction) may be prophylactic with respect to cocaine.

Hypothesis 7

7. Will two directed questions provide a measure of self-blame that will be highly correlated with total scores on the 12-item attribution scale?

Pearson product moment correlation coefficients between the self-blame scale, the the four attribution dimension subscales, and the 12-item scale summarized in Table 15 show a relatively low level of support for this hypothesis. The correlation between scores on the self-blame scale and the 12-item scale for attributions of current status was only -.77; for attributions of slips this figure was even lower, -.34. Contrary to the author's expectations, these correlations were lower than correlations between scores on three of the four attribution dimension subscales and the 12-item scales. In formulating this hypothesis and including these two directed questions from Janoff-Bulman's (1979) study of self-blame, the author's intent was to

determine if these two items would provide an abbreviated measure of self-blame. Results suggest that for this sample, the two directed questions accounted for less than 60% of the variance of the full 12-item measure of current attributions and for only about 12% of the variance of the 12-item measure of attributions for slips. In other words, the two-item scale does not appear to offer a measure of self-blame that parallels the 12-item attribution scale.

Discussion of Other Analyses Done in the Study

The factor analyses of measures of attributions for slips (Table 1) provided relatively clear support for a four dimensional attribution model. However, the evidence in support of this model was less clear cut when the confirmatory factor analysis focused on attributions of current status (Table 2).

Several issues are involved here. From the standpoint of instrument development, these results suggest that cleaner subscale measures of attributions might be derived when specific events are addressed and assessed than when events of a more general or less time-bound nature are measured. Said another way, when measuring causal attributions of specific events, researchers should probably consider the global-specific dimension along with the other three dimensions. However, when measuring causal attributions in a more general context, measures suggested by the three dimension Causal Dimension Scale may suffice.

A theoretical conjecture suggested by the results of the factor analyses is that cognitions focusing on causes of specific events (such as a slip) may more clearly align with the four dimensions of

attribution than would occur when the causes of a more general event (e.g., current drinking/drugging status) are contemplated. In other words, a person may be more likely to ponder, contemplate and formalize attributions across multiple dimensions when the point of focus is a specific context rather than a general context.

Limitations of the Study

This section discusses limitations of the study as they relate to internal and external validity issues. Some of the potential sources of invalidity that are discussed are derived from Campbell and Stanley's (1963) descriptions of experimental and quasi-experimental designs.

Factors Jeopardizing Internal Validity. Campbell and Stanley (1963) define internal validity as "the basic minimum without which any experiment is uninterpretable: Did in fact the experimental treatments make a difference in this specific experimental instance?" (p. 5). Alternative explanations for some of the major findings of this investigation include, but are not limited to, effects of substance abuse, instrumentation, the time of the interview, and selection bias.

One of the factors that may have confounded internal validity was the distinct possibility that some of the participants were under the influence of a mood-altering substance at the time of the interview. This condition was most likely to have prevailed among subjects from the never-abstinent and slip-relapse groups, since by group placement they would have admitted to having drunk or used drugs within the past thirty days. Thus, the possibility that some of the subjects in these two groups were "under the influence" during the interview was very

real. Unfortunately, the question of whether subjects were under the influence at the time of the interview was never asked. No subject was noticeably drunk or high. However, with the degree of tolerance that chemically dependent people are capable of achieving, it was certainly possible that some subjects were under the influence and cognitively impaired even though these conditions were not noticeable. This phenomenon may have contributed in part to observed differences in attributions and behavioral characteristics between successful and nonsuccessful substance abusers.

A second source of rival hypotheses stems from issues in instrumentation. Retrospective telephone surveys require that participants recall things from the past, tapping their remote memory. Cognitive deficits of varying degrees are a common condition with substance abusers. This condition is most likely to have prevailed among those subjects who had been actively drinking during the thirty days prior to the interview (e.g., slip-relapsers). To the extent that this occurred slip-relapsers may have been at a disadvantage relative to slip-abstainers in being able to recall details of prior events as called for by interview questions focusing on slips. This, in turn, may have contributed to observed differences in the attributions for the slips of these two groups.

Whereas drinking/drugging within thirty days of the interview may have affected slip-relapsers in their ability to recall events associated with their slips, drinking/drugging within thirty days of the interview may also have interfered with the ability of both slip-relapsers and never-abstainers to think clearly about and analyze past and present events. This task requires a higher level of cognitive

functioning than memory alone. In other words, a major factor which might have interfered with slip-relapsers' and never-abstainers' abilities to render valid attributions would have been cognitive impairment resulting from use of mood altering substances around the time of the interview. Since this limitation would not have existed for abstainers and slip-abstainers, this condition may have contributed to observed differences in attributions of current status between successful and nonsuccessful substance abusers.

Selection bias was another extraneous variable that threatened internal validity. The Human Subjects Committee at Michigan State University required that potential subjects in this study be called only if they returned a postcard confirming their willingness to participate. This procedure precluded contact with subjects who might have otherwise participated had they been contacted without prior written consent. Failure to return the postcard may have been due to any number of factors, such as lack of interest, lack of organization, potential embarrassment, or never having received the letter and postcard. In other words, participants in the study were limited to volunteers who possessed the characteristics necessary to follow through with a mail-back procedure.

It is possible that a differential response pattern may have developed as a result of the aforementioned procedure. It is likely that successfully recovering substance abusers (Abstainers and Slip-abstainers) felt good about their recovery, while the nonsuccessfully recovering substance abusers (Never-abstainers and Slip-relapsers) did not. If that were true, successfully recovering substance abusers would feel better about themselves than their less successful

counterparts and thus be more willing to participate. Nonsuccessfully recovering substance abusers might also consider the process of sharing information about their recovery as potentially embarrassing and thus be less willing to participate. In fact, one could argue that the subsample of never-abstainers and slip-relapsers who would be most likely to agree to participate would be those who were in a relatively high state of denial, that is, those individuals who were refusing to acknowledge the unpleasant reality caused by their substance abuse. As described earlier, these individuals would, in turn, be likely to attribute their slips and/or current status to different causes from those who were not in a high state of denial. Thus, the procedure used to identify subjects for this study may have resulted in a biased sample that, in turn, contributed to observed differences in the attributions of successful and nonsuccessful substance abusers.

Factors Jeopardizing External Validity. There are a lot of factors that seem to limit the generalizability of results from this study. Some of the factors threatening external validity have been implicitly included in the discussion of internal validity. For example, the results of this study may be specific to those of a certain level of cognitive functioning affected by alcohol or drugs at or near the time the interviews were conducted. Moreover, the procedures used to identify participants for this study may have resulted in a disproportionately high representation of successfully recovering substance abusers and a disproportionately low representation of nonsuccessfully recovering substance abusers, particularly those who did not deny their recovery status.

However, the most significant limitations in external validity result from the fact that the population was from only one drug treatment program during a specific 12 month interval. A different treatment program or a different time period may have resulted in different findings. In addition to carefully considering the extent to which the sample characteristics summarized in Table 4 characterize the group to which one wishes to generalize, it is important to keep in mind the diversity of factors involved in substance abuse. For example, while the sample from this study was predominantly male (90%) and between the ages of thirty and forty (62%), it is uncertain as to what type of results would have occurred had the majority of the sample been female and/or younger or older.

Implications For Research

Although there is mounting evidence that cognitive factors play a significant role in the process of relapse among those with addictive disorders such as smoking, few studies have explored the role of attributions in the relapse process among chemical substance abusers. The results of this exploratory investigation suggest that extending attribution research to this population may yield very positive results. In short, the results of this study suggest a clear need for similar research across a wider variety of contexts (different types of subjects and programs). Additional research of this type would test the generalizability of the findings of this study.

Second, as outlined in the next section, results from this study suggest the utility of studying an attributional focus in treating substance abusers. For example, as a result of this attributional

focus, will there be a reduction in the proportion of never-abstainers following completion of substance abuse treatment? Will the intensity, frequency, and duration of slips be reduced as a result of this focus?

Future research using refined measures of cognitive factors might help clarify an important issue noted in this study. This issue stems from the fact that the two factor analyses yielded mixed results. For example, whereas items in the global-specific attribution measure did not align as a single factor when attributions of current status were addressed, two of these items did align as a factor when attributions for slips were addressed. As noted earlier, these results may be the product of limitations in the measure of global-specific attributions used in this study or they may reflect a true difference in how people think about the causes of their behaviors in general rather than specific contexts. Further research is therefore needed to determine which of these competing explanations is most plausible.

Another interesting avenue of research suggested by one of the unexpected findings in this study has to do with the manifestation of denial discussed earlier in this chapter. It seemed that the nonabstainers expressed a greater degree of control for their nonabstinence than was expected, and one interpretation was that they were in denial with regard to how out of control they really were. Research investigating this hypothesis using the Minnesota Multiphasic Personality Inventory and a self-esteem measure might uncover the dynamics that are operating and bring us closer to an accurate interpretation of these findings.

Implications For Clinical Practice

In terms of clinical implications, the present findings suggest treatment components that may enhance substance abuse interventions and support the notion of an attributionally defined Abstinence Violation Effect. Thus, substance abuse treatment programs that focus on cognitive restructuring to help individuals who slip from making self-defeating internal, stable and global causal attributions might be quite beneficial. Administering an attribution dimension scale, such as the Causal Dimension Scale (Russell, 1982), at the outset of treatment might identify individuals who are prone to making self-defeating causal attributions associated with relapse. Focusing attention on these individuals and modifying their belief systems about themselves may decrease the likelihood of relapse or decrease the intensity, frequency and duration of relapse.

The differentiation between two types of self-blame received support from the results in this study. Recalling that one of the more significant differences between the two types of self-blame lies in the dimension of perceived controllability, an appropriate therapeutic intervention might be to encourage people to attribute personal responsibility to controllable behavioral factors (such as a lack of coping skills) rather than to uncontrollable characterological ones (such as a weak will). Increasing one's awareness of two types of self-blame might also improve one's ability to discriminate between what is and what is not within their control.

The findings of this study regarding the lack of statistically significant differences between the attributions of alcoholics and drug users provide support for the current practice of treating these two

types of addiction in a similar manner. The high percentage of cocaine addicts in this sample who slipped using alcohol versus their drug of choice suggest that the current practice in some settings of administering Antabuse to cocaine addicts is also a reasonable one.

In short, the primary results of this investigation seem to suggest that research focusing on attributional processes and relapse following substance abuse treatment may suggest new ways of treating substance abusers. The application of these improved clinical interventions may ultimately contribute to significantly higher rates of success in the treatment of substance abusers.

TABLES

Table 1. Factor Loadings for a 4-Factor Solution of Attributions of Slips (n = 50)

	Factor 1	Factor 2	Factor 3	Factor 4
Item #				
17 (I-E)	.88	-.11	-.05	-.01
12 (I-E)	.88	-.21	-.04	-.23
21 (I-E)	.81	.02	.20	.14
22 (Gl-Sp)	.57	.31	-.12	.54
19 (St-UnSt)	.27	-.79	-.03	.22
14 (St-UnSt)	.08	-.77	.39	-.16
23 (St-UnSt)	.08	-.74	-.25	-.12
13 (C-UnC)	.08	.63	.31	-.24
16 (C-UnC)	-.04	-.02	.95	-.04
20 (C-UnC)	.07	.12	.88	.17
18 (Gl-Sp)	-.12	-.16	.12	.91
15 (Gl-Sp)	.43	.17	-.13	.65

Factor Correlation Matrix

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	-			
Factor 2	-.16	-		
Factor 3	.00	.14	-	
Factor 4	.27	.09	-.10	-

Note. I-E - Internal-External; Gl-Sp - Global-Specific;

St-Unst - Stable-Unstable; C-Unc - Controllable-Uncontrollable

Table 2. Factor Loadings for a 4-Factor Solution of Attributions of Current Status (n = 100)

Item #	Factor 1	Factor 2	Factor 3	Factor 4
37 (St-UnSt)	.92	.01	-.10	.13
33 (St-UnSt)	.89	.12	.00	-.19
28 (St-UnSt)	.86	.03	.01	.19
29 (Gl-Sp)	.55	.04	.38	.13
32 (Gl-Sp)	.54	.08	.45	-.09
26 (I-E)	.09	.86	.12	-.18
35 (I-E)	.01	.85	-.08	.25
27 (C-UnC)	-.17	.09	.95	.04
30 (C-UnC)	-.03	.03	.93	.00
34 (C-UnC)	.25	-.09	.69	-.09
36 (Gl-Sp)	.37	-.15	.57	.22
31 (I-E)	.06	.06	.04	.91

Factor Correlation Matrix

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	-			
Factor 2	.24	-		
Factor 3	.50	.13	-	
Factor 4	.25	.11	.07	-

Note. I-E - Internal-External; Gl-Sp - Global-Specific;

St-Unst - Stable-Unstable; C-Unc - Controllable-Uncontrollable

Table 3. Intersubscale Correlations and Measures of Internal Consistency[1]

A. Attributions of Current Status (n = 100)

	Internal/ External	Control./ Uncontrol.	Global/ Specific	Stable/ Unstable
Internal/ External	(.55)	.23 *	.46 ***	.36 ***
Control./ Uncontrol.		(.86)	.50 ***	.73 ***
Global/ Specific			(.88)	.76 ***
Stable/ Unstable				(.90)

B. Attributions for Slips (n = 50)

	Internal/ External	Control./ Uncontrol.	Global/ Specific	Stable/ Unstable
Internal/ External	-	-.05	.45 **	.38 **
Control./ Uncontrol.		-	-.06	-.30 *
Global/ Specific			-	-.03
Stable/ Unstable				-

1. Coefficient alphas are presented in the diagonal of Part A.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Sample Characteristics (in percents)

	Abstainers (n = 50)	Nonabstainers (n = 50)
Level of Education		
Some high school	8%	18%
High school graduate	68	78
Some college\voc. school	24	4
	X^2 (3) = 9.50, $p < .05$	
Employment Status		
Working (full or part)	80%	62%
Laid-off	16	34
Unemployed or retired	4	4
	X^2 (2) = 4.38, $p > .05$	
Family Income		
< $30,000	64%	84%
> $30,000	36	16
	X^2 (1) = 4.21, $p < .05$	
Marital Status		
Single	2%	20%
Married	56	26
Separated\Divorced	42	54
	X^2 (2) = 13.60, $p < .01$	
Age		
< 30	14%	30%
30 - 40	68	56
>40	18	14
	X^2 (2) = 3.74, $p > .05$	
Gender		
Male	88%	92%
Female	12	8
	X^2 (1) = .11, $p > .05$	

Table 4 (cont'd)

	Abstainers (n = 50)	Nonabstainers (n = 50)
Length of Time Since Program Completion		
10 - 12 months ago	36%	22%
13 - 15 months ago	26	20
16 - 18 months ago	16	34
19 - 21 months ago	22	24

X^2 (3) = 4.30, $p > .05$

Table 5. Results of MANOVA Test of Differences in Mean Attribution Scores Among the Four Groups

	Abstainers (n = 25)		Never-Abstainers (n = 25)		Slip-Abstainers (n = 25)		Slip-Relapsers (n = 25)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D
Attribution Dimensions								
Internal/ External	4.60	(0.51)	4.17	(0.73)	4.83	(0.26)	4.08	(0.85)
Control./ Uncontrol.	4.71	(0.38)	2.87	(0.85)	4.85	(0.22)	3.16	(1.32)
Global/ Specific	4.64	(0.35)	2.21	(0.96)	4.56	(0.61)	2.71	(1.56)
Stable/ Unstable	4.60	(0.75)	2.13	(0.93)	4.57	(0.49)	2.01	(1.26)

Hotellings $F(12, 275) = 26.49$, $p < .001$

Note. High scores on the attribution subscales indicate that the cause is perceived as internal, controllable, global and stable.

Table 6. Results of Discriminant Function Analysis for All Four Groups

	Group Centroids (function 1)	% Successful Predictions
Group		
Abstainers (n = 25)	1.72	52%
Never-Abstainers (n = 25)	-1.97	64%
Slip-Abstainers (n = 25)	1.85	68%
Slip-Relapsers (n = 25)	-1.60	48%

Discriminant Score = 0.578 (Controllable-Uncontrollable subscore) + 0.484 (Global/Specific subscore) + 0.381 (Stable/Unstable subscore) + 0.209 (Internal/External subscore).

Table 7. Results of MANOVA Test of Differences in Mean Attribution Scores for Abstainers and Nonabstainers

	Abstainers (n = 50)		Nonabstainers (n = 50)	
Attributions	Mean	S.D.	Mean	S.D.
Internal/External	4.71	(0.42)	4.13	(0.79)
Controllable/Uncontrollable	4.78	(0.31)	3.01	(1.11)
Global/Specific	4.60	(0.49)	2.46	(1.30)
Stable/Unstable	4.59	(0.63)	2.07	(1.10)

Hotellings F (4, 95) = 77.57, p < .001

Note. High scores on the attribution subscales indicate that the cause is perceived as internal, controllable, global and stable.

Table 8. Results of Discriminant Function Analysis for Abstainers and Nonabstainers

	Group Centroids	% Successful Predictions
Group		
Abstainers (n = 50)	1.79	100%
Nonabstainers (n = 50)	-1.79	90%

Discriminant Score = 0.546 (Controllable/Uncontrollable subscore) + 0.445 (Global/Specific subscore) + 0.432 (Stable/Unstable subscore) + 0.221 (Internal/External subscore).

Table 9. Results of MANOVA Test of Differences in Mean Attribution Scores for Slip-Abstainers and Slip-Relapsers

	Slip-Abstainers (n = 25)		Slip-Relapsers (n = 25)	
Attributions	**Mean**	**S.D.**	**Mean**	**S.D.**
Internal/ External	2.69	(1.33)	3.71	(1.10)
Controllable/ Uncontrollable	4.16	(0.80)	3.00	(1.14)
Global/ Specific	2.09	(1.38)	2.33	(0.99)
Stable/ Unstable	1.65	(0.54)	3.04	(1.17)
A.V.E. Scores	2.07	(0.68)	3.02	(0.51)

Hotellings $F(4, 45) = 12.99$, $p < .001$

Note. High scores on the attribution subscales indicate that the cause is perceived as internal, controllable, global and stable.

Table 10. Results of Discriminant Function Analysis for Slip-Abstainers and Slip-Relapsers

	Group Centroids	% Successful Predictions
Group		
Slip-Abstainers (n = 25)	-1.05	92%
Slip-Relapsers (n = 25)	1.05	92%

Discriminant Score = 0.665 (Stable/Unstable subscore) - 0.654 (Controllable/Uncontrollable subscore) + 0.392 (Internal/External subscore).

Table 11. Results of MANOVA Test of Differences in Mean Attribution Scores for Alcoholics and Drug Users

	Alcoholics (n = 56)		Drug Users (n = 44)	
Attributions	Mean	S.D.	Mean	S.D.
Internal/External	4.39	(0.69)	4.46	(0.70)
Controllable/Uncontrollable	4.00	(1.14)	3.77	(1.27)
Global/Specific	3.49	(1.52)	3.58	(1.39)
Stable/Unstable	3.33	(1.50)	3.33	(1.61)

Hotellings F (4, 95) = 0.53, $p > .05$

Note. High scores on the attribution subscales indicate that the cause is perceived as internal, controllable, global and stable.

Table 12. Similarities in Behavioral Characteristics of Slip-Abstainers and Slip-Relapsers

	Slip-Abstainers (n = 25)	Slip-Relapsers (n = 25)
Drug Used in Initial Slip		
Alcohol	84%	76%
Cocaine	4	12
Pot	12	12
	X^2 (2) = 1.10, p > .01	
Period of Abstinence		
< one week	20%	12%
1 - 12 weeks	52	64
> 12 weeks	28	24
	X^2 (2) = .89, p > .01	
Location of Initial Slip		
Home	24%	44%
Work	24	12
Friend's house	28	36
Bar or restaurant	20	8
Car	4	0
	X^2 (1) = 3.21, p > .01	
Time of Day of Slip		
Morning (6:00 am - noon)	4%	24%
Afternoon (noon - 5:00 pm)	32	24
Evening (5:00 pm - 11:00 pm)	52	44
Night (11:00 pm - 6:00 am)	12	8
	X^2 (3) = 4.22, p > .01	
Alone or With Others During Initial Slip		
Alone	20%	40%
With others	80	60
	X^2 (1) = 1.52, p > .01	

Table 12 (cont'd)

	Slip-Abstainers (n = 25)	Slip-Relapsers (n = 25)
How Drugs were Obtained for the Initial Slip		
Offered by others	40%	48%
You bought it	44	48
You asked for it	16	4
	X^2 (2) = 2.03, p > .01	
Premeditation		
Yes	76%	80%
No	24	20
	X^2 (1) = .12, p >.01	
Impulsivity (time from point at which decision was made to use and the actual slip)		
Seconds	12%	16%
Minutes	12	12
Hours	16	16
Days	24	16
No conscious decision	36	40
	X^2 (4) = .60, p > .01	

Table 13. Differences in Behavioral Characteristics of Abstainers and Nonabstainers

	Abstainers (n = 50)	Nonabstainers (n = 50)
Drugs of Choice		
Alcohol	58%	54%
Cocaine	36	38
Pot	4	4
Minor tranquilizers	0	2
Opioids	2	2
	X^2 (4) = 1.10, $p > .01$	
Use of Antabuse		
Yes	28%	4%
No	72	96
	X^2 (1) = 9.00, $p < .01$	
Support Group Member (A.A., N.A., or C.A.)		
Yes	78%	8%
No	22	92
	X^2 (1) = 47.16, $p < .001$	
Detox Admission Since Residential Program		
Yes	4%	30%
No	96	70
	X^2 (1) = 10.21, $p < .01$	
Likelihood of Using 3 Months From Now		
Very unlikely/Unlikely	98%	38%
Very likely/Likely	2	62
	X^2 (1) = 38.65, $p < .001$	

Table 14. Similarities in Drug Used During Initial Slip Between Alcoholics and Drug Users

	Alcoholics (n = 26)	Cocaine Users (n = 20)	Other (n = 4)	Totals for Drug Users (n = 24)
Alcohol	88.5%	70%	75%	70.8%
Cocaine	0	20	0	16.7
Pot	11.5	10	25	12.5

X^2 (2) = 4.83, $p > .01$

Table 15. Correlations Between Scores on The Four Attribution Subscales, The Self-Blame Scale, and The 12-Item Scale

	12-Item AVE Scores (Slip Attributions) (n = 50)	12-Item Current Status Attribution Scores (n = 100)
Internal/ External	.83	.54
Control./ Uncontrol.	.25	.79
Global/ Specific	.63	.88
Stable/ Unstable	.48	.93
Self-Blame Scale	-.34	-.77

APPENDICES

Appendix A

Letter

Dear Mr._____:

In cooperation with Insight, we would like to invite you to participate in a research study to be conducted over the telephone that takes about 20 minutes answering some simple questions. You were selected because of your completion of one of Insight's programs within the last two years.

Please be assured that all of the information you provide will be kept in strict confidence. Your individual responses will remain anonymous and will not be identifiable for any individual who participates. The results of this study will be reported for people as a group where no individuals can be identified. Once the data has been analyzed any information that identifies the individuals who participated in the study will be destroyed.

This study is important because there is evidence to suggest that what happens to people following completion of a treatment program has something to do with the ways they explain things that happen to them. We are interested in the reasons that you give for certain things that have happened to you since completing the program. There are no right or wrong answers and all answers are very important to us. At the end

Appendix A (cont'd)

of the interview you will have an opportunity to talk about your feelings concerning any of the questions that were asked.

Your cooperation in this study will be greatly appreciated. It is completely voluntary and there is no penalty for declining to participate. If you decide to participate, you will also be free to discontinue the interview at any time without penalty. We will be happy to provide a summary of the results to interested participants.

Please complete the enclosed postcard to let us know if you would be willing to participate in this important study. We hope to be talking with you in about a week.

Sincerely,

Paul Fatell, M.S., L.L.P.
Insight Outpatient Therapist

Steve Johnson, M.S.W.
Program Director,
Insight at Fifth Avenue

Appendix B

Postcard

I would prefer not to participate in this study.

I am interested in participating in this study. I understand the conditions for my participation as outlined in the letter (e.g., assurance of anonymity).
Convenient times to call me are _____
Phone number _____

Signature _____

Appendix C

Follow-up Letter

Dear _____

About a week ago Steve Johnson, Program Director at Insight at Fifth Avenue, and myself sent you a letter inviting you to take part in study done over the telephone. I haven't heard from you and wonder whether you ever received the letter or decided not to take part. Whether you have relapsed or even cut down, your help is needed in this study. It takes about 15 minutes on the phone answering basic questions, all of which is completely confidential and remains anonymous. Please take a minute to read the enclosed letter. Then fill out the postcard and mail it back to me. Remember, if you decide to participate, write in a phone number and a good time to reach you. Don't forget to sign your name so I know who to ask for when I call you. Thanks a lot.

Sincerely,

Paul Fatell, M.S.,L.L.P.
Insight Outpatient Therapist

Appendix D

Phone Narrative

Hello Mr.\Ms._____,

This is Paul Fatell from Insight. I hope this is still a good time to call you regarding the postcard you sent back to me a few days ago concerning the phone study?

____If Yes — Let me just assure you that your responses will remain anonymous and all of the information you provide will be kept in strict confidence.

(Proceed to "If any question...")

___If No — May I call you at a more convenient time?

If Yes — When would that be?

date____, day____, time____

If No —— O.K., thank you anyway for your time, bye.

If any question bothers you and you don't feel like answering it, we can skip it for the time being and return to it later. If, when we do talk about these things, you feel upset, I am trained to provide that help and can be available at the conclusion of our interview, or if you prefer to see myself or someone in person, we can arrange to have an appointment for you. Please let me know and I'll try to be helpful. Now, can we begin with the interview?

(Go to Appendix E - Introductory Questions and Group Placement)

Appendix E

Introductory Questions and Group Placement

1. What month was it when you finished the program at Insight at Fifth Avenue in 1986?

   January, February or March.....1
   April, May or June.....2
   July, August or September.....3
   October, November or December.....4

2. Have you been in any detox treatments since Insight?

   Yes.....1 (If yes,)
   About how many months ago?_____
   No.....2

3. Have you been in treatment for substance abuse besides the one at Insight in 1986?

   Yes.....1 (If yes,)
   About how many times?_____
   No.....2

GROUP ASSIGNMENT QUESTIONS

4. Have you had a drink or used at all since the end of the residential treatment program at Fifth Avenue?

   _____No - Group 1 (Go to ABSTAINER packet, Appendix F)
   _____Yes - go to next question

5. Has there been any period of time since getting out of Fifth Avenue in which you have been substance-free for at least 30 days?

   _____No - Group 2 (Go to NEVER-ABSTAINER packet, Appendix G)
   _____Yes - go to next question

6. Are you drinking or using these days, that is, anything within the past thirty days?

   _____No - Group 3 (Go to SLIP-ABSTAINER packet, Appendix H)
   _____Yes - Group 4 (Go to SLIP-RELAPSER packet, Appendix I)

Appendix F

Abstainer

Let's talk about the fact that you have continued to remain substance-free, since the completion of your treatment at Insight at Fifth Avenue. If you were going to try to explain to a friend why you continue to be abstinent, what would you say? (If more than one cause, ask for main cause.)

_____

_____

Now, I want you to keep in mind the reason you just gave me about staying abstinent, but first I want to explain how the next set of questions work. They're on a one to five scale and you answer by giving me some number between one and five. For example, if I were to ask you on a one to five scale how you feel about visiting relatives, where, one stood for very strongly disliking it, two meant that you disliked it, three meant that you didn't care one way or the other, four meant that you liked it, and five meant that you very much liked visiting your relatives, how would you answer? (Process the answer with the respondent). Since you gave me a ( ) that means that you 1) very strongly dislike, 2) dislike, 3) feel indifferent about, 4) like, 5) very strongly like -- visiting relatives, is this correct? (If Yes - continue with next paragraph. If No - say, "O.K., let's try it again", then repeat "if I were to ask you..." Continue to process with the respondent, inquiring as to what they meant by their response and matching it with the appropriate number).

Now, let's get back to the reason you gave for remaining substance-free. You said that the main cause of your abstinence is (repeat cause from above). Now, the following questions concern your opinions of the cause of your abstinence.

1. Is the cause something that reflects an aspect of the SITUATION or does it reflect an aspect of YOURSELF? I'm going to give you five choices to pick from, listen first to all of them, then give me your answer. Now here are what the numbers mean on the one to five scale for this question. One means the cause is something that totally reflects an aspect of the SITUATION, two means the cause reflects more an aspect of the situation than of yourself, a three means the cause reflects equally as much an aspect of the situation as yourself, a four means the cause reflects more an aspect of yourself than of the situation, and five means the cause is something that totally reflects an aspect of YOURSELF. Okay? What is your answer?____ (Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of your abstinence:

   1) totally reflects an aspect of the situation,
   2) reflects more an aspect of the situation than yourself,
   3) reflects as much an aspect of the situation as yourself,
   4) reflects more an aspect of yourself than of the situation,
   5) totally reflects an aspect of yourself.

   Is that what you meant? (If Yes - continue with the next question. If No, say "Let me repeat the question and we'll try it again." - Repeat no more than twice. If the respondent continues to have difficulty after the second repetition, say, "Okay, let's go on to the next question then." Follow this procedure whenever the respondent answers with a negative response.)

2. Now, keeping in mind the reason you gave for your continued abstinence: Is the cause UNCONTROLLABLE by you or other people, or, is the cause CONTROLLABLE by you or other people? Now here are the five choices. The cause of your abstinence is: (Read the choices)

   1) totally uncontrollable by you or other people
   2) more uncontrollable than controllable by you or other people
   3) equally as uncontrollable as controllable by you or other people
   4) more controllable than uncontrollable by you or other people
   5) totally controllable by you or other people

   What is your answer?____ (Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of your abstinence is:

1) totally uncontrollable by you or other people
2) more uncontrollable than controllable by you or other people
3) equally as uncontrollable as controllable by you or other people
4) more controllable than uncontrollable by you or other people
5) totally controllable by you or other people

Is that what you meant? (If Yes - continue with the next paragraph. If No, say " Let me repeat the question and we'll try it again." Use the procedure stated earlier.)

The rest of the questions follow in a similar way. I'll first state the question regarding the cause that you gave for your abstinence. I'll then give you five choices to pick from, and after listening to the five choices select the one that you think most closely reflects your thoughts about the main reason for remaining abstinent. Ready?

3. Is the cause that you gave for your continued abstinence something that is TEMPORARY or something that is PERMANENT? Now here are the five choices to pick from. The cause of your abstinence is something that is: (Read all choices)

1) completely temporary
2) more temporary than permanent
3) about as much temporary as permanent
4) more permanent than temporary
5) completely permanent

What is your answer?____ (If the question needs to be repeated, do so, but no more than twice. Follow procedure stated in question #1).

4. Is the cause of your continued abstinence something that influences your behavior in only THAT situation or is the cause something that influences your behavior in ALL situations? Here are the five choices. The cause of your abstinence is something that: (Read all choices)

1) influences your behavior in only that situation
2) influences your behavior more in that situation than in all situations
3) influences your behavior in that situation and all situations about equally
4) influences your behavior more in all situations than in that situation
5) influences your behavior in all situations

What is your answer?____

5. Regarding your abstinence, is the cause UNINTENDED by you or other people or is the cause INTENDED by you or other people? Here are the five choices. The cause of your abstinence is something that is: (Read options)

1) totally unintended by you or other people
2) more unintended than intended by you or other people
3) equally unintended as intended by you or other people
4) more intended than unintended by you or other people
5) totally intended by you or other people

What is your answer?____

6. Is the cause something that is OUTSIDE of you or is the cause something that is INSIDE of you? Here are the five choices. The cause of your abstinence is something that is: (Read options)

1) totally outside of you
2) more outside of you than inside of you
3) equally outside of you as inside of you
4) more inside of you than outside of you
5) totally inside of you

What is your answer?____

7. Regarding your abstinence, is the cause something that is important to you in only THAT situation or is the cause something that is important to you in ALL situations? Here are the five choices. The cause of your abstinence is something that is: (Read options)

1) important to you in only that situation
2) important to you more in that situation than in all situations
3) important to you in that situation and all situations about equally
4) important to you more in all situations than in that situation
5) important to you in all situations

What is your answer?____

8. Is the cause of your abstinence something that is VARIABLE over time or something that is STABLE over time? Here are the five choices. The cause of your abstinence is something that is: (Read options)

1) totally variable over time
2) more variable than stable over time
3) equally variable as it is stable over time
4) more stable than variable over time
5) totally stable over time

What is your answer?____

9. Is the cause of your abstinence something for which NO ONE is responsible or is the cause something for which SOMEONE is responsible? Here are the choices. The cause of your abstinence is something for which: (Read options)

1) no one is totally responsible
2) no one is responsible more than someone is responsible
3) about equally no one and someone is responsible
4) someone is responsible more than no one is responsible
5) someone is totally responsible

What is your answer?____

10. Is the cause of your abstinence something about OTHERS or is the cause something about YOU? Here are the choices. The cause of your abstinence is: (Read options)

1) something totally about others
2) something more about others than about you
3) something equally about others as about you
4) something more about you than about others
5) something totally about you

What is your answer?____

11. Regarding your abstinence, is the cause something that relates to your behavior in only THAT situation or is the cause something that relates to your behavior in ALL situations? Here are the choices. The cause of your abstinence is something that: (Read options)

1) relates to your behavior in only that situation
2) relates to your behavior more in that situation than in all situations
3) relates to your behavior about equally in that situation and all situations
4) relates to your behavior more in all situations than in that situation
5) relates to your behavior in all situations

What is your answer?____

12. Is the cause of your abstinence something that is CHANGEABLE or something that is UNCHANGING? Here are the choices. The cause of your abstinence is something that is: (Read options)

1) totally changeable
2) more changeable than unchanging
3) about equally changeable as unchanging
4) more unchanging than changeable
5) totally unchanging

What is your answer?____

The following two questions are on a scale of one to five with "not at all" at the low end and "completely" at the high end.

13. How much do you credit yourself for remaining abstinent because of the kind of person you are, answering with one for "not at all" or five for "completely" or, any number in between?_____

14. How much do you credit yourself for remaining abstinent because of something you are or aren't doing, answering with one for "not at all" or five for "completely", or, any number in between?_____

15. What is your best guess of the likelihood you will be drinking\using three months from now? (Read 1-4)

very unlikely.....1
unlikely.....2
likely.....3
very likely.....4
maybe or I don't know.....5

16. Are you currently taking Antabuse? Yes.....1 No.....2

I would like to finish the interview by asking you a short list of questions about yourself. Answers to these questions will be used for statistical purposes only. If you think any of the questions are too personal, please say so.

17. How old are you?_____ Refused____

18. What's the last grade of school you completed?

Jr. high school or less (grades 1-8).....1
Some high school (grades 9-11).....2
Graduated from high school.....3
Vocational\Technical school.....4
Some college - 2 years or less.....5
Some college - more than 2 years.....6
Graduated from college.....7
Post-graduate work.....8
Refused to answer.....9

19. What is your current marital status?

Single.....1
Married.....2
Separated.....3
Divorced.....4
Widowed.....5
Refused to answer.6

20. What is your current work status? Are you (Read 1-5)

Working full-time.....1
Working part-time.....2
Unemployed.....3
On lay-off.....4
Retired.....5
Other (specify).....6
Refused to answer.....7

21. Which of the following income groups includes your total family income for the past tax year? Just stop me when I read the correct category.

    Under 10,000.....1
    10 to 20,000.....2
    20 to 30,000.....3
    30 to 40,000.....4
    40 to 50,000.....5
    More than 50,000.....6
    Don't know.....7
    Refused to answer.....8

22. Are you currently involved in A.A., N.A., or C.A.?

    Yes.....1
    No.....2

23. Gender (by observation)

    Male.....1
    Female.....2

If any questions were skipped, say "We did skip some questions I'd like to ask now, how do you feel about trying them again"? If yes, proceed, then go to conclusion section. If no, go to conclusion section.

If no questions were skipped, proceed to conclusion section.

Concluding comments -
Do you have any questions or comments, I'd like to hear them now? (pause - if yes, process; if no, proceed)
Are there any upsetting feelings that the interview has caused you that you would like to mention? (pause - if yes, process; if no, proceed)
I want to thank you very much for the time you have taken and your cooperation. Good bye now.

Appendix G

Never-Abstainer

Let's talk about the fact that you have not remained substance-free since the completion of your treatment at Insight at Fifth Avenue. If you were going to try to explain to a friend why you continue to drink or use, what would you say? (If more than one cause, ask for main cause.)

_____

_____

Now, I want you to keep in mind the reason you just gave me about not staying abstinent, but first I want to explain how the next set of questions work. They're on a one to five scale and you answer by giving me some number between one and five. For example, if I were to ask you on a one to five scale how you feel about visiting relatives, where, one stood for very strongly disliking it, two meant that you disliked it, three meant that you didn't care one way or the other, four meant that you liked it, and five meant that you very much liked visiting your relatives, how would you answer? (Process the answer with the respondent). Since you gave me a ( ) that means that you 1) very strongly dislike, 2) dislike, 3) feel indifferent about, 4) like, 5) very strongly like — visiting relatives, is this correct? (If Yes - continue with next paragraph. If No - say, "O.K., let's try it again", then repeat "if I were to ask you..." Continue to process with the respondent, inquiring as

to what they meant by their response and matching it with the appropriate number.)

Now, let's get back to the reason you gave for not remaining substance-free. You said that the main cause of your non-abstinence is (repeat cause from above). Now, the following questions concern your opinions of the cause of you not remaining substance-free.

1. Is the cause something that reflects an aspect of the SITUATION or does it reflect an aspect of YOURSELF? I'm going to give you five choices to pick from, listen first to all of them, then give me your answer. Now here are what the numbers mean on the one to five scale for this question. One means the cause is something that totally reflects an aspect of the SITUATION, two means the cause reflects more an aspect of the situation than of yourself, a three means the cause reflects equally as much an aspect of the situation as yourself, a four means the cause reflects more an aspect of yourself than of the situation, and five means the cause is something that totally reflects an aspect of YOURSELF. Okay? What is your answer?____ (Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of you not remaining substance-free:

   1) totally reflects an aspect of the situation,
   2) reflects more an aspect of the situation than of yourself,
   3) reflects as much an aspect of the situation as yourself,
   4) reflects more an aspect of yourself than of the situation,
   5) totally reflects an aspect of yourself.

   Is that what you meant? (If Yes - continue with the next question. If No, say "Let me repeat the question and we'll try it again." - Repeat no more than twice. If the respondent continues to have difficulty after the second repetition, say, "Okay, let's go on to the next question then." Follow this procedure whenever the respondent answers with a negative response.)

2. Now, keeping in mind the reason you gave for you not remaining substance-free: Is the cause UNCONTROLLABLE by you or other people, or, is the cause CONTROLLABLE by you or other people? Now here are the five choices. The cause of you not remaining substance-free is: (Read options)

   1) totally uncontrollable by you or other people
   2) more uncontrollable than controllable by you or other people
   3) equally as uncontrollable as controllable by you or other people
   4) more controllable than uncontrollable by you or other people
   5) totally controllable by you or other people

What is your answer?____(Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of you not remaining substance-free is:

1) totally uncontrollable by you or other people
2) more uncontrollable than controllable by you or other people
3) equally as uncontrollable as controllable by you or other people
4) more controllable than uncontrollable by you or other people
5) totally controllable by you or other people

Is that what you meant? (If Yes - continue with the next paragraph. If No, say " Let me repeat the question and we'll try it again." Use the procedure stated earlier.)

The rest of the questions follow in a similar way. I'll first state the question regarding the cause that you gave for you not remaining substance-free. I'll then give you five choices to pick from, and after listening to the five choices select the one that you think most closely reflects your thoughts about the main reason for not remaining abstinent. Ready?

3. Is the cause that you gave for your continued non-abstinence something that is TEMPORARY or something that is PERMANENT? Now here are the five choices to pick from. The cause of your non-abstinence is something that is: (Read options)

1) completely temporary
2) more temporary than permanent
3) about as much temporary as permanent
4) more permanent than temporary
5) completely permanent

What is your answer?____ (If the question needs to be repeated, do so, but no more than twice. Follow procedure stated in question #1).

4. Is the cause of your continued non-abstinence something that influences your behavior in only THAT situation or is the cause something that influences your behavior in ALL situations? Here are the five choices. The cause of your non-abstinence is something that: (Read options)

1) influences your behavior in only that situation
2) influences your behavior more in that situation than in all situations
3) influences your behavior in that situation and all situations about equally
4) influences your behavior more in all situations than in that situation
5) influences your behavior in all situations

What is your answer?____

5. Regarding your non-abstinence, is the cause UNINTENDED by you or other people or is the cause INTENDED by you or other people? Here are the five choices. The cause of your non-abstinence is something that is: (Read options)

   1) totally unintended by you or other people
   2) more unintended than intended by you or other people
   3) equally unintended as intended by you or other people
   4) more intended than unintended by you or other people
   5) totally intended by you or other people

   What is your answer?____

6. Is the cause something that is OUTSIDE of you or is the cause something that is INSIDE of you? Here are the five choices. The cause of your non-abstinence is something that is: (Read options)

   1) totally outside of you
   2) more outside of you than inside of you
   3) equally outside of you as inside of you
   4) more inside of you than outside of you
   5) totally inside of you

   What is your answer?____

7. Regarding your non-abstinence, is the cause something that is important to you in only THAT situation or is the cause something that is important to you in ALL situations? Here are the five choices. The cause of your non-abstinence is something that is: (Read options)

   1) important to you in only that situation
   2) important to you more in that situation than in all situations
   3) important to you in that situation and all situations about equally
   4) important to you more in all situations than in that situation
   5) important to you in all situations

   What is your answer?____

8. Is the cause of your non-abstinence something that is VARIABLE over time or something that is STABLE over time? Here are the five choices. The cause of your non-abstinence is something that is: (Read options)

   1) totally variable over time
   2) more variable than stable over time
   3) equally variable as it is stable over time
   4) more stable than variable over time
   5) totally stable over time

   What is your answer?____

9. Is the cause of your non-abstinence something for which NO ONE is responsible or is the cause something for which SOMEONE is responsible? Here are the choices. The cause of your non-abstinence is something for which: (Read options)

   1) no one is totally responsible
   2) no one is responsible more than someone is responsible
   3) about equally no one and someone is responsible
   4) someone is responsible more than no one is responsible
   5) someone is totally responsible

   What is your answer?____

10. Is the cause of your non-abstinence something about OTHERS or is the cause something about YOU? Here are the choices. The cause of your non-abstinence is: (Read options)

   1) something totally about others
   2) something more about others than about you
   3) something equally about others as about you
   4) something more about you than about others
   5) something totally about you

   What is your answer?____

11. Regarding your non-abstinence, is the cause something that relates to your behavior in only THAT situation or is the cause something that relates to your behavior in ALL situations? Here are the choices. The cause of your non-abstinence is something that: (Read options)

   1) relates to your behavior in only that situation
   2) relates to your behavior more in that situation than in all situations
   3) relates to your behavior about equally in that situation and all situations
   4) relates to your behavior more in all situations than in that situation
   5) relates to your behavior in all situations

   What is your answer?____

12. Is the cause of your non-abstinence something that is CHANGEABLE or something that is UNCHANGING? Here are the choices. The cause of your non-abstinence is something that is: (Read options)

   1) totally changeable
   2) more changeable than unchanging
   3) about equally changeable as unchanging
   4) more unchanging than changeable
   5) totally unchanging

   What is your answer?____

The following two questions are on a scale of one to five with "not at all" at the low end and "completely" at the high end.

13. How much do you blame yourself for not staying substance-free because of the kind of person you are, answering with one for "not at all" or five for "completely" or, any number in between?_____

14. How much do you blame yourself for not staying substance-free because of something you are or aren't doing, answering with one for "not at all" or five for "completely", or, any number in between?_____

15. What is your best guess of the likelihood you will be drinking\using three months from now? (Read 1-4)

very unlikely.....1	very likely.....4
unlikely.....2	maybe or I don't know.....5
likely.....3	

16. Are you currently taking Antabuse? Yes.....1 No.....2

I would like to finish the interview by asking you a short list of questions about yourself. Answers to these questions will be used for statistical purposes only. If you think any of the questions are too personal, please say so.

17. How old are you?_____ Refused____

18. What's the last grade of school you completed?

Jr. high school or less (grades 1-8).....1
Some high school (grades 9-11).....2
Graduated from high school.....3
Vocational\Technical school.....4
Some college - 2 years or less.....5
Some college - more than 2 years.....6
Graduated from college.....7
Post-graduate work.....8
Refused to answer.....9

19. What is your current marital status?

Single.....1
Married.....2
Separated.....3
Divorced.....4
Widowed.....5
Refused to answer.6

20. What is your current work status? Are you (Read 1-5)

Working full-time.....1
Working part-time.....2
Unemployed.....3
On lay-off.....4
Retired.....5
Other (specify).....6
Refused to answer.....7

21. Which of the following income groups includes your total family income for the past tax year? Just stop me when I read the correct category.

Under 10,000.....1
10 to 20,000.....2
20 to 30,000.....3
30 to 40,000.....4
40 to 50,000.....5
More than 50,000.....6
Don't know.....7
Refused to answer.....8

22. Are you currently involved in A.A., N.A., or C.A.?

Yes.....1
No.....2

23. Gender (by observation)

Male.....1
Female.....2

If any questions were skipped, say "We did skip some questions I'd like to ask now, how do you feel about trying them again"? If yes, proceed, then go to conclusion section. If no, go to conclusion section.

If no questions were skipped, proceed to conclusion section.

Concluding comments -
Do you have any questions or comments, I'd like to hear them now? (pause - if yes, process; if no, proceed)
Are there any upsetting feelings that the interview has caused you that you would like to mention? (pause - if yes, process; if no, proceed)
I want to thank you very much for the time you have taken and your cooperation. Good bye now.

Appendix H

Slip-Abstainer

1. What was the first thing you drank or used after the treatment program?

alcohol.....1	minor tranquilizers.....5
pot.....2	opioids.....6
cocaine.....3	psychedelics.....7
amphetamines.....4	other - specify_____....8

(If alcohol, say 'drank' hereafter; otherwise, say 'used')

2. Is that your primary drug of choice?

Yes.....1
No.....2 (If no,)
What is your drug of choice?

alcohol.....1	minor tranquilizers.....5
pot.....2	opioids.....6
cocaine.....3	psychedelics.....7
amphetamines.....4	other - specify_____....8

3. About how long after the treatment program at Fifth Avenue did you first drink\use?

less than one week...1	4-6 months.....4
1-4 weeks.....2	7-9 months.....5
1-3 months.....3	10-12 months.....6
	more than one year...7

4. Where were you when you first drank\used after the treatment program?

home.....1
work.....2
friend's or relative's house.....3
bar or restaurant.....4
car.....5
other specific place -.....6
Describe:_____

5. What time of day was it?

morning.....1
afternoon - noon to 5 pm.....2
evening - 5 to 11 pm.....3
night - 11 pm to 6 am.....4

6. When you first drank\used after the treatment program, were you: (read options)

   alone.....1
   with other people.....2

7. How did you get it? Did: (read options)

   someone offer it to you without you asking.....1
   you buy it.....2
   you ask for it from another person.....3
   or did you get it somewhere else.....4

8. Had you been thinking about drinking\using earlier that day?

   Yes.....1
   No.....2

9. About how long before having that first drink\use did you make a decision to drink\use?

   no conscious decision to drink\use.....1
   seconds.....2
   minutes.....3
   hours.....4
   days.....5

10. How soon after that first drink\use did you drink\use again?

    minutes later.....1
    hours later.....2
    days later.....3
    weeks later.....4
    have not drunk\used since.....5

11. Let's talk about your first drink\use after treatment. If you were going to try to explain to a friend why you drank\ used, what would you say? (If more than one cause, ask for main cause.)

    _____

    _____

Now, I want you to keep in mind the reason you just gave me about your first drink\use after treatment, but first I want to explain how the next set of questions work. They're on a one to five scale and you answer by giving me some number between one and five. For example, if I were to ask you on a one to five scale how you feel about visiting

relatives, where, one stood for very strongly disliking it, two meant that you disliked it, three meant that you didn't care one way or the other, four meant that you liked it, and five meant that you very much liked visiting your relatives, how would you answer? (Process the answer with the respondent). Since you gave me a ( ) that means that you 1) very strongly dislike, 2) dislike, 3) feel indifferent about, 4) like, 5) very strongly like -- visiting relatives, is this correct? (If Yes - continue with next paragraph. If No - say, "O.K., let's try it again", then repeat "if I were to ask you..." Continue to process with the respondent, inquiring as to what they meant by their response and matching it with the appropriate number.)

Now, let's get back to the reason you gave for your first drink\use after treatment. You said that the main cause of your slip was (repeat cause from above). Now, the following questions concern your opinions of the cause of your slip.

12. Is the cause something that reflects an aspect of the SITUATION or does it reflect an aspect of YOURSELF? I'm going to give you five choices to pick from, listen first to all of them, then give me your answer. Now here are what the numbers mean on the one to five scale for this question. One means the cause is something that totally reflects an aspect of the SITUATION, two means the cause reflects more an aspect of the situation than of yourself, three means the cause reflects equally as much an aspect of the situation as yourself, a four means the cause reflects more an aspect of yourself than of the situation, and five means the cause is something that totally reflects an aspect of YOURSELF. Okay? What is your answer?____ (Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of your slip:

    1) totally reflects an aspect of the situation,
    2) reflects more an aspect of the situation than of yourself,
    3) reflects as much an aspect of the situation as yourself,
    4) reflects more an aspect of yourself than of the situation,
    5) totally reflects an aspect of yourself.

    Is that what you meant? (If Yes - continue with the next question. If No, say "Let me repeat the question and we'll try it again." - Repeat no more than twice. If the respondent continues

to have difficulty after the second repetition, say, "Okay, let's go on to the next question then." Follow this procedure whenever the respondent answers with a negative response.)

13. Now, keeping in mind the reason you gave for your slip: Is the cause UNCONTROLLABLE by you or other people, or, is the cause CONTROLLABLE by you or other people? Now here are the five choices. The cause of your slip is: (Read the choices)

    1) totally uncontrollable by you or other people
    2) more uncontrollable than controllable by you or other people
    3) equally as uncontrollable as controllable by you or other people
    4) more controllable than uncontrollable by you or other people
    5) totally controllable by you or other people

    What is your answer?____ (Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of your slip is:

    1) totally uncontrollable by you or other people
    2) more uncontrollable than controllable by you or other people
    3) equally as uncontrollable as controllable by you or other people
    4) more controllable than uncontrollable by you or other people
    5) totally controllable by you or other people

    Is that what you meant? (If Yes - continue with the next paragraph. If No, say " Let me repeat the question and we'll try it again." Use the procedure stated earlier.)

    The rest of the questions follow in a similar way. I'll first state the question regarding the cause that you gave for your slip. I'll then give you five choices to pick from, and after listening to the five choices select the one that you think most closely reflects your thoughts about the main reason for your slip. Ready?

14. Is the cause that you gave for your slip something that is TEMPORARY or something that is PERMANENT? Now here are the five choices to pick from. The cause of your slip is something that is: (Read all choices)

    1) completely temporary
    2) more temporary than permanent
    3) about as much temporary as permanent
    4) more permanent than temporary
    5) completely permanent

    What is your answer?____ (If the question needs to be repeated, do so, but no more than twice. Follow procedure stated above).

15. Is the cause of your slip something that influences your behavior in only THAT situation or is the cause something that influences your behavior in ALL situations? Here are the five choices. The

cause of your slip is something that: (Read all choices)

1) influences your behavior in only that situation
2) influences your behavior more in that situation than in all situations
3) influences your behavior in that situation and all situations about equally
4) influences your behavior more in all situations than in that situation
5) influences your behavior in all situations

What is your answer?____

16. Regarding your slip, is the cause UNINTENDED by you or other people or is the cause INTENDED by you or other people? Here are the five choices. The cause of your slip is something that is: (Read options)

1) totally unintended by you or other people
2) more unintended than intended by you or other people
3) equally unintended as intended by you or other people
4) more intended than unintended by you or other people
5) totally intended by you or other people

What is your answer?____

17. Is the cause something that is OUTSIDE of you or is the cause something that is INSIDE of you? Here are the five choices. The cause of your slip is something that is: (Read options)

1) totally outside of you
2) more outside of you than inside of you
3) equally outside of you as inside of you
4) more inside of you than outside of you
5) totally inside of you

What is your answer?____

18. Regarding your slip, is the cause something that is important to you in only THAT situation or is the cause something that is important to you in ALL situations? Here are the five choices. The cause of your slip is something that is: (Read options)

1) important to you in only that situation
2) important to you more in that situation than in all situations
3) important to you in that situation and all situations about equally
4) important to you more in all situations than in that situation
5) important to you in all situations

What is your answer?____

19. Is the cause of your slip something that is VARIABLE over time or something that is STABLE over time? Here are the five choices. The cause of your slip is something that is: (Read options)

    1) totally variable over time
    2) more variable than stable over time
    3) equally variable as it is stable over time
    4) more stable than variable over time
    5) totally stable over time

    What is your answer?____

20. Is the cause of your slip something for which NO ONE is responsible or is the cause something for which SOMEONE is responsible? Here are the choices. The cause of your slip is something for which: (Read options)

    1) no one is totally responsible
    2) no one is responsible more than someone is responsible
    3) about equally no one and someone is responsible
    4) someone is responsible more than no one is responsible
    5) someone is totally responsible

    What is your answer?____

21. Is the cause of your slip something about OTHERS or is the cause something about YOU? Here are the choices. The cause of your slip is: (Read options)

    1) something totally about others
    2) something more about others than about you
    3) something equally about others as about you
    4) something more about you than about others
    5) something totally about you

    What is your answer?____

22. Regarding your slip, is the cause something that relates to your behavior in only THAT situation or is the cause something that relates to your behavior in ALL situations? Here are the choices. The cause of your slip is something that: (Read options)

    1) relates to your behavior in only that situation
    2) relates to your behavior more in that situation than in all situations
    3) relates to your behavior about equally in that situation and all situations
    4) relates to your behavior more in all situations than in that situation
    5) relates to your behavior in all situations

    What is your answer?____

23. Is the cause of your slip something that is CHANGEABLE or something that is UNCHANGING? Here are the choices. The cause of your slip is something that is: (Read options)

    1) totally changeable
    2) more changeable than unchanging
    3) about equally changeable as unchanging
    4) more unchanging than changeable
    5) totally unchanging

    What is your answer?____

    The following two questions are on a scale of one to five with "not at all" at the low end and "completely" at the high end.

24. Given what happened, how much do you blame yourself for the slip because of the kind of person you are, answering with one for "not at all" or five for "completely" or, any number in between?_____

25. Given what happened, how much do you blame yourself for the slip because of something you did or didn't do, answering with one for "not at all" or five for "completely", or, any number in between?_____

Okay, so far I have been asking you mostly about that first drink\use you had after the treatment program. The next part of our interview focuses on your thoughts and feelings right NOW, while you are abstaining from drinking\using. Many of the questions will be very similar to the ones I have already asked; the difference is that they are focused on the present time.

In your own words, what would you say is the main cause for your continuing not to drink\use?

_____

_____

Now, just like before with the other questions that were on a scale of one to five:

26. Is the cause for your continued abstinence something that reflects an aspect of the SITUATION or does it reflect an aspect of YOURSELF? Here are the five choices to pick from. The cause for your continued abstinence:

    1) totally reflects an aspect of the situation,
    2) reflects more an aspect of the situation than of yourself,
    3) reflects as much an aspect of the situation as yourself,
    4) reflects more an aspect of yourself than of the situation,
    5) totally reflects an aspect of yourself.

    What is your answer?____ (If the respondent indicates confusion,

say "Let me repeat the question and we'll try it again." - Repeat no more than twice. If the respondent continues to have difficulty after the second repetition, say, "Okay, let's go on to the next question then." Follow this procedure whenever the respondent shows some confusion.)

27. Now, keeping in mind the reason you gave for your continued abstinence: Is the cause UNCONTROLLABLE by you or other people, or, is the cause CONTROLLABLE by you or other people? Now here are the five choices. The cause for your continued abstinence is: (Read options)

    1) totally uncontrollable by you or other people
    2) more uncontrollable than controllable by you or other people
    3) equally as uncontrollable as controllable by you or other people
    4) more controllable than uncontrollable by you or other people
    5) totally controllable by you or other people

    What is your answer?____

28. Is the cause that you gave for your continued abstinence something that is TEMPORARY or something that is PERMANENT? Now here are the five choices to pick from. The cause for your continued abstinence is something that is: (Read options)

    1) completely temporary
    2) more temporary than permanent
    3) about as much temporary as permanent
    4) more permanent than temporary
    5) completely permanent

    What is your answer?____

29. Is the cause for your continued abstinence something that influences your behavior in only THAT situation or is the cause something that influences your behavior in ALL situations? Here are the five choices. The cause for your continued abstinence is something that: (Read options)

    1) influences your behavior in only that situation
    2) influences your behavior more in that situation than in all situations
    3) influences your behavior in that situation and all situations about equally
    4) influences your behavior more in all situations than in that situation
    5) influences your behavior in all situations

    What is your answer?____

30. Regarding your continued abstinence, is the cause UNINTENDED by you or other people or is the cause INTENDED by you or other people? Here are the five choices. The cause for your continued

abstinence is something that is: (Read options)

1) totally unintended by you or other people
2) more unintended than intended by you or other people
3) equally unintended as intended by you or other people
4) more intended than unintended by you or other people
5) totally intended by you or other people

What is your answer?____

31. Is the cause something that is OUTSIDE of you or is the cause something that is INSIDE of you? Here are the five choices. The cause for your continued abstinence is something that is: (Read options)

1) totally outside of you
2) more outside of you than inside of you
3) equally outside of you as inside of you
4) more inside of you than outside of you
5) totally inside of you

What is your answer?____

32. Regarding your continued abstinence, is the cause something that is important to you in only THAT situation or is the cause something that is important to you in ALL situations? Here are the five choices. The cause for your continued abstinence is something that is: (Read options)

1) important to you in only that situation
2) important to you more in that situation than in all situations
3) important to you in that situation and all situations about equally
4) important to you more in all situations than in that situation
5) important to you in all situations

What is your answer?____

33. Is the cause for your continued abstinence something that is VARIABLE over time or something that is STABLE over time? Here are the five choices. The cause for your continued abstinence is something that is: (Read options)

1) totally variable over time
2) more variable than stable over time
3) equally variable as it is stable over time
4) more stable than variable over time
5) totally stable over time

What is your answer?____

34. Is the cause for your continued abstinence something for which NO ONE is responsible or is the cause something for which SOMEONE is responsible? Here are the choices. The cause for your continued abstinence is something for which: (Read options)

    1) no one is totally responsible
    2) no one is responsible more than someone is responsible
    3) about equally no one and someone is responsible
    4) someone is responsible more than no one is responsible
    5) someone is totally responsible

    What is your answer?____

35. Is the cause for your continued abstinence something about OTHERS or is the cause something about YOU? Here are the choices. The cause for your continued abstinence is: (Read options)

    1) something totally about others
    2) something more about others than about you
    3) something equally about others as about you
    4) something more about you than about others
    5) something totally about you

    What is your answer?____

36. Regarding your continued abstinence, is the cause something that relates to your behavior in only THAT situation or is the cause something that relates to your behavior in ALL situations? Here are the choices. The cause for your continued abstinence is something that: (Read options)

    1) relates to your behavior in only that situation
    2) relates to your behavior more in that situation than in all situations
    3) relates to your behavior about equally in that situation and all situations
    4) relates to your behavior more in all situations than in that situation
    5) relates to your behavior in all situations

    What is your answer?____

37. Is the cause for your continued abstinence something that is CHANGEABLE or something that is UNCHANGING? Here are the choices. The cause for your continued abstinence is something that is: (Read options)

    1) totally changeable
    2) more changeable than unchanging
    3) about equally changeable as unchanging
    4) more unchanging than changeable
    5) totally unchanging

    What is your answer?____

The following two questions are on a scale of one to five with "not at all" at the low end and "completely" at the high end.

38. How much do you credit yourself for your continued abstinence because of the kind of person you are, answering with one for "not at all" or five for "completely" or, any number in between?_____

39. How much do you credit yourself for your continued abstinence because of something you are or aren't doing, answering with one for "not at all" or five for "completely", or, any number in between?_____

40. What is your best guess of the likelihood you will be drinking\using three months from now? (Read 1-4)

very unlikely.....1
unlikely.....2
likely.....3
very likely.....4
maybe or I don't know.....5

41. Are you currently taking Antabuse? Yes.....1 No.....2

I would like to finish the interview by asking you a short list of questions about yourself. Answers to these questions will be used for statistical purposes only. If you think any of the questions are too personal, please say so.

42. How old are you?_____ Refused____

43. What's the last grade of school you completed?

Jr. high school or less (grades 1-8).....1
Some high school (grades 9-11).....2
Graduated from high school.....3
Vocational\Technical school.....4
Some college - 2 years or less.....5
Some college - more than 2 years.....6
Graduated from college.....7
Post-graduate work.....8
Refused to answer.....9

44. What is your current marital status?

Single.....1
Married.....2
Separated.....3
Divorced.....4
Widowed.....5
Refused to answer.6

45. What is your current work status? Are you (Read 1-5)

Working full-time.....1
Working part-time.....2
Unemployed.....3

On lay-off.....4
Retired.....5
Other (specify).....6
Refused to answer.....7

46. Which of the following income groups includes your total family income for the past tax year? Just stop me when I read the correct category.

Under 10,000.....1
10 to 20,000.....2
20 to 30,000.....3
30 to 40,000.....4
40 to 50,000.....5
More than 50,000.....6
Don't know.....7
Refused to answer.....8

47. Are you currently involved in A.A., N.A., or C.A.?

Yes.....1
No.....2

48. Gender (by observation)

Male.....1 Female.....2

If any questions were skipped, say "We did skip some questions I'd like to ask now, how do you feel about trying them again"? If yes, proceed, then go to conclusion section. If no, go to conclusion section.

If no questions were skipped, proceed to conclusion section.

Concluding comments -
Do you have any questions or comments, I'd like to hear them now? (pause - if yes, process; if no, proceed)
Are there any upsetting feelings that the interview has caused you that you would like to mention? (pause - if yes, process; if no, proceed)
I want to thank you very much for the time you have taken and your cooperation. Good bye now.

Appendix I

Slip-Relapser

1. What was the first thing you drank or used after the treatment program?

alcohol.....1	minor tranquilizers.....5
pot.....2	opioids.....6
cocaine.....3	psychedelics.....7
amphetamines.....4	other - specify_____....8

(If alcohol, say 'drank' hereafter; otherwise, say 'used')

2. Is that your primary drug of choice?

Yes.....1
No.....2 (If no,)
What is your drug of choice?

alcohol.....1	minor tranquilizers.....5
pot.....2	opioids.....6
cocaine.....3	psychedelics.....7
amphetamines.....4	other - specify_____....8

3. About how long after the treatment program at Fifth Avenue did you first drink\use?

less than one week...1	4-6 months.....4
1-4 weeks.....2	7-9 months.....5
1-3 months.....3	10-12 months.....6
	more than one year...7

4. Where were you when you first drank\used after the treatment program?

home.....1
work.....2
friend's or relative's house.....3
bar or restaurant.....4
car.....5
other specific place -.....6
Describe:_____

5. What time of day was it?

morning.....1
afternoon - noon to 5 pm.....2
evening - 5 to 11 pm.....3
night - 11 pm to 6 am.....4

6. When you first drank\used after the treatment program, were you: (read options)

   alone.....1
   with other people.....2

7. How did you get it? Did: (read options)

   someone offer it to you without you asking.....1
   you buy it.....2
   you ask for it from another person.....3
   or did you get it somewhere else.....4

8. Had you been thinking about drinking\using earlier that day?

   Yes.....1
   No.....2

9. About how long before having that first drink\use did you make a decision to drink\use?

   no conscious decision to drink\use.....1
   seconds.....2
   minutes.....3
   hours.....4
   days.....5

10. How soon after that first drink\use did you drink\use again?

    minutes later.....1
    hours later.....2
    days later.....3
    weeks later.....4
    have not drunk\used since.....5

11. Let's talk about your first drink\use after treatment. If you were going to try to explain to a friend why you drank\ used, what would you say? (If more than one cause, ask for main cause.)

    _____

    _____

Now, I want you to keep in mind the reason you just gave me about your first drink\use after treatment, but first I want to explain how the next set of questions work. They're on a one to five scale and you answer by giving me some number between one and five. For example, if I were to ask you on a one to five scale how you

feel about visiting relatives, where, one stood for very strongly disliking it, two meant that you disliked it, three meant that you didn't care one way or the other, four meant that you liked it, and five meant that you very much liked visiting your relatives, how would you answer? (Process the answer with the respondent). Since you gave me a ( ) that means that you 1) very strongly dislike, 2) dislike, 3) feel indifferent about, 4) like, 5) very strongly like — visiting relatives, is this correct? (If Yes - continue with next paragraph. If No - say, "O.K., let's try it again", then repeat "if I were to ask you..." Continue to process with the respondent, inquiring as to what they meant by their response and matching it with the appropriate number.)

Now, let's get back to the reason you gave for your first drink\use after treatment. You said that the main cause of your slip was (repeat cause from above). Now, the following questions concern your opinions of the cause of your slip.

12. Is the cause something that reflects an aspect of the SITUATION or does it reflect an aspect of YOURSELF? I'm going to give you five choices to pick from, listen first to all of them, then give me your answer. Now here are what the numbers mean on the one to five scale for this question. One means the cause is something that totally reflects an aspect of the SITUATION, two means the cause reflects more an aspect of the situation than of yourself, a three means the cause reflects equally as much an aspect of the situation as yourself, a four means the cause reflects more an aspect of yourself than of the situation, and five means the cause is something that totally reflects an aspect of YOURSELF. Okay? What is your answer?____ (Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of your slip:

    1) totally reflects an aspect of the situation,
    2) reflects more an aspect of the situation than of yourself,
    3) reflects as much an aspect of the situation as yourself,
    4) reflects more an aspect of yourself than of the situation,
    5) totally reflects an aspect of yourself.

Is that what you meant? (If Yes - continue with the next question. If No, say "Let me repeat the question and we'll try it again." - Repeat no more than twice. If the respondent continues to have difficulty after the second repetition, say, "Okay, let's go on to the next question then." Follow this procedure whenever the respondent answers with a negative response.)

13. Now, keeping in mind the reason you gave for your slip: Is the cause UNCONTROLLABLE by you or other people, or, is the cause CONTROLLABLE by you or other people? Now here are the five choices. The cause of your slip is: (Read the choices)

    1) totally uncontrollable by you or other people
    2) more uncontrollable than controllable by you or other people
    3) equally as uncontrollable as controllable by you or other people
    4) more controllable than uncontrollable by you or other people
    5) totally controllable by you or other people

    What is your answer?____(Process the answer with the respondent.) Since you gave me a ( ) that means that you think the cause of your slip is:

    1) totally uncontrollable by you or other people
    2) more uncontrollable than controllable by you or other people
    3) equally as uncontrollable as controllable by you or other people
    4) more controllable than uncontrollable by you or other people
    5) totally controllable by you or other people

    Is that what you meant? (If Yes - continue with the next paragraph. If No, say " Let me repeat the question and we'll try it again." Use the procedure stated earlier.)

    The rest of the questions follow in a similar way. I'll first state the question regarding the cause that you gave for your slip. I'll then give you five choices to pick from, and after listening to the five choices select the one that you think most closely reflects your thoughts about the main reason for your slip. Ready?

14. Is the cause that you gave for your slip something that is TEMPORARY or something that is PERMANENT? Now here are the five choices to pick from. The cause of your slip is something that is: (Read all choices)

    1) completely temporary
    2) more temporary than permanent
    3) about as much temporary as permanent
    4) more permanent than temporary
    5) completely permanent

    What is your answer?____ (If the question needs to be repeated, do so, but no more than twice. Follow procedure stated above).

15. Is the cause of your slip something that influences your behavior in only THAT situation or is the cause something that influences your behavior in ALL situations? Here are the five choices. The cause of your slip is something that: (Read all choices)

    1) influences your behavior in only that situation
    2) influences your behavior more in that situation than in all situations
    3) influences your behavior in that situation and all situations about equally
    4) influences your behavior more in all situations than in that situation
    5) Influences your behavior in all situations

    What is your answer?____

16. Regarding your slip, is the cause UNINTENDED by you or other people or is the cause INTENDED by you or other people? Here are the five choices. The cause of your slip is something that is: (Read options)

    1) totally unintended by you or other people
    2) more unintended than intended by you or other people
    3) equally unintended as intended by you or other people
    4) more intended than unintended by you or other people
    5) totally intended by you or other people

    What is your answer?____

17. Is the cause something that is OUTSIDE of you or is the cause something that is INSIDE of you? Here are the five choices. The cause of your slip is something that is: (Read options)

    1) totally outside of you
    2) more outside of you than inside of you
    3) equally outside of you as inside of you
    4) more inside of you than outside of you
    5) totally inside of you

    What is your answer?____

18. Regarding your slip, is the cause something that is important to you in only THAT situation or is the cause something that is important to you in ALL situations? Here are the five choices. The cause of your slip is something that is: (Read options)

    1) important to you in only that situation
    2) important to you more in that situation than in all situations
    3) important to you in that situation and all situations about equally
    4) important to you more in all situations than in that situation
    5) important to you in all situations

What is your answer?____

19. Is the cause of your slip something that is VARIABLE over time or something that is STABLE over time? Here are the five choices. The cause of your slip is something that is: (Read options)

1) totally variable over time
2) more variable than stable over time
3) equally variable as it is stable over time
4) more stable than variable over time
5) totally stable over time

What is your answer?____

20. Is the cause of your slip something for which NO ONE is responsible or is the cause something for which SOMEONE is responsible? Here are the choices. The cause of your slip is something for which: (Read options)

1) no one is totally responsible
2) no one is responsible more than someone is responsible
3) about equally no one and someone is responsible
4) someone is responsible more than no one is responsible
5) someone is totally responsible

What is your answer?____

21. Is the cause of your slip something about OTHERS or is the cause something about YOU? Here are the choices. The cause of your slip is: (Read options)

1) something totally about others
2) something more about others than about you
3) something equally about others as about you
4) something more about you than about others
5) something totally about you

What is your answer?____

22. Regarding your slip, is the cause something that relates to your behavior in only THAT situation or is the cause something that relates to your behavior in ALL situations? Here are the choices. The cause of your slip is something that: (Read options)

1) relates to your behavior in only that situation
2) relates to your behavior more in that situation than in all situations
3) relates to your behavior about equally in that situation and all situations
4) relates to your behavior more in all situations than in that situation
5) relates to your behavior in all situations

What is your answer?____

23. Is the cause of your slip something that is CHANGEABLE or something that is UNCHANGING? Here are the choices. The cause of your slip is something that is: (Read options)

    1) totally changeable
    2) more changeable than unchanging
    3) about equally changeable as unchanging
    4) more unchanging than changeable
    5) totally unchanging

    What is your answer?____

    The following two questions are on a scale of one to five with "not at all" at the low end and "completely" at the high end.

24. Given what happened, how much do you blame yourself for the slip because of the kind of person you are, answering with one for "not at all" or five for "completely" or, any number in between?_____

25. Given what happened, how much do you blame yourself for the slip because of something you did or didn't do, answering with one for "not at all" or five for "completely", or, any number in between?_____

Okay, so far I have been asking you mostly about that first drink\use you had after the treatment program. The next part of our interview focuses on your thoughts and feelings right NOW. Many of the questions will be very similar to the ones I have already asked; the difference is that they are focused on the present time.

A little earlier you said that within the past thirty days you have done some drinking or using. Since you're not staying completely substance-free, let's agree to call it a period of non-abstinence.

In your own words, what would you say is the main cause for your continued non-abstinence?

_____

_____

Now, just like before with the other questions that were on a scale of one to five:

26. Is the cause for your continued non-abstinence something that reflects an aspect of the SITUATION or does it reflect an aspect of YOURSELF? Here are the five choices to pick from. The cause for your continued non-abstinence:

    1) totally reflects an aspect of the situation,
    2) reflects more an aspect of the situation than of yourself,
    3) reflects as much an aspect of the situation as yourself,
    4) reflects more an aspect of yourself than of the situation,
    5) totally reflects an aspect of yourself.

What is your answer?____ (If the respondent indicates confusion, say "Let me repeat the question and we'll try it again." - Repeat no more than twice. If the respondent continues to have difficulty after the second repetition, say, "Okay, let's go on to the next question then." Follow this procedure whenever the respondent shows some confusion.)

27. Now, keeping in mind the reason you gave for your continued non-abstinence: Is the cause UNCONTROLLABLE by you or other people, or, is the cause CONTROLLABLE by you or other people? Now here are the five choices. The cause for your continued non-abstinence is: (Read options)

    1) totally uncontrollable by you or other people
    2) more uncontrollable than controllable by you or other people
    3) equally as uncontrollable as controllable by you or other people
    4) more controllable than uncontrollable by you or other people
    5) totally controllable by you or other people

    What is your answer?____

28. Is the cause that you gave for your continued non-abstinence something that is TEMPORARY or something that is PERMANENT? Now here are the five choices to pick from. The cause for your continued non-abstinence is something that is: (Read options)

    1) completely temporary
    2) more temporary than permanent
    3) about as much temporary as permanent
    4) more permanent than temporary
    5) completely permanent

    What is your answer?____

29. Is the cause for your continued non-abstinence something that influences your behavior in only THAT situation or is the cause something that influences your behavior in ALL situations? Here are the five choices. The cause for your continued non-abstinence is something that: (Read options)

    1) influences your behavior in only that situation
    2) influences your behavior more in that situation than in all situations
    3) influences your behavior in that situation and all situations about equally
    4) influences your behavior more in all situations than in that situation
    5) influences your behavior in all situations

    What is your answer?____

30. Regarding your continued non-abstinence, is the cause UNINTENDED by you or other people or is the cause INTENDED by you or other

people? Here are the five choices. The cause for your continued non-abstinence is something that is: (Read options)

1) totally unintended by you or other people
2) more unintended than intended by you or other people
3) equally unintended as intended by you or other people
4) more intended than unintended by you or other people
5) totally intended by you or other people

What is your answer?____

31. Is the cause something that is OUTSIDE of you or is the cause something that is INSIDE of you? Here are the five choices. The cause for your continued non-abstinence is something that is: (Read options)

1) totally outside of you
2) more outside of you than inside of you
3) equally outside of you as inside of you
4) more inside of you than outside of you
5) totally inside of you

What is your answer?____

32. Regarding your continued non-abstinence, is the cause something that is important to you in only THAT situation or is the cause something that is important to you in ALL situations? Here are the five choices. The cause for your continued non-abstinence is something that is: (Read options).

1) important to you in only that situation
2) important to you more in that situation than in all situations
3) important to you in that situation and all situations about equally
4) important to you more in all situations than in that situation
5) important to you in all situations

What is your answer?____

33. Is the cause for your continued non-abstinence something that is VARIABLE over time or something that is STABLE over time? Here are the five choices. The cause for your continued non-abstinence is something that is: (Read options)

1) totally variable over time
2) more variable than stable over time
3) equally variable as it is stable over time
4) more stable than variable over time
5) totally stable over time

What is your answer?____

34. Is the cause for your continued non-abstinence something for which NO ONE is responsible or is the cause something for which SOMEONE is responsible? Here are the choices. The cause for your continued non-abstinence is something for which: (Read options)

1) no one is totally responsible
2) no one is responsible more than someone is responsible
3) about equally no one and someone is responsible
4) someone is responsible more than no one is responsible
5) someone is totally responsible

What is your answer?____

35. Is the cause for your continued non-abstinence something about OTHERS or is the cause something about YOU? Here are the choices. The cause for your continued non-abstinence is: (Read options)

1) something totally about others
2) something more about others than about you
3) something equally about others as about you
4) something more about you than about others
5) something totally about you

What is your answer?____

36. Regarding your continued non-abstinence, is the cause something that relates to your behavior in only THAT situation or is the cause something that relates to your behavior in ALL situations? Here are the choices. The cause for your continued non-abstinence is something that: (Read options)

1) relates to your behavior in only that situation
2) relates to your behavior more in that situation than in all situations
3) relates to your behavior about equally in that situation and all situations
4) relates to your behavior more in all situations than in that situation
5) relates to your behavior in all situations

What is your answer?____

37. Is the cause for your continued non-abstinence something that is CHANGEABLE or something that is UNCHANGING? Here are the choices. The cause for your continued non-abstinence is something that is: (Read options)

1) totally changeable
2) more changeable than unchanging
3) about equally changeable as unchanging
4) more unchanging than changeable
5) totally unchanging

What is your answer?____

The following two questions are on a scale of one to five with "not at all" at the low end and "completely" at the high end.

38. How much do you blame yourself for your continued non-abstinence because of the kind of person you are, answering with one for "not at all" or five for "completely" or, any number in between?_____

39. How much do you blame yourself for your continued non-abstinence because of something you are or aren't doing, answering with one for "not at all" or five for "completely", or, any number in between?_____

40. What is your best guess of the likelihood you will be drinking\using three months from now? (Read 1-4)

very unlikely.....1
unlikely.....2
likely.....3
very likely.....4
maybe or I don't know.....5

41. Are you currently taking Antabuse? Yes.....1 No.....2

I would like to finish the interview by asking you a short list of questions about yourself. Answers to these questions will be used for statistical purposes only. If you think any of the questions are too personal, please say so.

42. How old are you?_____ Refused____

43. What's the last grade of school you completed?

Jr. high school or less (grades 1-8).....1
Some high school (grades 9-11).....2
Graduated from high school.....3
Vocational\Technical school.....4
Some college - 2 years or less.....5
Some college - more than 2 years.....6
Graduated from college.....7
Post-graduate work.....8
Refused to answer.....9

44. What is your current marital status?

Single.....1
Married.....2
Separated.....3
Divorced.....4
Widowed.....5
Refused to answer.6

45. What is your current work status? Are you (Read 1-5)

Working full-time.....1
Working part-time.....2
Unemployed.....3

On lay-off.....4
Retired.....5
Other (specify).....6
Refused to answer.....7

46. Which of the following income groups includes your total family income for the past tax year? Just stop me when I read the correct category.

Under 10,000.....1
10 to 20,000.....2
20 to 30,000.....3
30 to 40,000.....4
40 to 50,000.....5
More than 50,000.....6
Don't know.....7
Refused to answer.....8

47. Are you currently involved in A.A., N.A., or C.A.?

Yes.....1
No.....2

48. Gender (by observation)

Male.....1 Female.....2

If any questions were skipped, say "We did skip some questions I'd like to ask now, how do you feel about trying them again"? If yes, proceed, then go to conclusion section. If no, go to conclusion section.

If no questions were skipped, proceed to conclusion section.

Concluding comments -
Do you have any questions or comments, I'd like to hear them now? (pause - if yes, process; if no, proceed)
Are there any upsetting feelings that the interview has caused you that you would like to mention? (pause - if yes, process; if no, proceed)
I want to thank you very much for the time you have taken and your cooperation. Good bye now.

LIST OF REFERENCES

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