The Effects of Training and Experience on the Ability to Detect Relapse Precipitants in a Substance Abuse Client

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THE EFFECTS OF TRAINING AND EXPERIENCE ON THE ABILITY TO DETECT RELAPSE PRECIPITANTS IN A SUBSTANCE ABUSE CLIENT

by

Michael F. Sunich

A Dissertation Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Doctor of Education Department of Counselor Education and Counseling Psychology

Western Michigan University Kalamazoo, Michigan December 1992

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This study examined the effects of training and experience on counselors' ability to detect relapse precipitants in substance abuse clients. Eighty counselor trainees from Western Michigan University and the University of Northern Colorado participated. They were classified as to their previous level of experience and then exposed to either the treatment condition or the control condition. Pretest-posttest data were gathered using a modified version of the Alcohol Confidence Questionnaire (Annis & Graham, 1988) (ACQ-M).

The findings from this study suggest that counselors with previous substance abuse experience tend to show less confidence in a client's ability to remain abstinent than those without experience. Also, the effects of a videotaped training film indicated statistically significant differences between those who were exposed to the tape prior to the posttest and those who were exposed after the posttest.
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The effects of training and experience on the ability to detect relapse precipitants in a substance abuse client

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Michael F. Sunich
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CHAPTER I

BACKGROUND AND STATEMENT OF THE PROBLEM

Background of the Problem

Alcoholism is a disease characterized by a tendency to relapse. An accepted estimate of the prevalence of alcoholism is approximately 7% of the American population, or roughly 16 million (American Psychiatric Association, 1987; Pattison & Kaufmann, 1982). Conservative estimates also indicate that each alcoholic directly impacts the lives of four additional people, or approximately 64 million (Pattison & Kaufmann, 1982). Combined, these figures represent one-third of the population living in the United States today.

Consequences of Alcohol Abuse

Alcoholism follows heart disease and cancer as the third most prevalent health problem in this country (Pattison & Kaufmann, 1982). Prolonged and excessive alcohol use leads to serious physical complications. Malnutrition and disorders related to nutritional deficiencies (Worthington-Roberts, 1982), gastrointestinal disorders including diseases of the liver and pancreas (Fenster, 1982), neurological difficulties (Smith, 1982b), anemia and other hematological problems (Hillman, 1982), and heart and other skeletal muscle disorders (Smith, 1982a) account for the majority of life-threatening physical consequences encountered by alcoholics.

1
Accidents claim the lives of many alcoholics and others falling victim to drunk drivers. Highway fatalities are the fourth leading cause of death across all ages in this country and alcohol is involved in over 50% of those deaths (Waller, 1982).

Suicide rates among alcoholics exceed those reported by other groups. Several studies have reported that between 10% and 33% of completed suicides involved alcoholics, a rate at least twice that of the average population (Goodwin, 1973).

Alcoholism also takes its toll on the family. Alcoholic marriages are 4 to 8 times more likely to end in divorce than those in the general population (McCrady, 1982) and, during the course of the marriages, are more likely to experience serious problems in the areas of finances, child rearing, and domestic violence (Gold, 1988; J. K. Jackson, 1959). Children reared in alcoholic environments have been shown to develop learning difficulties, as well as emotional and behavioral problems (Chafetz, Blane, & Hill, 1971; El-Guebly & Offord, 1977; Kammsier, 1971; C. Wilson & Onford, 1978) and are frequently the victims of gross neglect and abuse (Olson, 1976).

Treatment Outcomes

Treatment has proven beneficial with respect to short-term gains in maintaining abstinence, decreasing the severity of drinking consequences, and improving both physical health and social functioning (Crawford & Chalupsky, 1977; M. B. Sobell, 1978). However, an alarming majority of "successfully treated" clients relapse soon after discharge (Polich, Armor, & Braiker, 1980). Many (Hunt,
Barnett, & Branch, 1971; Hunt & Matazarro, 1973; Marlatt & Gordon, 1980, 1985) estimate the range of relapse rates to be from 50% to 90%. For example, in the Rand report, Polich et al. (1980) stated that of a sample of 474 alcohol-dependent clients, only 7% were abstinent throughout a 4.5-year evaluation. A major review of treatment outcomes by W. R. Miller and Hester (1980) maintained that only 26% of treated individuals remained abstinent for 1 year. Marlatt and Gordon (1985) also held that relapse rates are high across the addictions and that most addicts return to consequential use within 90 days after discharge. While treatment may effectively assist clients in establishing an initial period of abstinence, it appears that the critical issue in counseling alcoholics is in helping them maintain treatment gains.

The Need for Counselor Training in Relapse Prevention

Alcoholics are overrepresented in the counseling population (Bakdash, 1983) and frequently seek help for a wide array of psychological problems (Packard, 1986). For example, depression is a commonly associated feature of alcoholics. In a group of 70 depressed alcoholic females, Schuckit, Pitts, Reich, King, and Winokur (1969) found that 27% (n = 19) suffered severe depression prior to their alcoholism. Weisman and Meyers (1980) and Weisman, Meyers, and Harding (1980) reported that of 34 individuals diagnosed with alcoholism, 71% had also received some other psychiatric diagnosis, primarily depression. Furthermore, the depression diagnosis preceded the alcoholism diagnosis. While there is a growing debate as
to the relationship between alcoholism and other mental disturbances (Hesselbrock, Hesselbrock, Tennen, Meyer, & Workman, 1983), one clear fact remains. Counselors working across a variety of service delivery systems are exposed to clients with drinking problems.

Many counselors find themselves undertrained in identifying and addressing alcohol-related concerns. Some (Knox, 1982; Zinberg, Wallace, & Blume, 1985) have noted that mental health professionals may be reluctant to working with alcohol abusers. Packard (1986) maintained that a large portion of counselors receive limited exposure to the dynamics of alcohol abuse and that those who do receive such training tend to work in facilities that specialize in delivering specific substance abuse services.

Statement of the Problem

This study investigated the effects of training on how counselor trainees viewed the relapse potential of a substance abuse client. Two independent training factors were of concern. The first was the effects of having had previous substance abuse counseling experience. The second was having been exposed to a training videotape.

Purpose of the Study

This study examined two distinct counselor training issues as they relate to working with clients presenting with alcohol-related concerns. The first looked at counselor trainees' assessments of the relapse potential of a substance abuse client before and after
being exposed to a 20-minute video training tape. The second explored the effects of previous training in substance abuse on trainees' abilities to identify and discriminate between relapse precipitants.

Specifically, this study addressed two research questions:

1. What effects will previous substance abuse experience have on trainees' ratings of the relapse potential of a substance abuse client?

2. What effects will exposure to a 20-minute video training tape have on trainees' ratings of the relapse potential of a substance abuse client?

Significance of the Study

Most counselors will be exposed to clients with substance abuse issues regardless of the setting in which they work. Although many will have received specific substance abuse training similar to those who specialize and work in a chemical dependency treatment setting, most are likely to find themselves undertrained in this area. Consequently, counselors may frequently find themselves lacking the essential skills in identifying the relapse potential of a substance abuse client. Considering the recent research indicating that when counselors are able to identify the prodromal signs of a potential relapse, they are better able to intervene and assist clients in maintaining abstinence (Gorski & Miller, 1982; Marlatt & Gordon, 1985); it seems reasonable that counselors receive training in identifying the relapse symptoms in substance abuse clients.
While additional training programs devoted to substance abuse issues may be readily available, they are likely to involve greater costs and time commitments than most trainees are able to endure. Given the relative low cost of purchasing and producing videotaped programs, it seems feasible to utilize this type of cost contained and time efficient training method.

The significance of this study was in determining whether a videotaped lecture on relapse precipitants will increase trainees' understanding of the relapse process. While the effectiveness of videotaped training has been studied in a variety of training settings (Chandler, 1989; Juhnke, 1991/1992), an exhaustive search of the literature indicated that research of this type has not been conducted in the substance abuse/relapse prevention area. Given the potential benefits of a cost and time effective method of training counselors to identify relapse, it seemed both reasonable and necessary that the efficacy of such training also be studied.

Statements of the Hypotheses

This study tested six hypotheses. The first two involved the trainee's previous level of substance abuse counseling experience as the only critical variable; therefore, only pretest scores were examined.

Hypothesis 1

Trainees with previous substance abuse experience will initially express less confidence in the client's ability to remain
abstinent than trainees without prior experience.

**Hypothesis 2**

Trainees who are randomly assigned to the treatment group will express the same amount of confidence in the client's ability to remain abstinent as those who are randomly assigned to the control group.

Figure 1 shows the originally anticipated results of the analyses. Trainees with previous experience were expected to show lower scores on the Alcohol Confidence Questionnaire-Modified (ACQ-M) than those without prior experience, and this same pattern was expected to remain consistent across both levels of treatment.

![Figure 1](image_url)

Figure 1. Anticipated ACQ-M Pretest Scores by Experience.

The remaining four hypotheses considered treatment as the second critical variable; therefore, pretest-posttest differences were analyzed.
Hypothesis 3

Trainees without previous substance abuse experience will show greater pretest-posttest differences after being exposed to the training videotape than those with prior experience.

Hypothesis 4

Trainees who are exposed to the training video will show greater pretest-posttest differences than those who are not exposed to the video.

Hypothesis 5

Trainees will express less confidence in the client's ability to maintain abstinence after viewing the counseling vignette for the second time (lower posttest ACQ-M scores).

Hypothesis 6

Inexperienced trainees will show similar ratings after being exposed to the training video as experienced counselors.

Figure 2 shows the anticipated results after the treatment groups have been exposed to the training video. It was expected that initial significant differences would exist between those with substance abuse experience and those without and that these differences would lessen after the inexperienced group was exposed to the training video.
Figure 2. Anticipated ACQ-M Posttest Scores.

Definition of Terms

Aftercare: Continued group or individual counseling immediately following residential treatment.

Alcohol Confidence Questionnaire (ACQ): The shortened, 16-item version of the Situational Confidence Questionnaire (SCQ, Annis & Graham, 1988).

Alcohol Confidence Questionnaire-Modified (ACQ-M): A version of the ACQ that was modified for this study.

Control group: Graduate level counselor trainees who participated in the study and were exposed to the training videotape after taking the posttest.
Relapse: Full return to the use of alcohol or mood-altering substances after a protracted period of abstinence, resulting in consequences.

Relapse precipitant: A factor involved in the onset of relapse.

Situational Confidence Questionnaire (SCQ): A 39-item instrument designed to measure the self-efficacy of substance abuse clients in a variety of high-risk situations (Annis & Graham, 1988).

Training videotape: A 20-minute videotaped lecture, prepared by the researcher, covering relevant data pertaining to relapse in substance abuse clients.

Treatment group: Graduate level counselor trainees who participated in the study and were exposed to the training videotape before the posttest.

Limitations of the Study

The results of this study can be generalized only when the procedures carried out at Western Michigan University and the University of Northern Colorado are employed. Applications of this study should take into account that the subjects in this study were graduate students enrolled in a counseling degree program and at the prepracticum or first practicum level of training.

Other limitations of this study that were not controlled for were the effects of age, gender, types of substance abuse training, previous treatment, or self-help group involvement.
Organization of the Remaining Chapters

The next chapter, Chapter II, contains a review of the literature in topical areas related to relapse and the use of training videotapes in other research settings. Described in Chapter III are the research methodology, descriptions of the subjects, the research instrument, and the types of videotapes utilized in conducting the study and collecting the data. The findings of the study and tables pertaining to the analysis of the data are reported in Chapter IV. Chapter V contains a discussion of the results as they pertain to the research hypotheses.
CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

Introduction

Alcoholism remains as a highly focused upon topic in the literature. Since the seminal work of Jellinek (1960), the past two decades have produced a plethora of research in the areas of etiology, prevention, intervention, and treatment. Perhaps the most popular over the past 10 years has been in the area of relapse prevention. Little emphasis, however, has been placed upon counselor training in these areas.

One training method that has recently gained attention is the use of videotaped material as an adjunct to imparting information or as a means of providing feedback to counselor trainees on their use of counseling skills. Although the use of training videotapes has been cited throughout the literature (Chandler, 1989; M. G. Jackson & Pinkerton, 1983; Mason, Barkley, Kappleman, Carter, & Beachy, 1988; Meyerson, Wachtel, & Thornton, 1977; Pearl & Nixon, 1980; Sox, Marton, Higgins, & Hickman, 1984; Stone, Wolraich, & Hillerbrand, 1988; Verby, David, & Marshall, 1979), little has been done in the substance abuse area.

The purpose of this literature review is twofold. The first is to explore factors that contribute to relapse, as well as factors that increase the probability of maintaining abstinence.
The second is to provide an overview of recent studies that have utilized videotaped material as a training adjunct. Since many training programs have incorporated videotaped lectures into their curriculum, recent efficacy studies have been published in this area (Mason et al., 1988; Sox et al., 1984).

Relapse Prevention

Determining why alcoholics relapse has been a growing concern over the past two decades (Moos & Finney, 1983). To date, one single factor or set of factors has not proven 100% predictive. It appears that alcoholics relapse for a wide variety of reasons. Rather than pursue discussion regarding causation, a more helpful description of the relapse phenomenon might be found in describing those factors which have been found to increase the likelihood of relapse and those which tend to support the alcoholic's ability to maintain abstinence. This section reviews the literature related to these two questions.

Factors Involved in Relapse

Physiological

Two widely discussed physiological variables involved in relapse are those of craving and loss of control. Isbell (1955) and Jellinek (1960) distinguished between a pure physiological craving, that which immediately follows the abrupt discontinuation of alcohol, and psychological craving, which is experienced as an urgent
and overpowering desire to use alcohol after a protracted period of abstinence.

One difficulty in studying the concept of craving is that alcoholics may not readily identify this experience as it occurs. Ludwig (1972), when asking relapsed in-patient alcoholics why they had taken their first drinks, found that only 1% of the relapers spontaneously reported craving as the reason, while the majority reported dysphoria or some other difficult situation as the primary cause. The opposite was found by Ludwig and Stark (1974). When they included craving as a specific item in the interview, no longer requiring the patient to spontaneously identify this experience, 70% of their sample admitted to strong cravings prior to relapse.

Hore (1974) argued that the concept of craving is difficult to pinpoint due to the subjective nature of its definition. When asking 349 alcoholics to describe the intensity, frequency, and situational specificity regarding craving, 33% acknowledged experiencing some craving for alcohol. Of those, 78% rated their craving as moderately to severely strong, yet when they were asked to describe their experience of craving, the vast majority expressed somatic symptoms similar to that of anxiety, depressed affect, and obsessive preoccupations with drinking. Clearly, the alcoholic's perception and definition of craving appear to adhere, in part, to the principles of classical conditioning.

Johnson (1980) described the progression of alcoholism in terms of learning theory. Specifically, alcoholics begin associating positive affects and experiences with the use of alcohol and, in the
absence of consequences, develop a positive relationship with alcohol. Barbarin (1979) noted that the range of the stimuli's prior reinforcing properties are likely to elicit craving. The once unconditioned craving, experienced in response to physical withdrawal symptoms, becomes a conditioned response to the conditioned stimuli, manifesting in the same unpleasant physiological and psychological distress associated with alcohol withdrawal. The conditioned behavior, naturally, is to drink.

While Ludwig and Stark (1974) proposed that craving is the central determinant of relapse, a reexamination of this concept might find craving to be a central relapse precipitant—the physiological and/or psychological state of the alcoholic immediately preceding the use of alcohol.

A second related physiological variable, and one that is closely aligned with the disease concept, is loss of control (Jellinek, 1960). Frequently, loss of control is described as the uncontrollable urge to continue drinking once an initial amount of alcohol is consumed. People in Alcoholics Anonymous refer to this as being "one drink away from a drunk." A closer examination of Jellinek's description of this phenomena finds the following distinction:

Loss of control means that any consumption of alcohol starts a chain reaction which is felt by the drinker as a physical demand for alcohol. This state, possibly a conversion phenomenon, may take hours or weeks for its full development; it lasts until the drinker is too intoxicated or too sick to ingest more alcohol. (p. 679)

Jellinek's (1960) views on loss of control fail to indicate the "one drink then drunk" concept. Rather, he referred to the
initial use of alcohol as a trigger, manifesting in a full-blown relapse at some future point. Several studies support the notion that one drink does not inevitably lead to out of control drinking (Engle & Williams, 1972; Marlatt, Demming, & Reed, 1973; Merry, 1966) by demonstrating that neither a priming dose of alcohol nor placebo as producing loss of control drinking.

Further support of loss of control concept is found in the recent discovery of the isoquinolines, namely, tetrahydroisoquinoline (Cohen & Collins, 1970; Davis & Walsh, 1970). Davis and Walsh (1970) identified involvement of benzylisoquinoline alkaloids in the biosynthesis of morphine in the poppy plant. After having discovered isoquinolines in the brains, postmortem, of chronic alcoholics, they postulated the biogenesis of these chemicals in mammalian tissue. Cohen and Collins (1970) furthered this thinking by stating that tetrahydroisoquinolines, which are produced by the condensation of catecholamines with acetaldehyde, a metabolic by-product of alcohol, might be responsible for the acute and chronic effects of alcohol intoxication and addiction.

Although the isoquinoline theory has met opposition (A. Goldstein & Judson, 1971; Seevers, 1970), numerous studies have supported the involvement of the isoquinolines in alcohol dependence and the alcohol-opiate relationship (Blum, Wallace, Schwertner, & Eubanks, 1976; Myers, 1978). While the above discussion centered on the physiological manifestations and related biological responses of loss of control, others (Marlatt & Gordon, 1980, 1985; Wilbur,
Roberts-Wilbur, & Morris, 1990) have spoken to this concept from the cognitive-behavioral perspective.

**Abstinence Violation Effect**

Marlatt (1978) postulated that a chief factor in an alcoholic's inability to control alcohol intake rests, in part, in the patient's previously held beliefs about the consequences of the first drink. He referred to this concept as the abstinence violation effect (AVE). Specifically, the patient who is indoctrinated to believe that one drink will lead to intoxication is more likely to experience a full-blown relapse than the client who does not hold this belief. In a survey study of 30 inpatient alcoholics, L. C. Sobell, Sobell, and Christelman (1972) found that 67% believed that one drink would inevitably lead to intoxication and 77% believed that 16 ounces of spirits would produce the loss of control response. Marlatt and Gordon (1980) reported that of the relapsers who believed that one drink would lead to loss of control, 90% continued drinking after their first drink and only 10% were able to resume abstinence safely.

The abstinence violation effect is explained in terms of the vicious circle perpetuated by the cognitive dissonance (Festinger, 1964) created by the first drink. The recovering person, committed to abstinence, violates this commitment upon ingesting the first drop of alcohol. This immediately creates dissonance between a perceived self-image (abstainer) and the present behavior (drinking), thereby creating guilt over engaging in the forbidden
The internal conflict acts as a source of motivation to reduce dissonance; and the extent to which drinking has in the past been used as a method of reducing unpleasant affects, the alcoholic is more likely to engage in continued drinking. Drinking, again, is negatively reinforced by removing the painful feelings and, at the same time, producing continued dissonance. The alcoholic becomes caught in the circular pattern of drinking.

While Marlatt's (1978) discussion of the abstinence violation effect does not disprove the physiological theories of loss of control, he offered a useful link between a "slip" and a "full-blown relapse." Since abstinence still appears to be the most widely prescribed treatment goal, the abstinence violation effect might prove useful in explaining the emotional response to the initial use of alcohol. Considering the role of negative emotional states in the relapse process, as will be discussed in subsequent paragraphs, those "little slips," left unaddressed, stand as critical predictors of future relapse.

**Neurological Impairment**

Gorski and Miller (1982) presented a comprehensive description of the relapse process based upon the core neurological symptom of post-acute withdrawal. They described relapse as a progression of symptoms that worsen over time. The alcoholic initially feels vaguely apprehensive about his or her ability to remain sober. This is followed by other physiological, behavioral, and psychological manifestations such as depression, denial, apathy, isolation,
avoidance responses, and rigidity. Finally, the alcoholic attempts
to test his or her ability to drink safely, ultimately ending in a
full-blown relapse. The essential features of post-acute withdrawal
are that these symptoms surface 1 to 2 weeks after the acute with­
drawal stage, peak within 2 months, and diminish over the following
3 months. During this period, the alcoholic experiences confusion,
irrational thinking, and difficulty in coping. The severity of
post-acute withdrawal relates directly to amount, frequency, and
duration variables, and greatly increases the probability of relapse
during the initial 3- to 4-month period of abstinence. The Gorski
and Miller (1982) description agrees with Hunt et al. (1971) regard­
ing the propensity of relapse during this initial posttreatment
period and is also supported by the Marlatt and Gordon (1980, 1985)
reports on temporal factors involved in relapse.

Self-Efficacy and Outcome Expectancies

Two other factors involved in the relapse process, and also
contributors to the abstinence violation effect, are self-efficacy
and outcome expectancies. There is a growing body of evidence in
the addictions field showing that increased self-efficacy is related
to positive treatment outcomes across the addictions (Annis & Davis,
1988; Coelho, 1984; Colletti, Supnick, & Payne, 1985; Condiotte &
Lichtenstein, 1981; DiClemente, 1981; Marlatt & Gordon, 1985;
Prochaska, Crimi, Lapinski, Martel, & Reid, 1982; Rist & Watzl,
1983). According to Bandura (1977), the essential feature of
self-efficacy is that when people believe strongly in their ability
to perform a certain task, they are more likely to successfully carry out that task. As this relates to relapse, alcoholics with higher levels of self-efficacy are more likely to cope effectively with difficult situations than those with lower degrees of self-efficacy. A number of studies utilizing the Situational Confidence Questionnaire (SCQ, Annis & Graham, 1988) have examined this issue. Annis and Graham (1988) studied a sample of 424 inpatient alcoholics, all of whom completed the SCQ upon intake. They found a small, yet significant, correlation between SCQ scales across all situations and intake data related to amount, frequency, and severity of drinking prior to admission.

Solomon and Annis (1988a) administered the SCQ to 100 new inpatient alcohol admissions, along with the Outcome Expectancy Scale (OES), the Drinking Locus of Control Scale (DRIE), Beck Depression Inventory (BDI), and the Hopelessness Scale (HS). They found a small, yet significant, correlation (r = .24) between the SCQ and the OES, measuring the client’s perceived positive and negative consequences of drinking. This suggests a rather weak relationship between the client's perceived abilities to resist drinking and his or her beliefs about the consequences of drinking. A significant negative correlation (r = -.45) was reported between the SCQ and the DRIE, a locus of control measure, suggesting that clients reporting low self-efficacy tend to attribute their drinking to external, rather than internal, factors. The SCQ was also found to show significant negative correlations with the BDI (r = -52) and the HS (r = -.37), suggesting that clients experiencing greater
feelings of depression and hopelessness express less belief in their ability to handle situations without drinking.

P. J. Miller, Ross, Emerson, and Todt (1987), employing a modified version of the SCQ, administered the instrument to 46 newly admitted inpatient alcoholics and 25 clients with at least 1 year of abstinence. They found that the abstinent group showed greater levels of self-efficacy across the scales than the new admits, concluding that the self-efficacy measure can discriminate between successful clients and those who are new to treatment.

Solomon and Annis (1988b) administered the SCQ to clients upon intake and later compared these scores to posttreatment performance. They found some predictive value in the SCQ, in that, of the clients who relapsed, those with lower SCQ scores drank larger quantities of alcohol, accounting for 16% of the outcome variance.

Annis and Davis (1988) also found predictive value in the SCQ from a sample of 41 inpatient alcoholics. When comparing SCQ scores to the actual reported relapse situation, those who drank heavily in a given situation had lower SCQ scale scores in the corresponding area. Only 19% of the light drinking relapsers were identified by SCQ scales. This information suggests that when considering relapse to be a full return to pathological use, as opposed to a slip, self-efficacy measures play a role in discriminating between situations in which clients are most likely to relapse.

Bandura (1977) described an outcome expectancy as the belief that a certain behavior will produce a particular outcome. Bandura (1977) maintained that self-efficacy expectancies motivate outcome
expectancies in that if the individual believes that he or she can perform the task, knowledge of the outcome becomes more important. If, on the other hand, the individual experiences low self-efficacy, the perceived outcome expectancy becomes less important, since it is unlikely that the outcome will be experienced. For example, alcoholics treated in traditional disease model programs are frequently taught to avoid all situations involving alcohol. G. T. Wilson (1978) argued that this approach reinforces the alcoholic's low self-efficacy in coping with these types of situations. Little attention is paid to the outcomes of successfully coping with this situation. Rather, the client is taught an avoidant response by being instructed to not engage in such activities. Bandura (1977) stated that one's self-efficacy expectations are increased, in part, by having successfully coped with a similar situation or situations in the past. Obviously, the alcoholic client who drank heavily in these situations would rate his or her personal self-efficacy very lowly, thereby increasing the likelihood of relapse if confronted with this situation in the future.

Rollnick and Heather (1982), as well as C. Wilson and Onford (1978), noted that traditional alcoholism treatment approaches tend to favor verbal, insight-oriented approaches. While clients discuss difficult, high-risk situations, Bandura (1977) indicated that verbal persuasion of this sort does very little to increase self-efficacy. Rollnick and Heather (1982) claimed that clients exposed only to this form of therapy might increase their motivation for control, yet be left with little other than a false illusion of efficacy that
fails to hold across a variety of high risk situations. Many con-
temporary theorists (Marlatt & Gordon, 1985; Rollnick & Heather,
1982; C. Wilson & Onford, 1978) have suggested more performance
based cognitive-behavioral interventions designed at teaching coping
skills and providing the client with successful outcomes, thereby
contributing to increased self-efficacy.

High Risk Situations

Another factor in the relapse process, involving both inter-
personal and intrapersonal dynamics, is that of high risk situa-
tions. A high risk situation is best described as an event, either
internal or external, that threatens the individual's sense of self-
control, thereby acting as an antecedent to relapse. Prior to 1973,
a paucity of information existed regarding relapse precipitants. As
mentioned above, the dominant thinking was in the area of craving
(Isbell, 1955; Jellinek, 1952; Mardones, 1955). Also, the concept
of high risk situations is frequently discussed throughout the Alco-
holics Anonymous literature (AA, 1976), often referring to situa-
tions resembling those in which the alcoholic drank previously. In
a study of alcoholic patients receiving aversion therapy, Burt
(1974) reported that approximately 80% of his sample relapsed in a
setting other than their preferred drinking environment. Hore
(1974) studied a group of 22 outpatient alcoholics, looking at the
relationship between life events and relapse. He found that 33%
reported relapse in interpersonal interactions, 33% in work related
events, 20% involving health related issues, and 13% involving a
change in residence.

Marlatt (1978) began more closely examining the relapse process with individuals treated in aversion therapy. He found that of his sample of 65 patients, 48 had taken at least one drink within the first 90 days posttreatment.

Shown in Table 1 are the data from Marlatt (1978) suggesting that 73% of the reported factors preceding relapse involved the first three categories, frustration and anger, social pressure, and temptation.

Table 1
Leading Factors Preceding Relapse

<table>
<thead>
<tr>
<th>Situation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frustration and anger</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Social pressure</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Temptation</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Negative emotional states</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>No situation given</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

In a combined study by Marlatt and Gordon (1980) and Cummings, Gordon, and Marlatt (1980), a total of 311 subjects, with various addictions, were included in the sample. They divided the reported relapse precipitants into two broad classifications of either intrapersonal-environmental or interpersonal. Summarized in Table 2 are their results specifically to the alcoholic relapers.
Table 2
Intrapersonal and Interpersonal Relapse Precipitants

<table>
<thead>
<tr>
<th>Situation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intrapersonal</strong></td>
<td></td>
</tr>
<tr>
<td>Negative emotional states</td>
<td>35</td>
</tr>
<tr>
<td>Negative physiological states</td>
<td>3</td>
</tr>
<tr>
<td>Positive emotional states</td>
<td>3</td>
</tr>
<tr>
<td>Testing personal control</td>
<td>9</td>
</tr>
<tr>
<td>Urges and temptations</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total intrapersonal</strong></td>
<td>61</td>
</tr>
<tr>
<td><strong>Interpersonal</strong></td>
<td></td>
</tr>
<tr>
<td>Interpersonal conflict</td>
<td>18</td>
</tr>
<tr>
<td>Social pressure</td>
<td>18</td>
</tr>
<tr>
<td>Positive social situations</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total interpersonal</strong></td>
<td>39</td>
</tr>
</tbody>
</table>

These data suggest that alcoholic relapers report negative emotional states, including interpersonal conflict, as accounting for 53% of the relapse precipitants. Intrapersonal negative emotional states, such as dysphoria, depression, and guilt accounted for 30% of the reported antecedents, while anger and frustration associated with interpersonal conflict was given for another 15%. Social pressure to drink was listed as frequently as interpersonal.
conflict, with both being reported by 18% of the sample. Urges and temptations were also reported by another 11%. Clearly, negative emotional states, social pressure to drink, and urges and temptations account for the majority (82%) of reported relapse precipitants (53%, 18%, and 11%, respectively).

One factor that deserves mention when considering high risk situations is that of the alcoholic's tendency toward impulsive behavior. While no studies were found that directly link impulsivity to relapse, several have spoken of impulsivity as a distinct characteristic in many alcoholics (Gilberstadt & Duker, 1965; Graham, 1987; Graham & Strenger, 1988; Greene, 1980; Marks, Seeman, & Haller, 1974). Goldstein and Linden (1969), in a cluster analysis of 513 male alcoholics, identified four distinct profiles. The first, with a primary elevation on Scale 4 and a secondary elevation on Scale 2 is characterized by impulsivity, problems in appropriately expressing anger, poor vocational adjustment, marital difficulties, guilt, and remorse (Gilberstadt & Duker, 1965; Graham, 1987; Greene, 1980). The second type identified by S. G. Goldstein and Linden (1969) showed primary elevations on Scales 2, 7, and 8, with a secondary elevation on Scale 4. This type is seen as having dependency conflicts, problems with despondency, hopelessness, inferiority, and inadequacy, and tending to lead a schizoid lifestyle (Gilberstadt & Duker, 1965; Marks et al., 1974). Nerviano, McCarty, and McCarty (1980) described this type as a daily drinker who experiences anger when drinking and apathy regarding daily activities. The third identified type showed a primary elevation on Scale 4 and
secondary elevations on either Scale 2 and/or Scale 9 (S. G. Goldstein & Linden, 1969). This type is likely to display more passive-aggressive tendencies. Graham (1987) referred to this profile as being impulsive, insensitive toward others, self-centered, and having a low tolerance for frustration. The final type showed elevations on Scales 4 and 9 only. S. G. Goldstein and Linden (1969) described this alcoholic type as having other drug addictions and paranoid features. They display antisocial behavior, impulsivity, poor judgment, a low tolerance for frustration, and frequent displays of anger (Gilberstadt & Duker, 1965; Graham, 1987; Greene, 1980; Hathaway & Meehl, 1951).

The essential features of the S. G. Goldstein and Linden (1969) and other supporting Minnesota Multiphasic Personality Inventory (MMPI) studies (Hathaway & Meehl, 1951) show that alcoholics tend to be impulsive, easily frustrated, depressed or dysphoric, and have difficulties with anger expression and control. They also display marked social difficulties manifesting in interpersonal relationships, vocational and occupational settings, and in legal problems and trouble with authority figures. Considering these common tendencies across most alcoholics, and the studies that identify high relapse risks (Marlatt & Gordon, 1980, 1985), it would be a safe assumption to say that most alcoholics are high risks unless provided with specific, alternative coping behaviors.
Pretreatment Variables

Demographic variables are frequently given more weight in predicting outcomes than the nature of the treatment program (Armor, Polich, & Stambul, 1978; Schuckit, 1984); however, predicting relapse based upon pretreatment, demographic variables has proven difficult. Schuckit, Schwei, and Gold (1986) studied a sample of 464 inpatient male alcoholics, using a variety of pretreatment factors to predict 1-year outcomes. For the entire sample, they were only able to account for 12% of the outcome variance. They did find that when other diagnostic features were factored in, predictability improved. For example, in the subgroup of alcoholics with antisocial personality disorders, 86% of the variance was explained by pretreatment factors; however, the authors contended that this group would tend to do more poorly regardless of which type of treatment they received. While the Schuckit et al. (1986) study shows little effect of pretreatment variables, others have provided more information.

Oyabu and Garland (1987) studied the effects of social support on posttreatment outcomes with 83 inpatient alcoholics. While they found no significant relationship between social support and treatment outcomes, they did conclude that persons with a later onset of addiction, earlier detection, and other family members with addictions all experienced greater treatment gains. Marital status, employment status, age, and education all proved insignificant as a pretreatment predictor of outcome.
Vannicelli, Gingerich, and Ryback (1983) studied the relationship between family problems and treatment outcomes in 100 alcoholic patients. They found that problems with the nuclear family was predictive of negative treatment outcomes and also correlated significantly with negative affect upon leaving the treatment center.

Kivlahan, Donovan, and Walker (1983) studied 232 male alcoholics in residential treatment. All were assessed during the first week of treatment using the Drinking-Related Locus of Control (DRIE) Scale (Donovan & O'Leary, 1978; Keyson & Janda, 1972). They found significant differences in relapse rates attributable to locus of control. Relapsers tended to give more external reasons for drinking than survivors (means = 6.4 and 4.6, respectively). Also, for patients who identified negative emotional states, such as anger and depression, as their primary reason for drinking, relapses were more associated with external DRIE scores. For patients who gave negative physical states, such as craving, as their primary reason for drinking, relapses were associated with higher internal DRIE scores. These findings suggest that the patient's control orientation can be helpful in identifying relapse precipitants when compared to their stated reasons for drinking.

Factors Contributing to Abstinence

Social/Occupational Factors

Impairment in social and occupational functioning is listed as part of the diagnostic criteria for alcoholism (American Psychiatric
Association, 1987). A return to social and occupational functioning is given as criteria for recovery from alcoholism (National Council on Alcoholism, 1972). Alcoholics Anonymous (1976) has stressed the importance of support from others and productive work as two essential components for maintaining abstinence. Yet, some uncertainty exists as to the exact relationship between these factors and relapse.

Rosenberg (1983) studied a sample of 43 male alcoholics. Twenty were abstainers and 23 had reported relapses. He found no significant differences between the groups on the amount of social supports available; however, significant differences were found between abstainers and relapsers, showing the abstainers scoring higher in the areas of support from family and friends, comfortable living arrangements, more people that they could go to for help with their problems, and perceived social support from their structured network. Rosenberg's (1983) results suggest that the number of social contacts or significant others has little impact on length of sobriety. Rather, the quality of social support appears to be the deciding factor in this study.

Ward, Bendel, and Lange (1982) studied the environmental resources of 120 inpatient alcoholics. They randomly assigned patients to either a reality therapy or self-awareness treatment condition and examined the effects of treatment, family satisfaction, and job satisfaction on posttreatment functioning. They found that job satisfaction significantly influenced gains in abstinence, stable affect, and overall satisfaction with life, for groups
receiving either type of therapy. Also, family satisfaction was found to influence abstinence. These findings suggest a relationship between family and job satisfaction and the ability to maintain abstinence; however, these results might be attributable to the fact that abstinence is likely to increase one's job satisfaction and ability to function within the family. A causal relationship, therefore, is difficult to imply. Despite the interaction of these factors, it is clear that some interplay exists between abstinence and social and occupational functioning.

**Coping Skills**

A critical factor involved in increasing self-efficacy (Bandura, 1977) and reducing the probability of relapse (Marlatt & Gordon, 1985) is the client's ability to cope with high risk situations. Coping differs from self-efficacy in that the latter refers to a belief about one's ability to cope, whereas the former refers directly to coping behavior. Bandura (1977) spoke of performance accomplishments as being highly related to self-efficacy. He also included verbal persuasion as another factor, yet maintained that persuasion was at a greater risk of extinction than performance based acquisition of self-efficacy. Bandura (1977), regarding verbal persuasion as opposed to experientially achieved accomplishments, stated:

> Efficacy expectations induced in this manner (verbal persuasion) are also likely to be weaker than those arising from one's own accomplishments because they do not provide an authentic experiential base for them. In the face of distressing threats and a long history of failures in
coping with them, whatever mastery expectations are induced by suggestion can be readily extinguished by disconfirming experiences. (p. 198)

The effects of coping skills training on relapse rates support the notion that, despite the nature of the high risk situation, one critical factor in determining whether the alcoholic will relapse or survive, rests in his or her ability to cope effectively. Freedberg and Johnston (1981), utilizing a quasi-experimental, intact group design, studied the effects of assertion training on alcoholics in residential treatment. Fifty-six subjects received assertion training plus the residential program, while 45 control group members received only the residential program. They found that the subjects exposed to the treatment condition obtained greater gains in the areas of drinking and employment during the 1-year follow-up period.

Similarly, Ferrell and Galassi (1981) randomly assigned 22 low-assertive alcoholics to receive, in addition to the traditional inpatient treatment regime, either human relations training or assertiveness training. They found that subjects in the assertiveness training group demonstrated higher levels of assertive behavior and had higher sobriety rates throughout a 2-year follow-up.

Oei and Jackson (1982) compared cognitive restructuring, social skills training, and traditional group therapy with inpatient, low-social skilled alcoholics. They found that both social skills training and cognitive restructuring produced better ratings on alcohol intake at the 3-month posttreatment evaluation. Also, they noted that the cognitive restructuring group showed better overall adjustment across a variety of measures, suggesting that both
cognitive restructuring and social skills training be incorporated in the traditional treatment model.

Intagliata (1978) assigned 64 inpatient male alcoholics to either an interpersonal skill building condition or a control group. Employing the Means-Ends Problem Solving measure, Intagliata found that the skill training subjects showed greater improvements over the control group subjects and that of those trained in problem solving, nearly two-thirds continued employing those skills one month after discharge.

Chaney, O'Leary, and Marlatt (1978) randomly assigned 40 inpatient male alcoholics to either a social skills group, discussion group, or no additional treatment group. Subjects were assessed with the Situational Competency Test (SCT), which examines micro-assertiveness skills and coping behavior. They found that the social skills group showed one-sixth the total days drinking and one-ninth the average length of drinking period as the control subjects. They also noted that the predischarge SCT scores were comparable to demographic variables, in predicting the number of days abstinent during a 1-year follow-up period. SCT scores accounted for 53% of the outcome variance.

In a similar study, Jones, Kanfer, and Lanyon (1982) randomly assigned 68 alcoholic inpatients to either a Chaney et al. (1978) model skills training group, a discussion group, or no additional treatment. All subjects participated in the traditional treatment program activities. At the 1-year follow-up, both the skills training group and the discussion group reported fewer drinking days and
lower consumption than the control group.

Erickson, Bjornstad, and Gotestam (1986) randomly assigned 24 alcoholic inpatients to either a social skills training program or a discussion control group. Clients in this study were in the employment-seeking phase of a long-term residential treatment program. The authors found that during a 1-year follow-up, the skills training group had two-thirds less alcohol consumption than the control group. While these results indicate that the skill training group drank less frequently, they also reported twice the amount of consumption on drinking occasions; however, reports from significant others indicated that while the skill training group consumed more alcohol upon occasion, they judged their drinking to be under control.

During the same year, Hawkins, Catalano, and Wells (1986) expanded the use of skill training in research to include persons addicted to other drugs including alcohol. They combined referrals from four residential treatment communities for a total sample of 130. Utilizing a randomized block design, with program type and gender as blocking variables, they randomly assigned subjects to either the skill training program or no additional intervention. Their findings showed that the treatment group experienced greater gains in avoidance of substances, relapse prevention coping skills, realistic outcome expectancies, and social problem and stress management skills than the control group. Follow-up information on future drinking or drug use was not reported.

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The above studies suggest a strong relationship between coping skills training and relapse prevention. Where traditional treatment programs typically conduct open discussion groups, didactic educational presentations, and confrontational therapy, persons participating in an additional skill training component that involves role playing, rehearsal, and assertiveness training show a decrease in the frequency, duration, and severity of relapse. The goal of increasing the client's self-efficacy, or belief in his or her ability to maintain abstinence in the face of high risk situations, appears to be achieved, in greater proportions, when clients are exposed to the skill training component.

Continuing Care

Another factor contributing to abstinence is continuing care. For the purpose of this discussion, continuing care will refer to any ongoing posttreatment therapeutic activities such as attendance at Alcoholics Anonymous meetings and aftercare groups. Considering the increasing popularity of Alcoholics Anonymous since its inception in 1935 (Alcoholics Anonymous, 1976), many clients involved in aftercare programs following residential or intensive outpatient treatment, also attend AA meetings. It is, therefore, difficult to separate the two. Rather, a description of the impact of these two forms of continuing care on posttreatment functioning and abstinence appears to provide useful information when estimating a patient's likelihood of remaining chemical free.
Several studies have addressed the issue of the value of continuing care. Alford (1980) obtained follow-up information on 56 alcoholics who were treated in an Alcoholics Anonymous/Minnesota Model residential center. Patients were classified as either abstinent, light drinkers (less than six drinking days and less than two intoxications during 6 months), or abusive drinkers (those exceeding the light drinker criteria). Alford reported that 58% were abstinent and 16% were considered light drinkers at 6 months. At 1 year, the abstinence rate fell to 45%, while the light drinker rate rose to 19%. By 2 years, the abstinent rate rose to 51% and the light drinker rate dropped to 15%. Of those rated as abstinent, 61% had maintained AA attendance over the 2-year period, while 12% of the light drinkers remained in AA. None of those classified as abusive drinkers were involved in AA at the 2-year follow-up and only 25% were involved at 6 months. While Alford's study shows a relationship between AA and abstinence, as well as the value of the AA treatment model, these results fail to address the issue of whether AA attendance produced lower relapse rates or whether persons with a stronger commitment to sobriety and greater coping skills are more likely to attend AA meetings. With this question unanswered, identifying the relationship between AA and abstinence remains as a helpful tool in assessing the alcoholic's stability in recovery.

A study by Hoffman, Harrison, and Belille (1983) supports Alford's (1980) findings. They performed a follow-up analysis of 900 patients who were treated in Minnesota Model programs during 1980. They found a significant \( p = .0001 \) relationship between
frequency of AA attendance and length of sobriety. Of the patients who attended at least one AA meeting weekly during the first 6-month posttreatment period, 73% maintained abstinence. Of those attending several times monthly, 69% were abstinent. No significant differences were found between these two groups. A marked difference in sobriety rates was noted as AA attendance dropped sharply. Forty-five percent of the group attending AA once per month reported abstinence and only 33% of the nonattenders were chemical free. Another interesting finding in this study was that patients tended to either firmly commit to AA attendance, attending at least weekly (48%, n = 428) or completely reject AA as a means of continuing care (33%, n = 300). While the Hoffman et al. (1983) study supports the belief that AA involvement enhances sobriety rates, little is said about other forms of aftercare in this study. For example, no mention is made as to whether the nonattenders were involved in other forms of aftercare. This information would be useful in separating the effects of AA from other types of aftercare; however, for the purpose of this review, an assumption can be made regarding some aftercare involvement since this is an integral component of the Minnesota Model.

Vannicelli (1978) studied the impact of aftercare on outcome following treatment for alcoholism. She computed correlations between aftercare attendance and social adjustment and functioning at the 3- and 6-month posttreatment points. She found that aftercare significantly correlated with adjustment at the 3-month evaluation and that adjustment rates at 3 months affected outcomes found at 6
months. Client prognostic variables such as social stability at the time of admission were not controlled for; however, her results suggest a relationship between aftercare and future adjustment.

Costello (1980) replicated the Vannicelli (1978) study with 37 alcoholism inpatients by extending the evaluation period to include 1- and 2-year assessment points. He also controlled for pretreatment variables such as social adjustment and hospital adjustment. Costello found significant correlations between aftercare and outcomes at both the 1- and 2-year points. Also, he found that 28% of the outcome variance was accounted for by social stability prior to admission and that those most likely to be improved 2 years after treatment are those most stable at the 1-year mark. He also reported that aftercare accounted for 19% of the outcome variance, suggesting that both aftercare and social stability are strongly related to posttreatment functioning.

Walker, Donovan, Kivlahan, and O'Leary (1983) studied the effects of length of inpatient treatment, neuropsychological performance, and aftercare of the treatment outcomes of 245 inpatient male alcoholics. They found that when absolute abstinence was used as the criteria for sobriety, 70% of the patients who remained in aftercare for 9 months remained abstinent, while only 23% of the aftercare dropouts remained sober. Length of stay in residential treatment did not relate significantly to outcomes, suggesting that once stabilized, aftercare attendance is an essential factor in maintaining abstinence.
Ahles, Schlundt, Prue, and Rychtarik (1983) studied the effects of behavioral contracting on aftercare attendance and abstinence rates in 50 male alcoholics. All subjects were treated in a residential treatment program, utilizing a social learning approach (P. M. Miller & Mastria, 1981) with abstinence as the primary goal. Subjects were assigned to either the experimental group, employing attendance contracts for the initial 6 months of aftercare, or the control group, receiving no contract. The authors found that the contract group demonstrated higher monthly and cumulative abstinence rates for the initial 6 months than the control group. Also, when the contract expired after the 6-month period, the contract group maintained higher abstinence rates than those receiving no contract.

While causation cannot be implied from the above studies, a strong relationship exists between abstinence and continuing care. Persons remaining in some form of aftercare involvement tend to show better adjustment across a number of life areas, as well as in their ability to maintain abstinence. Whether attending aftercare increases the individual's ability to cope or whether persons with higher coping skills are more likely to attend aftercare remains an unanswered question. The important consideration for this inquiry remains that people who maintain continued contact with some type of aftercare show a decreased risk for relapse.

The Use of Training Videotapes

Training videotapes have been used successfully in a variety of educational fields. Stone et al. (1988) used a videotaped training
program with special education teachers, and found a reduction in the teacher's anxiety when dealing with previously difficult situations. Chandler (1989) showed significant pretest-posttest differences when studying the effects of an instructional videotape on pharmacy students conducting a medication interview with senior adults.

Videotaped instruction has gained popularity in the medical education field. Over the past two decades, several studies have demonstrated the efficacy of videotaped training aids (M. G. Jackson & Pinkerton, 1983; Juhnke, 1991/1992; Kaufman & Kaufman, 1983; Meyerson et al., 1977). For example, M. G. Jackson and Pinkerton (1983), in a survey of medical residents at the University of Connecticut, reported that 75% of those interviewed believed that videotaped instruction enhanced their education. They suggested that the greatest impact of videotaped instruction was seen in the earlier portion of the resident's medical training.

Kaufman and Kaufman (1983) supported the use of videotaped instruction in teaching specialty topics. They asserted that training programs can reduce costs by creating videotaped lectures, thereby reducing the required amounts of faculty time. Sox et al. (1984), in a study comparing live lectures to videotaped instruction and finding no statistically significant difference between the two, also suggested using videotaped instruction in areas where there is a limited supply of expert instructors.

Mason et al. (1988) developed and implemented a self-instructional videotape on interviewing skills for fourth-year
medical students. When comparing the experimental groups to the control group, they found that the self-instructional videotape significantly improved student's interviewing skills.

Pohl, Lewis, Niccolini, and Rubenstein (1982) studied the effects of videotaped instruction on student's abilities to perform mental status examinations. They compared groups receiving live lectures with those receiving the videotape and found that the two groups achieved no significant differences.

Golden (1978) compared a videotaped suicide assessment program to traditional training that involved readings and live lectures. He found that those who participated in the videotaped training group showed significantly greater gains than the traditional group in the areas of general knowledge of suicide and in their ability to perform a complete suicide assessment.

In a similar controlled study, Juhnke (1991/1992) compared live and videotaped instruction of suicide assessment using the SAD PERSONS scale, to master's level counselor trainees. He found that both the live and videotaped instruction groups performed significantly better than the control group. He also found no statistically significant differences between live and videotaped instruction, further supporting the use of the latter in counselor training programs.

Counselor educators also suggest that videotaped instructional methods are effective from both a training and financial perspective (Brown, 1977; Iverson, 1986; Thayer, 1977; Winborn, Hinds, & Stewart, 1971). Thayer (1977) asserted that videotaped mini-lectures, role-play situations, and skill-practice sessions can help
trainees in experiencing simulated difficulties prior to practicum. Stone and Vance (1976) purported that prerecorded videotaped training facilitates improvement in empathic communication.

Development and implementation of videotaped self-instructional training has been advocated by Cormier and Cormier (1976). They suggested that integrating traditional training methods with videotaped simulations of problem-solving strategies will enhance counselor trainees' development.

Brown (1977) suggested that videotaped training in counselor education will increase in popularity as technology increases and costs make taping more feasible. He maintained that the effectiveness of videotapes can be seen in social learning principles, specifically modeling.

Chapter Summary

Relapse is inherent in alcoholism. The question as to why some alcoholics relapse while others remain abstinent remains unanswered. The past 15 years, however, have brought a greater understanding of the relapse process and of factors that contribute to the alcoholic's ability to remain abstinent. Moving beyond the phenomena of physiological craving, several other variables have been identified as significantly impacting the alcoholic's continued recovery.

Post-acute withdrawal (Gorski & Miller, 1982), a type of alcohol-induced neurological impairment, has been found to seriously hinder the individual's ability to initially achieve a sense of balance in his or her life. Temporal factors involved in post-acute
withdrawal, namely, that the alcoholic is at greater risk for relapse during the initial 3 to 6 months, have been reported by several researchers (Gorski & Miller, 1982; Marlatt & Gordon, 1985).

When relapse is viewed as a full return to previous symptomatology, an emerging issue is the abstinence violation effect (Marlatt & Gordon, 1980). Largely as a result of the dichotomous distinction between abstinence and relapse, little "slips" are often predictive of future loss of control drinking. While some (M. B. Sobell, 1978) maintain that certain alcoholics can learn to control their drinking, there is little agreement as to the specific profile of the controlled-drinking alcoholic. Abstinence remains as the most widely prescribed treatment goal and those who violate the abstinence agreement, even at levels that produce few overt consequences, tend to experience guilt, shame, and the belief that they are destined to lose control. The vicious cycle is recreated, placing the alcoholic at a great risk for a full relapse.

Like most other people, alcoholics experience difficult situations in their lives. Daily hassles, frustrations, and other previous drinking triggers factor into the relapse process. The degree to which an alcoholic believes that he or she can effectively cope without drinking has some predictive value (Annis & Graham, 1988; Marlatt & Gordon, 1985; Rist & Watzl, 1983). Based largely upon Bandura's (1977) concept of self-efficacy, alcoholics prior to treatment have learned to maladaptively cope with many situations by drinking. Lacking the ability to cope effectively yields a lowered sense of self-efficacy. While many treatment approaches discuss...
handling difficult situations, Bandura (1977) maintained that this is the least productive method of increasing self-efficacy. Modeling, practicing, role playing, and rehearsal are stated as producing greater self-efficacy ratings. Alcoholics with higher degrees of self-efficacy are, therefore, more likely to cope with difficult situations, thereby reducing the probability of relapse.

Certain risk situations have been found to precipitate relapse at a greater rate than others. Negative emotional states, social pressure to drink, and urges and temptations accounted for over 80% of reported relapse precipitants (Marlatt & Gordon, 1985). Specifically, intrapersonal negative emotional states, such as guilt and depression, tend to present the greatest risk. Anger and frustration involved in interpersonal conflicts, social pressure, and temptations, all present the same risk, albeit less than intrapersonal negative emotional states. When presented with the above situations, alcoholics, lacking the adequate coping skills, are likely to behave impulsively. This especially places the alcoholic at risk when he or she is angry or experiencing other interpersonal conflicts.

Other pretreatment variables have been found to effect relapse. Early onset of addiction tends to increase the likelihood of relapse, as does instability in the nuclear family. Another factor is the alcoholic's perceived locus of control as it relates to certain high risk situations. Greater external scores have been shown to relate more to negative emotional states, while greater internal scores have been associated with negative physical states.
Just as certain factors contribute to relapse, others tend to strengthen the likelihood of abstinence. Social support and occupational satisfaction have both been shown to favorable effects on the alcoholic's ability to remain sober. More specifically, the quality of support, rather than the number of social contacts, is considered as a critical difference between relapsers and survivors.

Another factor, and perhaps one of the most critical, is in the alcoholic's ability to cope with high risk situations. Numerous studies over the past 15 years have shown that coping skills training produces significant treatment outcome differences in the length of sobriety, as well as the duration and severity of relapses. Coping skills training is considered essential in increasing the alcoholic's sense of self-efficacy, thereby reducing the likelihood of relapse.

A final chief factor involved in maintaining abstinence is that of continued involvement in recovery-oriented activities. Alcoholics Anonymous and aftercare group sessions both serve as strong predictors of abstinence during the initial posttreatment year. Several studies have indicated that clients who remain involved in some form of aftercare achieve greater lengths of continued abstinence than nonattenders.

Although there has been an increasing amount of research in the area of relapse and relapse prevention, there is a paucity of information pertaining to how relapse prevention material can be conveyed to counselor trainees. One effective teaching method used with similar material has been the use of training videotapes.
Videotaped training material has gained popularity over the past few years due to its relative low cost and proven effectiveness in counselor training programs (Brown, 1977; Cormier & Cormier, 1976; Chandler, 1989; M. G. Jackson & Pinkerton, 1983; Mason et al., 1988; Meyerson et al., 1977; Pearl & Nixon, 1980; Sox et al., 1984; Stone et al., 1988; Verby et al., 1979).
CHAPTER III

METHODOLOGY

Methods and Design

This study was approved by the Human Subjects Institutional Review Boards at Western Michigan University, Kalamazoo, and the University of Northern Colorado, Greeley. The basic design of this study employed a pretest-posttest control group structure. The independent variables were: (a) previous substance abuse experience and (b) exposure to the treatment condition. Previous substance abuse experience was defined as having had at least 1 year of work experience in a substance abuse setting or having taken at least one graduate level course in a substance abuse topic. The dependent variables were the subjects' ratings of the relapse potential on each of the eight scales of the Alcohol Confidence Questionnaire-Modified.

Subjects were randomly assigned to either the treatment group or the control group. Random assignment assured that both groups were probabilistically equivalent and that statistically significant between-group differences were due to either treatment or previous experience.

Subjects

A total of 80 volunteers were recruited for this study. Forty-three were from Western Michigan University and 37 were from the
University of Northern Colorado. All subjects were enrolled in a graduate counselor training program and were at a prepracticum or first practicum level of training. Of the 80 subjects, 30 were male and 50 were female. Thirty subjects were classified as having had previous experience and 50 were classified as having had no previous experience. Forty-one subjects were randomly assigned to receive treatment, while 39 subjects were randomly assigned to the control group. Figure 3 shows the experimental design used in the study. Table 3 shows the distribution of subjects after being classified and randomly assigned to the treatment or control groups.

\[
\begin{align*}
Y_1 & \quad R & \quad 0_1 & \quad X & \quad 0_2 \\
Y_1 & \quad R & \quad 0_3 & \quad & \quad 0_4 \\
Y_2 & \quad R & \quad 0_5 & \quad X & \quad 0_6 \\
Y_2 & \quad R & \quad 0_7 & \quad & \quad 0_8 \\
\end{align*}
\]

Legend: \( Y \) = Level of prior training. \( R \) = Random assignment. \( O \) = Observation (ACQ-M). \( X \) = Treatment (training tape).

Figure 3. Experimental Design.

Table 3

<table>
<thead>
<tr>
<th>Experience</th>
<th>Treatment</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>( n = 15 )</td>
<td>( n = 15 )</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>( n = 26 )</td>
<td>( n = 24 )</td>
<td></td>
</tr>
</tbody>
</table>

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Instrument

Alcohol Confidence Questionnaire-Modified (ACQ-M)

The ACQ-M is a modified version of the Alcohol Confidence Questionnaire (ACQ). The ACQ is a 16-item, shortened version of the Situational Confidence Questionnaire (Annis & Graham, 1988). The original instrument measures the level of efficacy reported by clients in a variety of typical high risk situations. Clients are asked to respond to each item by rating, on a 0-100% scale, how confident they are about being able to handle each situation without drinking heavily. The ACQ consists of two items from each of eight categories based on Marlatt and Gordon's (1985) model of high risk situations. The eight categories are: (1) unpleasant emotions and frustrations, (2) physical discomfort, (3) social problems at work, (4) social tension, (5) pleasant emotions, (6) positive social situations, (7) urges and temptations, and (8) testing personal control.

The original SCQ showed item-total score correlations ranging from .59 to .91 and internal consistency reliability (alpha) was excellent, ranging from .81 to .97. The ACQ showed a .99 correlation with the SCQ in a sample of 424 clients and the Cronbach alpha coefficient was .95. Therefore, it has been determined that the ACQ is an appropriate instrument for researchers in need of a short, reliable, general measure of self-efficacy across a variety of situations (Annis & Davis, 1988).

For the purpose of this study, one modification was made to the ACQ. Questions were worded in the third person, so as to serve as a
counselor rating instrument. For example, Item 1, "If I felt confident and relaxed" read "If the client felt confident and relaxed."

Videotapes

Two videotapes were prepared for use in this study. The first was a 20-minute training video and the second was a 10-minute counseling vignette. The finished videotapes were created at a cost equal to that of two blank video cassettes. When considering the costs of professionally produced videos estimated in the area of $1,000, the incurred expenses were well within the researcher's budget. All individuals associated with the production of the videotapes were amateurs to the film making process. As a result, production quality was jeopardized. For example, in the training video, the lecturer displayed some nervous movement and exaggerated use of his hands. Also, in the counseling vignette, there was one brief pause on the part of the client while he was attempting to recall his script. Despite these minor flaws, none of the research subjects or other experts who viewed the videos reported any distractions.

Training Tape

A 20-minute videotaped lecture was prepared for use as the treatment condition. The researcher presented information pertaining to the relapse process, highlighting the following five areas: (1) a synopsis of relapse incidence rates, (2) an overview of the cognitive-behavioral relapse model, (3) a description of the eight
high-risk areas according to the Marlatt and Gordon (1985) model, (4) other factors associated with relapse, and (5) factors contributing to abstinence.

Counseling Vignette

A mock counseling session was videotaped with a white male doctoral student serving as the client and the researcher as the counselor. This session was scripted by the researcher so as to portray the client as demonstrating high relapse indicators in the interpersonal area, primarily associated with social tension and social pressure to drink. Other high risk areas were also presented by the client; however, the distinguishing feature between those considered to place the client at risk and those which did not, were the client's reported self-efficacy and previous experience with coping in certain situations.

The five potential high risk factors presented by the client were: (1) negative emotional states--anger/frustration, (2) social tension and pressure to drink, (3) positive emotional states, (4) urges and temptations, and (5) thinking that one drink would cause no harm.

The five areas considered as supporting the client's ability to remain abstinent were: (1) high self-efficacy at risk Areas 3, 4, and 5; (2) previously demonstrated coping skills at risk Areas 1, 3, 4, and 5; (3) current involvement in AA and aftercare; (4) greater than 90 days abstinent; and (5) intact social and familial support.
Interrater Agreement

Interrater agreement data were obtained on the counseling vignette. The researcher recruited four substance abuse professionals to view the counseling vignette. The experts responded to each item on the ACQ-M by either stating that the client would be able to successfully cope in the indicated situation or that the client would be likely to relapse in that situation. A .75 agreement rate was obtained, indicating that the counseling vignette could be clearly understood and that it was relatively free from ambiguity.

Procedures

In the fall of 1991, two prepracticum instructors in the Department of Counselor Education and Counseling Psychology at Western Michigan University, one instructor of a Specialty Program in Alcohol and Drug Abuse class at Western Michigan University, and two prepracticum instructors from the University of Northern Colorado agreed to allow this researcher access to their students for the purpose of conducting this study. One hour of classroom time was granted by all instructors.

Prior to conducting the study, the researcher trained a second year doctoral student in the Department of Counselor Education and Counseling Psychology at Western Michigan University (WMU) to assist with the data collection at WMU. Training involved describing the two factor experimental design and explicit instruction as in the pretesting, posttesting, informed consent, and data collection.
procedures.

The study was conducted during the week of November 18, 1991, through November 22, 1991, at Western Michigan University and at the University of Northern Colorado. The researcher conducted the study with the group at the University of Northern Colorado and the researcher's assistant conducted the study with the three groups at Western Michigan University. All groups adhered to identical procedures with respect to informed consent, random assignment, and testing.

At the onset of the classroom period, students were informed of the nature of the study and were asked to read and sign the Research Consent Form. They were reminded that participation was voluntary and that they would not be penalized for refusing to participate. After the Research Consent Forms were signed and collected, the subjects were assigned a four-digit research code number.

The first digit indicated their level of experience. Subjects who qualified as having met the criteria for previous experience were assigned the number 1. Those who did not meet the criteria were assigned the number 2.

The second digit indicated gender, where males were assigned the number 1 and females were assigned the number 2.

The third digit indicated location and classroom. Subjects from the University of Northern Colorado were assigned the number 1. Subjects from the first prepracticum class at Western Michigan University were assigned the number 2. Subjects from the substance abuse class at Western Michigan University were assigned the number 3. Subjects
from the second prepracticum class were assigned the number 4.

The fourth digit indicated whether the subject was in the treatment group or the control group. Each subject was randomly assigned either a number 1 or 2 as the fourth digit. Subjects with the number 1 were exposed to the control condition, while subjects with the number 2 were exposed to the treatment condition.

Two examples of coding procedures follow. If a subject had previous experience in substance abuse (1), was male (1), was from the substance abuse class at Western Michigan University (3), and was in the treatment group (2), his research code number would have been 1132. A subject with no experience (2), female (2), from the University of Northern Colorado group (1), and in the control group (1), her research code number would have been 2211.

After assigning the research code numbers, subjects with the fourth digit number 2 (treatment group) were asked to leave the room for 15 minutes. During this time, the control group watched the counseling vignette and completed the pretest.

After the control group completed the pretest, the treatment group was asked to return to the room. Both groups then watched the counseling vignette. The control group completed the posttest and the treatment group completed the pretest. Both groups were then exposed to the videotaped training lecture. After watching the lecture, the control group was excused from the room. The treatment group watched the counseling vignette and completed the posttest. The control group was asked to rejoin the class, at which time questions were answered regarding the study and the results.
**Treatment Condition**

Subjects assigned to the treatment group participated according to the following schedule:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Vignette</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Pretest</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Training tape</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Vignette</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Posttest</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Debriefing</td>
<td>5 minutes</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td><strong>60 minutes</strong></td>
</tr>
</tbody>
</table>

**Control Condition**

Subjects assigned to the control group participated according to the following format:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Vignette</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Pretest</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Vignette</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Posttest</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Training tape</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Debriefing</td>
<td>5 minutes</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td><strong>60 minutes</strong></td>
</tr>
</tbody>
</table>
As indicated above, both the treatment and the control groups received the benefits of the training tape, with one difference. The treatment groups received the tape prior to the counseling vignette. The control groups had no exposure to the tape until after the posttest was completed.

**Data Collection and Analysis**

Pretest and posttest data were collected by the researcher at the time of the study. No identifying information was included on any of the forms, with the exception of a research number. The research code number indicated from which classification and experimental group the data were obtained. All pretest and posttest scores were entered into a computerized statistical program (SPSS, Inc., 1991) for analysis.

This study utilized a multivariate analysis of variance (MANOVA) to analyze the data. The MANOVA was chosen to account for the inflation of experimentwise Type I and Type II errors that would have been encountered by performing univariate tests on each of the eight dependent variables (ACQ-M scales) (Haase & Ellis, 1987). While other methods for controlling for experimentwise error exist, such as the Bonferroni F Test with a more conservative p value (Huitema, 1980), the MANOVA also takes into account the intercorrelation among the dependent variables. While univariate tests assume the intercorrelation among dependent variables is zero (Haase & Ellis, 1987), multivariate tests are not restricted to this assumption. Also, multivariate tests are ideal for repeated measures
designs when the pretest and posttest measures are taken with the identical instrument (Haase & Ellis, 1987).

Chapter Summary

This was a pretest-posttest experiment studying the effects of training on counselor trainees' abilities to identify relapse precipitants in a substance abuse client. The independent variables were (a) previous training and (b) exposure to the training tape. A total of 80 subjects from Western Michigan University and the University of Northern Colorado participated in the study. They were randomly assigned to either the treatment group or the control group. Subjects in the treatment group were exposed to the training videotape prior to the posttest, while those in the control group received the video after taking the posttest.

The effects of training were measured with the ACQ-M. The data were analyzed using multivariate analysis of variance to determine (a) if there were significant differences between those with previous experience and those without, and (b) if there were significant differences between the treatment group and the control group. Univariate analyses were also conducted on each significant multivariate finding, indicating which of the ACQ-M scales showed significant differences.
CHAPTER IV

RESULTS OF THE STUDY

Introduction

The present study assessed the effects of training on counselor trainees' abilities to identify relapse precipitants in a substance abuse client. The independent variables were previous substance abuse experience and exposure to the training videotape. The dependent variables were the confidence scores on the Alcohol Confidence Questionnaire-Modified (ACQ-M). A total of 80 subjects were randomly assigned to either a treatment group, who received the training prior to taking the posttest, or a control group, who received the tape after taking the posttest.

This study tested six hypotheses. The first two involved the trainees' ACQ-M pretest responses based on previous level of experience; therefore, only pretest scores were examined. The following four hypotheses considered the effects of the training video, thereby requiring analysis of the pretest-posttest differences.

Hypothesis 1

Hypothesis 1 predicted that trainees with previous substance abuse experience would initially express less confidence in the client's ability to remain abstinent than trainees without previous experience. As indicated in Chapter I, Figure 1 depicts the
anticipated results after administering the pretest. It was expected that subjects with previous substance abuse experience would be more sensitive to relapse precipitants, thereby rating the client lower on the ACQ-M.

Consistent with the hypothesized expectations, the pretest means of those with experience were slightly lower than those without experience. Table 4 shows that the experienced groups scored 60.9 and 52.9, while the inexperienced group scored 63.9 and 57.6. Table 5 indicates that the results of multivariate testing for the effects of experience were insignificant. The result of an analysis of variance test on the pretest scores only, presented in Table 6, was also insignificant.

Table 4
Total ACQ-M Means by Experience by Treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest means</th>
<th>Posttest means</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>60.9</td>
<td>42.3</td>
<td>18.6</td>
</tr>
<tr>
<td>Control</td>
<td>52.9</td>
<td>52.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Inexperienced</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>63.9</td>
<td>47.5</td>
<td>16.4</td>
</tr>
<tr>
<td>Control</td>
<td>57.6</td>
<td>56.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Total means</td>
<td>58.8</td>
<td>49.7</td>
<td>9.1</td>
</tr>
</tbody>
</table>
Table 5
MANOVA Summary Table

<table>
<thead>
<tr>
<th>Group</th>
<th>Multivariate tests&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Univariate tests&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hotellings&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Neg emot</td>
</tr>
<tr>
<td>Experience</td>
<td>1.64</td>
<td>0.66</td>
</tr>
<tr>
<td>Treatment</td>
<td>0.42</td>
<td>0.01</td>
</tr>
<tr>
<td>Exp x Trt</td>
<td>0.93</td>
<td>0.59</td>
</tr>
<tr>
<td>Time</td>
<td>8.80*</td>
<td>45.69*</td>
</tr>
<tr>
<td>Exp x Time</td>
<td>0.35</td>
<td>0.33</td>
</tr>
<tr>
<td>Trt x Time</td>
<td>7.13*</td>
<td>26.86*</td>
</tr>
<tr>
<td>Exp x Trt x Tim</td>
<td>0.40</td>
<td>0.30</td>
</tr>
</tbody>
</table>


<sup>a</sup>8,69 df.  <sup>b</sup>1,76 df.

*p < .001.
Table 6
Analysis of Variance of ACQ-M Pretest Scores by Experience

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>297.5</td>
<td>1</td>
<td>297.5</td>
<td>1.38</td>
<td>.244</td>
</tr>
<tr>
<td>Within cell</td>
<td>16808.7</td>
<td>78</td>
<td>215.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based upon these data, the decision was made to reject Hypothesis 1 and conclude that although the experienced groups' scores tended to be lower than the inexperienced groups', the differences between the groups were not statistically significant.

Hypothesis 2

Hypothesis 2 predicted that trainees who were randomly assigned to the treatment group would express the same amount of confidence in the client's ability to remain abstinent as those who were randomly assigned to the control group. While Figure 1 shows the anticipated results of the pretest to be equal across both treatment conditions, the obtained results depicted in Figure 4 show that although the effects of experience were consistent across both treatment conditions, the control group obtained lower pretest scores than the treatment group.

The data reported in Table 4 show the mean pretest scores for the treatment groups were 60.9 and 63.9, while the mean pretest scores for the control group were 52.9 and 57.6. An analysis of
Figure 4. Treatment by Time Interaction Plot.

A variance test was conducted to examine the pretest differences between the treatment and control groups. These results reported in Table 7 indicate that the control group's pretest scores were significantly lower than the treatment groups' pretest scores.

Table 7

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>971.4</td>
<td>1</td>
<td>971.4</td>
<td>4.70</td>
<td>.033</td>
</tr>
<tr>
<td>Within cell</td>
<td>16134.7</td>
<td>78</td>
<td>206.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
These data suggest that Hypothesis 2 be rejected, concluding that although the groups were formed by random assignment, significant differences existed at pretest. While these differences may potentially confound the findings of this study, the multivariate analysis of variance of the Experience x Treatment interaction effect shown in Table 4 shows that these differences were consistent across both levels of experience. In essence, the differences between the treatment and control groups that had previous substance abuse experience were the same as the differences between the groups without previous experience. Table 5 indicates that the Experience x Treatment x Time interaction effect was not significant.

The remaining four hypotheses considered the effects of the training video as the second critical variable; therefore, pretest-posttest (time) differences were analyzed.

Hypothesis 3

Hypothesis 3 predicted that trainees without previous substance abuse experience would show greater pretest-posttest differences after being exposed to the training videotape than those with prior experience. This hypothesis assumed that there would be pretest differences based upon levels of experience and that these differences would become insignificant after exposure to the training video.

Table 4 shows that the mean pretest-posttest change scores for the experienced group receiving treatment were 18.6, while the mean change score for the inexperienced group receiving treatment was
16.4. The two control groups yielded identical change scores of 0.7. Figure 4 plots the Experience x Treatment x Time interaction and indicates that the effects of Experience x Treatment were consistent across both levels of time.

The results of the multivariate analysis of variance for Experience x Treatment x Time reported in Table 5 indicate that the Experience x Treatment x Time interaction effect was insignificant. Hypothesis 3 was not supported, concluding that the effects of the training video were consistent across both levels of experience.

Hypothesis 4

Hypothesis 4 predicted that trainees who were exposed to the training video would show greater pretest-posttest differences than those who were not exposed to the video. This hypothesis ignored the effects of previous experience by pooling those with and without substance abuse experience (see Table 8).

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>430.5</td>
<td>1</td>
<td>430.5</td>
<td>1.76</td>
<td>.189</td>
</tr>
<tr>
<td>Within cell</td>
<td>19086.5</td>
<td>78</td>
<td>244.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Experience x Treatment x Time effects plotted in Figure 4 indicate a Treatment x Time interaction, suggesting that the effects
of the training video might be significant. An analysis of variance reported in Table 9, examining the posttest differences between treatment group and the control group, indicate that the posttest differences between the groups were significant.

Table 9
Analysis of Variance of ACQ-M Posttest Scores by Treatment

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>1774.5</td>
<td>1</td>
<td>1774.5</td>
<td>7.80</td>
<td>.007</td>
</tr>
<tr>
<td>Within cell</td>
<td>17742.5</td>
<td>78</td>
<td>227.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the multivariate analysis of variance on the Treatment x Time interaction effects, reported in Table 5, yielded a significant interaction effect. Considering that the significant pretest differences between the treatment and control might confound the results with respect to the significant posttest differences, further examination of the multivariate findings for the effects of time, reported in Table 4, was warranted. The data presented in Table 4 show that the grand pretest mean for the groups was 58.8 and the grand posttest mean was 49.7; a total mean change score of 9.1. The multivariate analysis of variance test for the effects of time indicated that statistically significant pretest-posttest difference existed; therefore, Hypothesis 4 was supported, concluding that those who were exposed to the training video showed greater pretest-posttest differences than those who were not exposed to the video.

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Hypothesis 5

Hypothesis 5 predicted that trainees would express less confidence in the client's ability to maintain abstinence after viewing the counseling vignette for the second time (lower posttest ACQ-M scores). This hypothesis ignored the effects of the training tape. Instead, it predicted that the counselor trainees would become more sensitive to the presented relapse precipitants after viewing the counseling vignette for the second time, regardless of whether they were exposed to the training video.

While the results of the multivariate analysis of variance shown in Table 2 indicate that the effects of time were significant (Hotelling's $T^2_{8,69} = 8.80, p < .001$), the Treatment x Time interaction effects, plotted in Figure 3, suggest that these effects were due to exposure to the training video. Considering the significant Treatment x Time interaction shown in Table 5 and the absence of an Experience x Treatment x Time interaction, Hypothesis 5 was rejected and it was concluded that the pretest-posttest differences were due to exposure to the training video and not a result of repeated exposure to the counseling vignette.

Hypothesis 6

Hypothesis 6 predicted that inexperienced trainees would show similar ACQ-M ratings after being exposed to the training video as experienced counselors. The anticipated results are diagramed in Figure 2, indicating that initial differences would exist based upon
previous levels of experience and that those differences would diminish after the two groups were exposed to the training video.

The multivariate analysis of variance of the Experience x Treatment interaction, shown in Table 5, suggest that the effects of previous experience were consistent across both levels of the treatment conditions. Considering the absence of significant pretest differences due to previous experience, it was assumed that posttest differences would also be insignificant.

An analysis of variance test on the posttest differences between the experienced and inexperienced groups, shown in Table 8, indicate that the inexperienced group performed as well as the experienced group at posttest. Therefore, Hypothesis 6 was supported.

Post Hoc Analysis

In examining the results of this study, an additional question became of interest. How do the posttest scores of the inexperienced group that were exposed to the training video compare with the pretest scores of the experienced group? Based upon the hypothesis that the training video would increase the trainees' abilities to detect relapse precipitants, and considering that this hypothesis was supported, further analysis was warranted to compare these two groups.

The results of the study are compiled in Table 10. The experienced-treatment group's mean pretest score was 60.9, while the mean posttest score for the inexperienced-treatment group was 47.5. Also, lower ratings were obtained by the inexperienced group on each
<table>
<thead>
<tr>
<th>Scale</th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Experienced</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>50.7</td>
<td>36.7</td>
</tr>
<tr>
<td>Physical</td>
<td>82.7</td>
<td>56.7</td>
</tr>
<tr>
<td>Social</td>
<td>56.0</td>
<td>36.0</td>
</tr>
<tr>
<td>Social Tension</td>
<td>53.3</td>
<td>39.3</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>90.0</td>
<td>66.0</td>
</tr>
<tr>
<td>Positive Social</td>
<td>54.0</td>
<td>34.7</td>
</tr>
<tr>
<td>Temptation</td>
<td>62.0</td>
<td>45.3</td>
</tr>
<tr>
<td>Control</td>
<td>38.7</td>
<td>23.3</td>
</tr>
<tr>
<td>Total</td>
<td>60.9</td>
<td>42.3</td>
</tr>
<tr>
<td>Inexperienced</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>52.3</td>
<td>35.4</td>
</tr>
<tr>
<td>Physical</td>
<td>85.4</td>
<td>66.2</td>
</tr>
<tr>
<td>Social</td>
<td>58.1</td>
<td>42.3</td>
</tr>
<tr>
<td>Social Tension</td>
<td>60.8</td>
<td>46.5</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>89.2</td>
<td>72.3</td>
</tr>
<tr>
<td>Positive Social</td>
<td>57.7</td>
<td>38.5</td>
</tr>
<tr>
<td>Temptation</td>
<td>60.0</td>
<td>46.9</td>
</tr>
<tr>
<td>Control</td>
<td>47.7</td>
<td>32.3</td>
</tr>
<tr>
<td>Total</td>
<td>63.9</td>
<td>47.5</td>
</tr>
</tbody>
</table>
of the eight scales. A multivariate analysis of variance test was conducted to compare these two groups. The results reported in Table 11 show the univariate $F$ scores obtained for each scale and a Hotelling's $T$ for the entire instrument.

Based on the total mean ACQ-M scores, a significant Hotelling's $T$ ratio was obtained. Significant $F$ ratios were also obtained on six out of the eight ACQ-M scales. These data suggest that after viewing the training video, the inexperienced group were more sensitive to the cognitive-behavioral relapse precipitants than those in the experienced group at pretest.
Table 11
Multivariate and Univariate Analysis of Variance Summary Table
of Pretest-Experienced by Posttest-Inexperienced

<table>
<thead>
<tr>
<th>Scale</th>
<th>Experienced Pretest</th>
<th>Inexperienced Posttest</th>
<th>Difference</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>50.7</td>
<td>35.4</td>
<td>15.3</td>
<td>9.28*</td>
<td>.004</td>
</tr>
<tr>
<td>Physical</td>
<td>82.7</td>
<td>66.1</td>
<td>14.6</td>
<td>4.70*</td>
<td>.036</td>
</tr>
<tr>
<td>Social</td>
<td>56.0</td>
<td>42.3</td>
<td>13.7</td>
<td>5.79*</td>
<td>.021</td>
</tr>
<tr>
<td>Social Tension</td>
<td>53.3</td>
<td>46.5</td>
<td>6.8</td>
<td>1.69</td>
<td>.201</td>
</tr>
<tr>
<td>Positive Emotional</td>
<td>90.0</td>
<td>72.3</td>
<td>17.7</td>
<td>8.76*</td>
<td>.005</td>
</tr>
<tr>
<td>Positive Social</td>
<td>54.0</td>
<td>38.5</td>
<td>15.5</td>
<td>8.70*</td>
<td>.005</td>
</tr>
<tr>
<td>Temptation</td>
<td>62.0</td>
<td>46.9</td>
<td>15.1</td>
<td>7.03*</td>
<td>.012</td>
</tr>
<tr>
<td>Control</td>
<td>38.7</td>
<td>32.3</td>
<td>6.4</td>
<td>0.84</td>
<td>.365</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60.9</td>
<td>47.5</td>
<td>13.4</td>
<td>2.74**</td>
<td>.020</td>
</tr>
</tbody>
</table>

*p < .05. **Hotellings T p < .05.
CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

This chapter is divided into five sections. The first consists of a brief summary of the study. A summary of the relevant findings is presented in the second section. The third section contains a discussion of the relevant findings. The conclusions and implications drawn from the findings are discussed in the fourth section. Recommendations for future research in the area of training counselors to identify relapse precipitants are highlighted in the fifth section.

Summary of the Study

The purpose of this study was to examine the effects of training on counselors' abilities to detect relapse precipitants in a substance abuse client. A total of 80 premaster's counselor trainees were recruited from Western Michigan University's Department of Counselor Education and Counseling Psychology, Western Michigan University's Specialty Program for Alcohol and Drug Abuse, and the University of Northern Colorado's Psychology Department. Trainees were initially classified as to their level of previous substance abuse training and then were randomly assigned either to one of the
treatment groups, consisting of exposure to a training videotaped lecture prior to taking the posttest, or to one of the control groups, who were exposed to the training video after completing the posttest.

The treatment groups and the control groups watched a 10-minute videotaped counseling vignette and then completed the Alcohol Confidence Questionnaire-Modified (ACQ-M). After completing the pretest ACQ-M, the treatment groups were exposed to the videotaped training lecture, followed by another viewing of the counseling vignette. They then completed the posttest ACQ-M. The control groups followed the same schedule with one exception. They were exposed to the training video after, rather than before, taking the posttest. This allowed for the control group to gain the benefits of the training without influencing their posttest scores.

The data were analyzed using multivariate analysis of variance tests to control for experimentwise error and potential violations of assumptions regarding independence among the dependent variables. The variables examined were the effects of previous substance abuse training and the effects of the training videotape. Further analysis of variance tests were conducted on post hoc analyses, examining main effects on pretest scores and posttest scores according to the trainee's level of substance abuse experience.

**Summary of the Findings**

Six hypotheses were tested in this study. The first two involved the trainees' ACQ-M pretest based upon their previous level
of substance abuse experience. The following four hypotheses addressed the effects of the training videotape, thereby requiring analysis of the pretest-posttest differences. A final post-hoc analysis was conducted to compare the pretest scores of those with previous substance abuse experience with the posttest scores of the inexperienced trainees who were exposed to the training video.

**Hypothesis 1**

Hypothesis 1 predicted that trainees with previous substance abuse experience would initially express less confidence in the client's ability to remain abstinent. Analysis of the data did not support this hypothesis. Instead, the mean ACQ-M scores of both the experienced and the inexperienced groups were similar.

**Hypothesis 2**

Hypothesis 2 predicted that random assignment to either the treatment group or the control group would yield similar mean ACQ-M scores for both groups. Hypothesis 2 was rejected upon finding a statistically significant difference between the two groups. These differences, however, remained consistent across both levels of time (pretest to posttest), thereby rendering them as less confounding than if they had produced an interaction effect across time.

**Hypothesis 3**

Hypothesis 3 predicted that trainees without previous substance abuse experience would show greater benefit from the training
videotape than those with previous experience. Considering the absence of effects due to levels of experience at pretest, Hypothesis 3 was not supported. Trainees at both levels of experience benefited equally.

**Hypothesis 4**

Hypothesis 4 predicted that trainees who were exposed to the training videotape prior to the posttest (treatment group) would show greater pretest-posttest differences than those who were exposed to the video after posttesting (control group). The data supported Hypothesis 4, suggesting that the training video significantly impacted the trainees.

**Hypothesis 5**

Hypothesis 5 predicted that repeated exposure to the counseling vignette would sensitize trainees to relapse precipitants, thereby producing lower ACQ-M posttest scores. This hypothesis was not supported by the data, suggesting that pretest-posttest differences were due to the effects of the training videotape rather than repeated exposure to the counseling vignette.

**Hypothesis 6**

Hypothesis 6 predicted that the posttest scores of the inexperienced trainees would be similar to those of the experienced trainees. The data supported this hypothesis, in that the pretest-posttest similarities between these two groups were consistent over
time and, at posttest, no statistically significant difference existed.

Post Hoc Analysis

A post hoc analysis was conducted, examining the differences between posttest scores of the inexperienced trainees who were exposed to the training video and the pretest scores of the experienced group. It was hypothesized that after exposure to the training tape, the inexperienced group would perform as well on the ACQ-M as the experienced group prior to viewing the training video. The data not only supported this hypothesis, but unexpectedly showed that, after training, the inexperienced group actually performed better than the untrained experienced group.

Conclusions and Implications

Based upon the data obtained in this study, several of the findings warrant further discussion. The effects of previous substance abuse experience and the effects of the training videotape are addressed in this section.

Previous Substance Abuse Training

An initial assumption in this study was that trainees with previous substance abuse experience would be more sensitive to the presence of relapse precipitants than trainees without previous substance abuse experience. Hypothesis 1 tested this by comparing the pretest scores of both groups and found that although no
statistically significant initial difference existed, those in the experienced group tended to produce lower ACQ-M scores than the inexperienced trainees. One possible explanation for the similarities in scores might rest in the types of substance abuse experience claimed by the experienced group. The reader will recall that the criteria for inclusion in the experienced group was either having had at least 1 year of direct substance abuse experience or having had at least one graduate level substance abuse course. There are several potentially confounding factors which may have impacted the experienced group. One being that the length of time or the amount of coursework may not have been extensive enough to assume that trainees with this background would have been exposed to clients with relapse issues. It is also possible that trainees might have had only one substance abuse related course that did not deal with relapse related issues. In the absence of clinical experience, these trainees would likely appear similar to the inexperienced group.

Another possibility for the obtained similarities between the two groups might be in the training model used in the videotaped lecture. The training tape delivered general information regarding relapse precipitants primarily from the cognitive-behavioral and social learning models. It is quite possible that trainees with previous direct service contact with relapse issues might have had training from a more traditional substance abuse treatment model, for example, the Disease Concept/Twelve Step model. While the presented model offered little contradiction to the more traditional
model, some differences exist. One difference is in the cognitive-behavioral/social learning model's emphasis on prior coping experience in high-risk situations as a predictor of successful coping in present high-risk situations (Marlatt & Gordon, 1985). The Twelve Step model argues that certain high-risk situations be avoided completely. Another difference is in each model's focus on the Higher Power concept. The cognitive-behavioral places less emphasis on a belief in a Higher Power as a necessary component to recovery, while the Twelve-Step model is built around the principles of spirituality. The client portrayed in the counseling vignette mentioned a strong spiritual belief; and despite his presented maladaptive coping skills, his "spiritual component" may have affected the experienced group's overall confidence in the client's ability to remain abstinent.

A third consideration for the initial similarities between the two groups is in the instrument used to measure sensitivity to relapse precipitants. The ACQ-M coincides with the cognitive-behavioral relapse model and excludes many of the Twelve-Step principles. For example, the ACQ-M does not address the concepts of spirituality, attendance at Twelve-Step meetings, surrendering to one's addiction, or powerlessness--all of which are underpinnings of the Twelve-Step model. Considering that the client in the counseling vignette indicated a belief in a Higher Power and utilized Alcoholics Anonymous meetings as a mainstay of his recovery, experienced trainees may have been inclined to see these as highly predictive of abstinence regardless of his brief period of sobriety.
Despite the lack of statistically significant initial differences, the experienced group tended to rate the client more conservatively. They indicated somewhat less confidence in his ability to maintain abstinence, suggesting that previous experience might help counselors obtain a more realistic view of the propensity to relapse.

The effect of previous experience was also considered in the third hypothesis. Essentially, the experienced group was expected to benefit less from the training than the inexperienced group. Considering that the initial pretest scores between the two groups was similar, the absence of an Experience x Treatment x Time interaction effect suggested that both the experienced and inexperienced groups benefited from the treatment. It is likely that this finding relates directly to the previous discussion regarding possible factors influencing the absence of pretest differences. For example, if the experienced group had not been previously exposed to the model presented in the training tape, they may have been expected to show the same degree of confidence in the client's ability to remain abstinent as those in the inexperienced group. Given that the effects of the training videotape were significant, it would be expected that both groups would benefit.

The Effects of the Video Training Tape

The fourth and sixth hypotheses and the post hoc analysis dealt with the effects of the training videotape. The data suggested that the training video produced increased sensitivity to relapse.
precipitants. Those who were exposed to the training obtained lower ACQ-M scores, thereby demonstrating more increase in sensitivity to the presented relapse precipitants than the control group. These findings are consistent with previous studies conducted on the effects of videotaped training films (Golden, 1978; Juhnke, 1991/1992; Pohl et al., 1982).

Golden (1978) found that beginning medical students, after viewing a videotaped self-instructional training method, demonstrated an increase in knowledge related to suicide assessment. Pohl et al. (1982) found that trainees who received videotaped training related to mental status assessment performed better than those who received a live lecture. Juhnke (1991/1992) found similar results when comparing the effects of a videotaped lecture, live lecture, and a control condition related to suicide assessment using the SAD PERSONS scale. He maintained that counselor trainees demonstrated more accuracy in assessing a client's suicide potential after being exposed to the videotaped lecture and that both groups who participated in the brief training performed better than the control group.

The results from the post hoc analysis on the effects of training on the performance of the inexperienced group yielded suggested that the inexperienced group actually performed better than the untrained experienced group. This finding was expected, considering the similarities between the experienced and inexperienced groups at pretest.
Recommendations

Based upon the data obtained from this study, the following are suggestions for further research and application.

Research Recommendations

1. In an attempt to verify the results of the present study, it is recommended that a replication of the study be performed with a different sample of counselor trainees.

2. A longitudinal study should be conducted, measuring the effects of the training tape, or similar type of training experience, over an extended period of time. These effects might be measured using a second posttest over the course of a semester.

3. Additional information regarding the types of previous experience that trainees bring would be helpful in refining the criteria used to classify subjects based upon prior experience. For example, a future study could classify trainees into one of three groups: (1) no previous substance abuse experience, (2) previous substance abuse experience from the disease concept/Twelve-Step model, or (3) other previous substance abuse experience.

4. Additional information regarding trainees' responses on the individual ACQ-M scales might prove beneficial in pinpointing which relapse precipitants are most easily detectable.

Recommendations for Application

1. Based upon the significant findings in this study related to the effects of the training video, it might prove beneficial and
cost effective to implement its use in substance abuse courses.

2. Considering the reduced costs of producing video training tapes, coupled with the often difficult task of supplying experts in the various mental health topics, a series of training videos, dealing with a full array of contemporary concerns, could be incorporated into a special topics course.

3. Given the prevalence of substance abuse clients in the mental health population, training tapes that address specific dual diagnosis issues, such as depression, could be utilized in an in-service training format.

4. Substance abuse training videotapes might also be integrated into existing counseling psychology, counselor education, marriage and family, and social work training programs.
Appendix A

Approval Letter From Human Subjects Institutional Review Board, Western Michigan University
Date: August 13, 1991
To: Michael Sunich
From: Mary Anne Bunda, Chair
Re: HSIRB Project Number 91-06-17

This letter will serve as confirmation that your research protocol, "Relapse Precipitant Training: The Effects of Brief Training on Counselor's Abilities to Identify and Discriminate Between Relapse Risk Factors" has been approved after expedited review by a subcommittee of the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any change in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

cx: Joseph Morris, CECP

Approval Termination: August 13, 1992
Appendix B

Approval Letter From Human Subjects Institutional Review Board, University of Northern Colorado
Memorandum

TO: Michael Sunich  
Counseling Center  
Colorado State University  
Ft. Collins, CO 80523

FROM: William A. Barnard, Chair  
UNC Institutional Review Board

DATE: 11-5-91

RE: Research Proposal Titled: The Effects of Brief Training on Counselor Trainees' Abilities to Detect Relapse Precipitants in Substance Abuse Clients  
Submitted by: Michael Sunich

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is:

X exempt from further review.

approved as proposed.

IT IS THE ADVISOR'S RESPONSIBILITY TO NOTIFY THE STUDENT OF THIS STATUS.

[Signature]

Approval Signature
Research Consent Form

My name is Michael Sunich, a doctoral student at Western Michigan University and an intern at Colorado State University's Counseling Center. I am conducting a study assessing the effects of training methods on counselors' abilities to identify factors that affect alcohol abuse clients. The results of this study will aid in designing counselor training programs and in increasing the competency of counselors working in a variety of service delivery systems.

You will be part of a sample of at least 80 graduate level counselor trainees. Your participation in this study is voluntary. Electing not to participate will have no repercussions with respect to grades or current status in your training program.

Your total involvement in this study will be approximately 60 minutes. You will be randomly assigned to either a treatment group or a control group. You will be watching videotapes of lectures and counseling sessions and completing two brief evaluations. Regardless of which group you are in, you will receive the benefit of the training video.

To protect your confidentiality, you will be assigned a research number. This number will be used on all of the forms. At no time will you be identified by name. All consent forms will be kept in a locked file.

This study involves little risk to its participants; however, as a measure to insure closure, a 20 minute debriefing period is included at the end of the 90 minute session. Should you have any further concerns regarding this study, I can be reached at Colorado State University's Counseling Center. (303/491-6053)

I, ______________________________, have read the above statement. I have had all of my questions answered and I agree to participate in this study.

Signature __________________________ Date________

Witness ______________________________ Date________
Appendix D

Examples From the Alcohol Confidence Questionnaire-Modified
Alcohol Confidence Questionnaire-Modified

Based on the counseling vignette that you have just seen, please indicate how certain you are that the client will be able to successfully cope without drinking in the following situations.

1. If the client felt confident and relaxed: 0 20 40 60 80 100

5. If the client had problems with people at work: 0 20 40 60 80 100

9. If the client felt satisfied with something he/she had done: 0 20 40 60 80 100

16. If the client met a friend that suggested that he/she have a drink together: 0 20 40 60 80 100
Appendix E

Permission to Modify Alcohol Confidence Questionnaire
July 25, 1991

Mr. Michael F. Sunich
CECP/Sangren Hall
Western Michigan University
Kalamazoo, MI 49008

Dear Mr. Sunich:

Thank you for informing me of the changes you propose in the ACQ for your dissertation research. Please feel free to use your modified form.

Best wishes in your dissertation work. I would appreciate if you would inform me of your results.

Sincerely,

Helen M. Annis, Ph.D.
Head of Psychology


consequences, and interventions (pp. 144-167). St. Louis, MO: C. V. Mosby.


