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A COMPARISON OF TWO HYPNOTIC METHODS
FOR ACHIEVING AND MAINTAINING
ABSTINENCE FROM SMOKING

BY

RONALD LEE LUTZ

B.A., California State University, 1976
M.A., California State University, 1982

A Dissertation
Submitted to the Faculty of
the University of Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy
in the School of Education

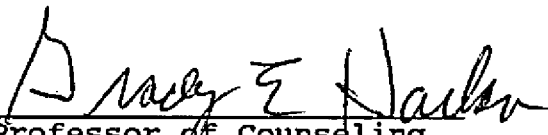
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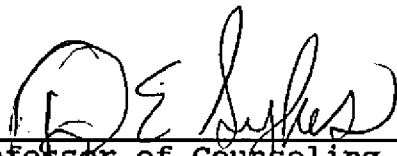
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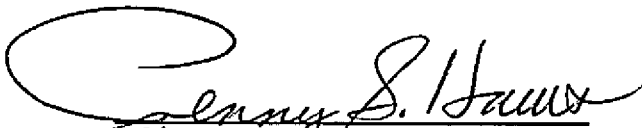
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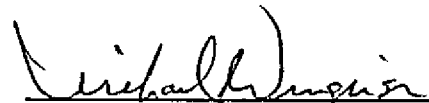
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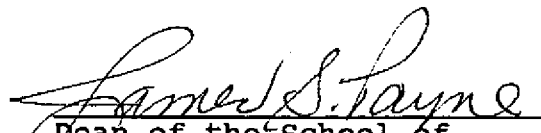

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ABSTRACT

A COMPARISON OF TWO METHODS FOR ACHIEVING AND MAINTAINING ABSTINENCE FROM SMOKING

LUTZ, RONALD LEE. B.A., California State University, Sacramento, 1976. M.A., California State University, Sacramento, 1982. Ph.D., University of Mississippi, 1989. Dissertation directed by Dr. Dudley E. Sykes.

Although many different approaches, including hypnosis, are used to help cigarette smokers quit, a review of the literature indicates that no one treatment outperforms any other in preventing relapse and promoting long-term abstinence.

One technique which has been used in a limited way to prevent relapse is the programmed relapse episode. Some research suggests that the use of a programmed relapse with cigarette smokers trying to quit may actually increase the likelihood of relapse. This study hypothesized that one way to obtain the possible instructional benefits of a programmed relapse without precipitating actual relapse may be to employ a hypnotically enhanced, imaginary lapse rehearsal focus.

A hypnotic smoking cessation treatment which incorporating lapse rehearsal suggestions and imagery was compared with a second treatment incorporating continued

abstinence suggestions and imagery. A no treatment control condition was also included. Subjects were randomly assigned to one of the three conditions. The final sample included 15 subjects in the lapse rehearsal condition, 13 subjects in the continued abstinence condition, and 10 subjects who served as controls.

A treatment by periods repeated measures design was employed. Treatment data were collected at five periods from baseline to three months follow-up. Variables included smoking status, smoking rate, abstinence self-efficacy, and Myers-Briggs Personality Type. The data were analyzed using a 2 x 2 chi square, 2 x 3 chi square, treatments by periods analysis of variance, Pearson correlation coefficients, and a multiple regression analysis.

No significant differences in abstinence or abstinence self-efficacy were found between lapse rehearsal and continued abstinence conditions at any point following treatment. No significant differences in abstinence or abstinence self-efficacy between either treatment or control conditions were found at three months follow-up. Among non-abstainers in both treatment conditions, the number of cigarettes smoked per day decreased significantly between the end of treatment and one month follow-up, but increased at two and three month follow ups. No significant

differences between groups were found at any point in the study.

One positive correlation was found between the Thinking dimension of the MBTI and abstinence. Recommendations for further research are discussed.

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There are several people who have, each in their unique way, influenced my thinking and contributed greatly to my education, both in and out of the classroom. I would like to acknowledge and thank Dr. Dudley Sykes and Dr. Grady Harlan for their continued support and encouragement during my time at The University of Mississippi, and for the advise they offered me which improved this finished project. I wish to extend a special thank you to Dr. Penny Haws who, despite her own professional commitments, took the time to read and edit my writing with acuity and sensitivity. I would like to express my heartfelt gratitude to Dr. Michael Dingerson, whose generosity, expertise, and optimism as reader and committee member never waned.

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Wade Birch supported my efforts and made my life much easier by making the resources and facilities of the Student Counseling Service available to me during the year that I worked on this dissertation.

I wish to thank the members of my family who encouraged me to believe in myself and to pursue my goals. I especially wish to acknowledge my mother, whose love over the years nurtured me and taught me that all things are possible.

Finally, I welcome the chance to make known the multiple contributions made by my wife, Renate. In addition to tirelessly typing and editing numerous drafts of this work, Renate's understanding, support, and patience during the years needed to complete my education were always my source of comfort and strength.

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CHAPTER 1
INTRODUCTION

Ever since the U.S. Surgeon General issued his first report on the health hazards of cigarette smoking over 20 years ago (US PHS 1964), mounting evidence has continued to indicate that people who smoke suffer more illness, hospitalization, and work disability than nonsmokers (Russell, 1980). From 1964 through 1979, each Surgeon General's report addressed the major health effects of smoking, including an increased risk of lung cancer, cardiovascular disease, emphysema and bronchitis (US DHEW, 1971, 1972, 1975, 1977, and 1979). The 1979 report provided the most comprehensive review of the health consequences of smoking and concluded that "it is no exaggeration to say that smoking is the prototypical substance-abuse dependency and that improved knowledge of this process holds great promise for prevention of risk" (US DHEW 1979). More encouraging is evidence which suggests that quitting smoking reverses the health complications of smoking and reduces the risk of death by heart disease (Bonekat et al, 1987; Gordon, Kannel, McGee, 1974). It has been reported that the longer an ex-smoker is abstinent, the closer their health will approach that of a nonsmoker (US DHEW 1979).

Although many individuals stop smoking without outside interventions or support, others find it very difficult to quit smoking and seek help. Persons wanting to stop smoking may look to self-help groups, smoking cessation clinics, or a variety of professionals for assistance. Many different approaches have been employed to help smokers quit including aversive conditioning, counseling, meditation, group discussions and support, and hypnosis (Vogt, 1982). Of the many approaches used to aid smoking cessation, one of the more controversial methods involves the use of hypnosis. Although hypnosis has been used in treating smoking behavior for more than 30 years (Johnson and Donoghue, 1971), the effectiveness of hypnosis as a method of treatment for smokers has received mixed reviews. Several studies have reported long-term abstinence rates well above the average of other approaches (Von Denroth, 1968; Kline, 1970; Miller, 1976). Some studies have reported success rates which equal but don't exceed other approaches (Barkley, et al., 1977; Straatmeyer, 1984). Still other studies have reported that hypnotic treatment does not increase long-term abstinence beyond that obtained with no treatment control groups (Cohen, 1969; Spiegel and Spiegel, 1978; Berkowitz, et al., 1979).

There are several possible reasons for these inconsistent success rates. One reason for the reported

differences in success rates among studies may be the wide range of techniques used. As Katz (1980) notes, to report that one was treated with "hypnosis" is equivalent to saying that one was treated with "psychotherapy." Hypnosis might have been used in at least one of twenty ways, including techniques as diverse as direct suggestions, age regression, future progressions, visual imagery, aversive conditioning, ego-strengthening, or any number of post-hypnotic suggestions (Katz, 1980).

Another factor which may account for the reported differences in treatment effectiveness among studies concerns the different methodologies used. Among the more significant methodological differences reported in the literature are: one session vs. multiple session treatments; group vs. individual treatment formats; and individually tailored vs. standardized instructions and suggestions. Although each change in procedural methodology is typically implemented with some theoretical justification, the desired improvement in long-term abstinence has typically not been realized. In an evaluative review of the hypnotic smoking cessation literature reported between 1970 and 1979, Holroyd (1980) delineated common treatment variables which apparently influenced abstinence rates and those which seemed to be of little importance. Following her analyses of 17 studies, Holroyd concluded that the following

variables had relatively little influence on abstinence rates: client vs. solicited volunteers; groups vs. individual therapy; and training in self-hypnosis vs. no training.

The number of sessions that subjects' receive does seem to have an effect on abstinence rates (Holroyd, 1980). In a review of sixteen hypnotic smoking cessation studies, Agee (1983) reported abstinence rates for treatments involving more than one session ranged from 25% - 68% (\bar{M} = 53%) as opposed to a range of 4% - 88% (\bar{M} = 32%) for single session approaches. Of the nine abstinence rates of 50% or above, six (67%) involved more than one session. Of the ten abstinence rates below 50%, eight (80%) involved a single session (Agee, 1983).

Individual vs. standardized suggestion has also been considered to be a major differentiating variable in determining success with hypnosis and smoking (Nuland and Field, 1970; Critenbaum et al., 1985). In the review by Agee (1983), the range in abstinence rates for those approaches using individualized suggestions was 45% -88% (\bar{M} = 63%) as opposed to 4% - 64% (\bar{M} = 30%) for those using standardized suggestions. Of the nine abstinence rates of 50% or above, five (56%) used individualized suggestions, and of the five most successful outcomes, four (80%) used individualized suggestions. Of even greater interest, only

one (1%) of those studies reporting abstinence rates of less than 50% used individualized suggestions (Agee, 1983).

A third reason for the varying rates of success reported for hypnotic treatment of smoking may be the inconsistent and often inadequate evaluation and follow-up procedures used. The early reports of successful treatment for smoking using hypnosis were often based on limited case studies which typically did not include adequate follow-up after treatment (eg. LeCron, 1964). Although such case studies helped to popularize hypnosis as a method of treatment for smoking, they did little to demonstrate the effectiveness of hypnosis in promoting long-term abstinence.

Such inadequate follow-up was not limited to treatments using hypnotic methods, but were common to many earlier smoking cessation studies. An evaluation done by Schwartz (1969) found that those cessation programs which claimed high success rates generally had very poor follow-up and inadequate documentation. Bernstein (1970) reported that few conclusions can be drawn regarding the modification of smoking behavior because design methodology used in most studies was so poor. Errors included failure to use control groups, simultaneous manipulation of more than one independent variable in the same condition, and failure to equate groups on variables such as duration of treatment frequency.

More recent studies using better controlled research methods have shown mixed results. Lambe, Osier, and Frank (1986) used large samples and well controlled procedures to show that hypnosis is of little value in smoking cessation. Another controlled study in which health education, behavior modification, and hypnosis were compared as treatments for smoking found no significant difference between treatment methods (Rabkin, Boyko, Shane and Kaufert, 1984). At the same time, some studies have reported hypnotic treatment to be superior to other methods including systematic relaxation (Schubert, 1983). Thus, despite the high rates of success initially reported in case studies of hypnotic treatment for smoking, more well controlled research has failed to confirm such high rates of success.

Though hypnosis has a long history in the treatment of smoking, reviews of the literature suggest that hypnotic treatment may be no more effective at promoting long-term abstinence than other available methods.

A review of the literature on other, non hypnotic, approaches to smoking cessation reveals reported success rates which equal or better the average for hypnotic approaches. Russell et al. (1980) has reported one year abstinence rates of 38% using nicotine chewing gum. At least two studies have reported abstinence rates above 50% using multicomponent psychological interventions which

combine aversive smoking and behavioral skill training (Delahunt and Curran, 1976; Lando, 1977). Finally, Fagerstrom (1982) has reported 6-month abstinence rates of 63% for nicotine gum and psychological therapy combined. All of the above approaches equal or better the results reported in most studies of hypnosis.

Following is a brief review of some of the more important hypnotic-smoking cessation studies which have been done. For clarity these will be divided into one-session approaches, multiple session approaches, and group approaches.

One-Session Approaches

Spiegel's (1970) one-session approach is the most well known of the brief methods. He began with a brief clinical and smoking history. Clients were tested for hypnotizability and learned self-hypnosis. While in the hypnotic state, the client was told: "For my body, smoking is a poison"; "I need my body to live"; and "I owe my body this protection." These suggestions were repeated in the waking state and again when hypnosis was self-induced. The client was instructed to self-induce the hypnotic state and repeat the above suggestions as often as ten times per day.

Spiegel (1970) conducted a six-month follow-up of 615 clients treated with this approach in one 45-minute session.

Obtained results indicated that of these clients, 20% had stopped smoking and 56% had not responded by the cut-off date and were assumed to still be smoking. Nuland (1970) was critical of the fact that Spiegel received follow-up data from only 44% of his total clients.

Several other studies have also been reported which used the Spiegel one-session approach. Shewchuk et al. (1977) treated 44 clients following Spiegel's methods and obtained a 17% abstinence rate at the end of one year. Perry and Mullen (1975) treated 38 volunteers using Spiegels' method, and at the three month follow-up, 13% were reported abstinent.

Berkowitz et al. (1979) followed the Spiegel's procedure when treating 40 clients. One difference in this study was that clients who had difficulty were encouraged to return for additional visits. Several did return, but had not succeeded in quitting smoking by the end of the study. The success rate of the Berkowitz study at six month follow-up was not significantly different from that of Spiegel (25% vs. 20%, respectively).

Stanton (1978) has reported using a different one session approach. Prior to induction, Stanton stressed his expectations for success and did a brief demonstration exercise to demonstrate the power of the mind over the body. The purpose of this was to enhance the expectations for

success. Following induction, Stanton used ego-enhancing suggestions, along with anti-smoking suggestions. Standardized visual imagery was used along with the clients own reasons for wanting to quit.

Of 75 clients treated, 60% were successful after the first session. At six-month follow-up, 45% of the total group were abstinent. Although the brevity of one-session methods make them clinically attractive, the value of one-session approaches in promoting long-term abstinence can be questioned, as the studies above indicate.

Multiple-Session Approaches

One approach frequently taken to increase the effectiveness of hypnotic methods has been to increase the number of sessions. Nuland and Field (1970) report on their use of an approach with no set number of sessions. However, the majority of clients did not require more than four weekly sessions. The first session began with a discussion of the ways in which the benefits of smoking (eg. relaxation) could be substituted for by the use of self-hypnosis. During a light hypnotic state, visual imagery was used to heighten the clients' reasons for wanting to stop smoking. The client was instructed to telephone the therapist the next day, and daily contact was maintained during the next week. During the second session,

the client was taught self-hypnosis and the use of visual imagery. Third and fourth sessions were required even if the client had stopped smoking.

Nuland and Field treated 84 clients with this method in his private practice. Approximately 60% of the clients quit smoking for a maximum of six months. They reported that the majority of clients who quit smoking for six months rarely resumed smoking (Nuland and Field, 1970).

Hall and Crasilneck (1970) used a five session approach, where hypnosis was employed during four or five sessions. Subjects were obtained primarily through medical referral. Initially, clients were given a psychiatric evaluation that assessed emotional stability as well as smoking habits. Three consecutive sessions were then conducted followed by a fourth session one month later. During all four sessions, the hypnotic state was induced and suggestions were repeated. Suggestions were related to: the minds' control over the body; harmful effects of smoking; diminished craving for cigarettes; lack of excessive hunger; reduced physiological and psychological withdrawal discomfort; and reduced nervousness. Substituting other forms of oral gratification, such as drinking water or chewing gum, and increased walking were also advised. Seventy-five subjects were treated using this technique, all of whom were followed with mailed questionnaires. Responses

were obtained from 67 of the treated subjects. Sixty-four percent were completely abstinent and had not substituted any other habit for a period ranging from one to four years. Of those who resumed smoking all reported doing so following some emotional stress (Hall and Crasilneck, 1970).

In another study, Watkins (1976) used a five session approach specifically designed for college students. Watkins eliminated the word "hypnosis" from her technique and referred to it as the "concentration - relaxation technique." Clients were volunteers selected on the basis of having previously made unsuccessful attempts to stop smoking. Five sessions were conducted at weekly intervals. In the first session, a smoking history and any relevant medical history was obtained. Watkins used information from the history to choose three suggestions and two visual imageries to be used in the remaining session. Relaxation suggestions were used as a substitute for the relaxation one is assumed to obtain from smoking. Aversion was used in some of the visual images.

In session two, the individualized suggestions and visual images were used. A meditation followed for one minute in which the client focused on internal strength and ways in which he or she could stop smoking. Following this session, clients maintained daily contact with the therapist. Session three was a repeat of the previous

session. In session four, self-induction, suggestions, and visual imageries were taught to the client. Clients were instructed to practice these techniques daily. In the final session, clients were asked to self-induce the relaxed state, employ the suggestions and visual imageries; meditate; and then return to an alert state. At the end of this session, clients were informed of the necessity of maintaining contact to determine smoking status.

By the end of five sessions 58% of the total clients treated were abstinent. At a six-month follow-up, 50% were still abstinent (Watkins, 1976).

The rates of abstinence obtained in the above studies are representative of other studies which have employed multiple sessions. In view of the fact that the success rates for multiple session techniques are generally better than those obtained with a single-session approach, Holroyd's (1980) contention that more successful outcomes are correlated with at least several hours of treatment appears supported. Because it is frequently not cost/time effective to treat individual clients over extended sessions, group hypnotic treatments for smoking are common.

Group Approaches

One of the most successful smoking cessation studies reported in the literature is a 12-hour group approach

developed by Kline (1970). Kline used hypnotherapy with groups of ten individuals who had previously been unsuccessful in quitting through the use of other methods. Each client was seen in an initial thirty-minute interview to assess motivation; obtain a polygraph recording of respiration and GSR patterns; and induce hypnosis. Clients were instructed to abstain from cigarettes for 24 hours prior to the 12 hour group session and to bring their favorite brand of cigarettes. At the group session, each client was hypnotized individually for 15 minutes each. The suggestion was given that increased relaxation would be available when needed. Kline considered deprivation to be the most important consideration in the treatment of smoking and measures were taken to intensify smoking deprivation. Information regarding the contexts in which smoking was most pleasurable and individual sensory experiences derived from smoking were obtained for each client. Hypnosis was then individually induced. Those qualities described as most stimulating and satisfying were intensified through suggestions and visual imagery. Hypnotic relaxation procedures immediately followed each intensification, followed by visual imagery of engaging in some type of physical activity. Periodic measures of respiration, GSR, blood pressure, and pulse rates were obtained to assess tension and the effectiveness of hypnosis in establishing

relaxation. At the end of a one-year follow-up, 88% of the 60 clients treated by the above method were completely abstinent (Kline, 1970).

In another group study done by Pederson, Scrimgeour, and Lefcoe (1975) clients were randomly assigned to one of three groups; hypnosis plus counseling; counseling alone; and a waiting list control. The hypnosis plus counseling group received a single 1 1/2 hour session of group hypnosis consisting of a description of the benefits of not smoking along with relaxation instructions. Both treatment groups met in six weekly group discussions concerning smoking and quitting. These groups also met for six monthly sessions following treatment. At a ten-month follow-up, 50% of the 16 subjects in the hypnosis plus counseling group were completely abstinent. This is reported to be significantly better than the results for the counseling alone group, although no figure for this latter group is given. In order to compare group hypnosis with multiple sessions and group hypnosis with a single session, the author recontacted 50 clients who had previously received the latter treatment. At 8-12 months following the session, only 8% of the single session clients were abstinent.

In a later study, Pederson, Scrimgeour, and Lefcoe (1979) randomly assigned 65 volunteers to one of four groups: live hypnosis plus counseling; videotape hypnosis

plus counseling; relaxation plus counseling; and counseling alone. The live hypnosis plus counseling and counseling alone groups received the same treatment as in the author's previous study (Pederson, et al. 1975). The videotape-hypnosis group received a videotaped presentation of the live hypnosis session. The relaxation-hypnosis group received instructions in relaxation techniques for coping with withdrawal symptoms. The abstinence rate at six months following treatment for 17 subjects in the live-hypnosis plus counseling group was 53%. For 16 subjects receiving counseling alone, the abstinence rate was 18%. Videotaped-hypnosis plus counseling and relaxation-hypnosis plus counseling were found to be ineffective (percentages not reported).

Although many different methods of hypnotic smoking cessation have been tried, reviews of the literature (Holroyd, 1980; Agee, 1983) consistently indicate that independent of other considerations a successful smoking cessation program should include: several hours of treatment; support from the therapist; individualized suggestions; and a client who is motivated to stop smoking.

Relapse

Although many different approaches, including hypnosis, are used to help smokers quit (Vogt, 1982), a review of the

literature shows that no one treatment approach outperforms any other in preventing relapse and promoting long-term abstinence (Lando and McGovern, 1982; Lichtenstein, 1982; Ockene et al. 1982; Shiffman, 1982). Many cessation programs are quite effective in helping people stop smoking; initial cessation rates of 70% are typical and 100% "quit" rates are not uncommon (Shiffman et al. 1985). However, initial abstinence is frequently lost within the first month, and within 6 months 75% - 88% of these "successful" clients are smoking again (Hunt and Matarazzo, 1973). High rates of relapse are common in the literature on smoking cessation, including treatments where hypnosis has been used. Several authors have noted that relapse rates for smoking are similar to rates for other addictions including alcohol, heroin, and obesity and are assumed to be in the range of 50% to 90% (Hunt et al. 1971; Hunt and Matarazzo, 1973; Marlatt and Gordon, 1980, 1985).

Given the high rate of relapse common to smoking cessation programs, including hypnosis, it is surprising that most treatment approaches do not address lapse rehearsal directly. Instead, most treatment strategies overemphasize initial cessation in the hope that cessation will generalize to long-term abstinence. A more realistic approach to promote long-term abstinence may involve focusing directly on the skills needed to prevent relapse.

As Shiffman et al., (1985) notes, "better" smoking cessation methods are not likely to produce substantial improvements in maintenance. What is needed are clinical methods that address the cause of the problem-Relapse.

Relapse Prevention

A central theme in the work on relapse prevention is client self-control over and self-management of the relapse process. The goal of relapse prevention is to teach individuals who are in the process of changing their behavior how to anticipate and cope with a temporary slip or backslide which may occur rather than avoiding or denying the issue of relapse. Marlatt and Gordon (1980) have advanced a theory of the relapse process based on social learning theory by postulating a mechanism that they call the Abstinence Violation Effect (AVE). Analysis by Marlatt (1978), revealed two primary components which make-up the AVE.

First, there is a cognitive dissonance component, in which the behavioral act associated with the initial use of a substance (alcohol, tobacco, etc.) is in conflict with the individuals self-image as an abstainer. Second, a personal attribution effect occurs in which the user attributes the "cause" of the slip to internal weakness or personal failure. Rather than attributing the first "slip" to a lack

of preparation or coping ability, the individual may assume that the behavior is due to personal short-comings, including a lack of willpower or an inability to handle troublesome urges. The single greatest cause of relapse is a failure to cope with a lapse crisis. A lapse crisis is most likely to occur when situational cravings and physical cravings for tobacco interact to overwhelm the ex-smokers capacity to cope or resist. A lapse in abstinence occurs at the intersection of a triggering situation and a deficient coping response (Shiffman et al. 1985).

According to Marlatt and Gordon (1980 and 1985) in order to manage a lapse successfully and regain abstinence, one must be able to recognize and cope with both situational and cognitive determinants which could lead from lapse to relapse. From a situational perspective, it is important for the individual to be able to identify "high risk" situations where a significant potential for a lapse exists. A high risk situation is defined as any situation that poses a threat to one's sense of self-control and increases the chance of potential relapse. Self control refers to an individuals ability to "make it through" and cope effectively with the situation without giving in to the temptation of the old addictive behavior.

Social Learning Theory (Bandura, 1977), as applied to relapse prevention, predicts that successful coping with

high risk situations will increase one's sense of self-efficacy and decrease the probability of relapse, whereas failure experiences will have the opposite effect. To cope successfully with a lapse and arrest relapse, one must be taught to recognize high-risk situations and quickly respond with the correct self-management strategy. Because the underlying sequence of events that can lead to a lapse are complex, successful coping is often difficult to do. In a study by Shiffman (1982), nearly one-third of the ex-smokers studied who attempted coping, nevertheless, smoked. However, in the same study it was reported that ex-smokers who did not cope with high-risk situations had a relapse rate two and one half times greater than those who did attempt coping (Shiffman, 1982). If Marlatt and Gordon's (1985) explanation of the relapse process is correct, one way to enhance long-term abstinence would be to refine the methods used to teach ex-smokers to cope. Social Learning Theory (Bandura, 1977) would suggest that the best method for teaching ex-smokers to cope would be one that promotes awareness of and control over situational and cognitive factors simultaneously.

Programmed Relapse

One technique which has been used in a limited way to promote coping is the programmed relapse (Marlatt and

Gordon, 1980 & 1985). The programmed relapse is a paradoxical intervention technique, similar to methods discussed by Haley (1977) and other strategic therapists who frequently prescribe relapses to clients in order to emphasize their sense of personal choice and control over the behavior in question.

Typically, the use of programmed relapse involves having the client engage in the undesired behavior under controlled circumstances (e.g. the therapists office, etc.). Because the relapse is planned and controlled, a potentially powerful learning situation is created wherein the client can become aware of the cognitive dialogue associated with smoking, and at the same time practice taking the necessary steps to stop smoking and restore abstinence. According to Marlatt and Gordon (1985), the use of a programmed relapse is designed to heighten the individual's sense of personal responsibility and choice in the self-management of an addictive habit.

A review of the literature shows that the use of programmed relapses have most often been limited to situations where an unplanned relapse was judged to be very probable. Used in this way, the programmed relapse technique is viewed as a "last ditch" effort to salvage abstinence and prevent a full relapse. No published studies were found in which programmed relapse has been used

routinely as part of a smoking cessation maintenance program.

One practical problem with the use of this technique is that instead of countering cognitive patterns which may lead to smoking, controlled smoking may actually promote uncontrolled relapse. Once subjects have obtained abstinence, they may regard any smoking, even under controlled circumstances, as a step backward. In their discussion of the programmed relapse technique, Marlatt and Gordon (1985) state that the use of this method has the greatest application for addictive behaviors that do not require total abstinence as a treatment goal. Overeating appears especially well suited for this approach, since treatment involves a reduction in consumption rather than abstention.

Although the use of programmed relapses may be viable, in maintaining abstinence from smoking, several problems have been reported in two studies where it has been tried. In two unpublished studies done by Cooney and Kopel, and reported in Brownell et al. (1986), programmed relapse was used on smokers after five weeks of cessation. Subjects smoked one cigarette during a controlled session and were said to be surprised by how unpleasant the experience was. Subjects undergoing the programmed condition reported greater self-efficacy ratings than subjects receiving only

the cessation program. However, at 6 month follow-ups there were no differences in abstinence rates, and there was a trend for subjects in the programmed relapse condition to relapse earlier.

There are two possible explanations for the disappointing results obtained by Cooney and Kopel. First, clients who have successfully abstained for a period of time are likely to make some positive self-attributions to explain their abstinence. Once clients are asked to smoke a cigarette, even under controlled circumstances, some of the positive attributes associated with having gone for a period of time without smoking may be weakened or lost. Second, cigarettes are an effective means for delivering nicotine to the brain. Only seven seconds after taking a puff on a cigarette the nicotine receptors in the brain will have been effected by the nicotine in the cigarette. A one pack-a-day smoker will repeat this process more than 70,000 times in a one year period. As Pomerleau (1981) has noted, this is a dosage frequency unmatched by any other form of drug taking. As a result of such frequent dosing with nicotine, clients are likely to develop increased sensitivity to the physiological effects of smoking.

Once a client has been abstinent as part of treatment, physiological changes begin to occur in response to nicotine withdrawal. When a subject smokes soon after obtaining

abstinence, the nicotine received during a controlled smoking trial may be sufficient to increase dependency and actually trigger a loss of control over smoking.

Hypnosis and Imagination

One method which might be employed to obtain the instructional benefits of a programmed relapse without the problems encountered by Cooney and Kopel (Brownell, et al., 1986), is to use a hypnotically enhanced, imaginary relapse.

Singer and McCraven (1961) reported that 96 percent of people use mental images, imagination, or fantasy regularly. Later research by Singer (1975, 1979) found that the exception is not to imagine, and that what we call thinking is actually a mental reproduction of external reality by the use of our internal senses, which serve to mirror the basic five receptive systems by which we interact with the external world. Shorr (1974, 1977), among others, has developed techniques to use mental images for therapeutic purposes.

Although enhancement and manipulation of mental imagery can be implemented in many different ways, many who work with hypnosis have reported a high correlation between hypnosis and the positive use of imagination (Hilgard, 1970). Wilson and Barber (1983) have demonstrated that so-called excellent hypnotic subjects often possess a profound

fantasy life. Wilson and Barber referred to these subjects as having a fantasy-prone personality and note that their involvement in fantasy plays an important role in producing their superb hypnotic performance. Among therapists who use hypnosis, the technique is frequently employed to intensify and enhance the stimuli and responses presented in imagination via instructions (Kroger and Fezler, 1976; Bowers, 1978; Erickson and Rossi, 1979). Hypnotically enhanced imagery has often been used in treatment situations where it may be impractical, unethical, or harmful to employ actual behavioral practice. One area where imagined practice has frequently been substituted for actual behavior rehearsal is in the practice of sex therapy (Masters and Johnson, 1970; Kaplan, 1979). More recently, Araoz (1982) has described the successful use of hypnotically enhanced imagery in the treatment of numerous forms of sexual dysfunction.

Based on the literature, it is reasoned that exposing clients to a hypnotically enhanced, imaginary relapse may be an effective method for teaching clients to anticipate and prevent an actual smoking relapse. Although previous use of programmed relapses for this purpose have been unsuccessful, the problems associated with this technique appear to result from the lack of control available during actual smoking. Use of covert imagery techniques would offer greater control

and may render the programmed relapse technique clinically useful. The dissociation made possible by the use of hypnosis should serve to enhance the client's experience during the imaginary relapse. Because clients undergoing hypnotic treatment for smoking cessation will already be familiar with the use of hypnotic relaxation, incorporation of the imagined relapse into a brief hypnotic smoking cessation treatment could be one way to significantly enhance the long-term maintenance of abstinence initially obtained with such approaches.

While hypnosis has been used in many different ways to aid smoking cessation, there are no studies in which hypnosis and an imagined relapse have been combined to improve abstinence maintenance. Incorporating an imaginary lapse scenario along with structured hypnotic smoking cessation procedures could have two benefits: First, adding the imaginary lapse to hypnotic treatment for smoking would extend treatment by teaching clients how to self-manage any temporary lapse that may occur in the early stages of abstinence, and as a result improve long-term abstinence beyond that obtained with hypnotic cessation procedures only.

Second, the use of hypnotic-relaxation should allow the imagined lapse to be intensively experienced without the possible risk associated with actual smoking. Thus, the use

of a hypnotically enhanced, imaginary lapse may provide a clinically useful, controlled mechanism for obtaining the advantages of a programmed relapse while avoiding many of the risks associated with actual controlled smoking. Inclusion of imagined lapse suggestions into a hypnotic smoking cessation program may increase the number of subjects who achieve and maintain abstinence over that obtained using the same program with continued abstinence suggestions.

Personality Type

The influence of innate, relatively stable personality traits on behavior has been the subject of interest and study (Jung, 1923; Eysenck, and Rachman, 1965; Keirsey and Bates, 1984). Recently, Myers and McCaully (1986) have shown how personality types can be assessed and classified using the Myers-Briggs Type Indicator.

One factor missing from the literature on hypnotic methods of smoking cessation is an examination of the influence of personality structures or type on treatment outcome. The literature on hypnotic methods of smoking cessation has primarily focused on differences in methods of treatment, while paying little attention to the possible correlation between personality type and abstinence. A review of recent literature found no studies where the

correlation between personality type and abstinence was examined in the context of a smoking cessation program.

Although differences in methods of treatment may be the primary influences of treatment outcome, the possibility that any observed changes in outcome may be linked with basic differences in personality type should not be overlooked.

Statement of the Problem

In view of the current literature, it is clear that any successful smoking cessation program must address lapse rehearsal as well as initial cessation. Having clients experience and recover from a controlled relapse has been suggested as one way to teach the skills associated with the maintenance of long-term abstinence. Although hypnotically enhanced suggestions and images have been employed in many different combinations in various smoking cessation packages, hypnosis has not been used to enhance and intensify the imaginary experience of recovering from lapse or to teach the skills associated with recovery. In addition, studies on the treatment of smoking have focused on differences in treatment technique, but have failed to consider how subjects' personality type may influence outcome. Given these facts, there are five primary questions to be answered by this study:

1. Within the context of a group hypnotic smoking cessation program, does the use of treatment suggestions and imagery which detail a lapse from abstinence, and recovery from that lapse, significantly increase the number of subjects who achieve initial abstinence following treatment when compared with the same treatment in which suggestions and imagery detailing continued abstinence have been substituted?
2. Within the context of a group hypnotic smoking cessation program, do subjects exposed to suggestions and imagery detailing a lapse from abstinence and a recovery from that lapse, subjects exposed to suggestions and imagery detailing continued abstinence, and subjects placed on a waiting-list who receive no treatment differ significantly in the number of subjects who will report abstinence 3 months after treatment?
3. Among subjects who are not abstinent following treatment, will subjects exposed to suggestions and imagery detailing a lapse from abstinence and a recovery from that lapse, and subjects exposed to suggestions and imagery which detail continued abstinence, differ significantly in the daily number of cigarettes smoked when assessed before

treatment, 1 month after treatment, 2 months after treatment, and 3 months after the completion of treatment?

4. Within the context of a hypnotic smoking cessation program, do subjects exposed to suggestions and imagery which detail a lapse from abstinence and recovery from that lapse and, subjects exposed to suggestions and imagery which detail continued abstinence differ significantly on a measure of abstinence self-efficacy assessed before treatment, 1 month after treatment, 2 months after treatment, and 3 months after completion of treatment?
5. When considering subjects in all conditions, both treatments and control, is there a significant correlation between the four preference indices on the Myers-Briggs Type Indicator and subjects reported abstinence at the end of the program?

Implications of This Study

Marlatt and Gordon (1980 and 1985) have argued that in order to manage a lapse successfully and regain abstinence, one must be able to recognize and cope with both situational determinants and cognitive attributions which could lead from lapse to relapse. Based on Social Learning Theory (Bandura, 1977), it is predicted that successfully coping

with high risk situations will increase one's sense of self-efficacy and decrease the possibility of relapse. Social Learning Theory would suggest that the best method for teaching ex-smokers to cope would be to teach an awareness of and control over the situational and cognitive factors involved in relapse simultaneously.

From a broad theoretical perspective, this study will test the assumptions that those people who are taught to anticipate and prepare for a lapse as part of quitting are more likely to maintain abstinence over a 3-month period than are subjects who anticipated continued abstinence with no lapses and, therefore, do not rehearse or prepare for a lapse. If this assumption is correct, it may be of value to include lapse rehearsal techniques in with other hypnotic smoking cessation procedures. Before recommending the inclusion of imaginary lapse rehearsal in hypnotic smoking cessation programs, the efficacy of this approach in reducing relapse needs to be demonstrated.

For the clinical practitioner working with smoking cessation, inclusion of an imagined relapse episode in a comprehensive smoking cessation program may be of value in reducing the likelihood of relapse among those who quit smoking. This study will consider the value of using a hypnotically enhanced set of suggestions and imagery, in which subjects "experience" a lapse, to teach the coping

skills needed to prevent relapse and maintain abstinence. Since this type of suggestion/imagery format has not been reported in the literature, a comparison of this approach to the more common continued abstinence approach is reasonable.

Finally, it may be that differences in Personality Type may play a role in the maintenance of abstinence following treatment for smoking. In order to make some preliminary tests of this assumption, this study will examine the correlation, if any, between personality types as indicated by the Myers-Briggs Type Indicator and abstinence from smoking measured 3 months after treatment. This additional information may help extend the knowledge base for both theoreticians and practitioners.

Limitations

Although this study poses questions of both theoretical and practical importance, there are some limitations which greatly restrict the degree to which one can generalize from this work. First, the small sample size used in the present study, although broadly representative of the population from which it was drawn, limits one's ability to make conclusive statements which can be generalized beyond this study. Only after the same comparisons in this study are made using a larger sample size can more certain predictive generalization be made.

A second possible limitation concerns the effect of using two different experimenters in the study. Although two experimenters were employed to provide some measure of control over experimenter bias, it is not possible to predict what differences may have been obtained if all subjects had been exposed to only one experimenter throughout the study. To control for the influence of using two experimenters, a written script containing all of the instructions and suggestions was followed during each session. Still, the influence of personality differences of each experimenter on subjects is an unknown.

A third drawback in the present study is the limited follow-up period. Because the primary purpose of this study was to compare two different treatment formats with each other, three months was judged to be a reasonable time period for differences between treatments to show themselves. Although it has been suggested that relapse will occur and abstinence will be lost within 3 months if it is going to occur (Hunt, Barnett, and Branch, 1971; Hunt and Bospalec, 1974; Byrne and Whyte, 1987), the present study would be improved if a six-month or one year follow-up period had been used.

A final limitation which is acknowledged involves the method of assessing abstinence. In the present study no biochemical verification methods were employed because of

the cost and complexity involved in implementing such procedures. Instead, subjects were simply asked to respond to questionnaire items which asked them to report on their smoking status. Although there is no reason to assume that any false reporting was involved, because no biochemical verification was employed, there is the possibility that some subjects may have given false reports. In order to limit this, subjects were instructed to answer honestly and were told of the importance to the experimenter of providing accurate information. More sophisticated biochemical methods of data collection would be a step toward improving this study.

CHAPTER 2
METHODS AND PROCEDURES

Subjects

Students, faculty and staff from Texas A&M University and members of the surrounding community served as subjects for this study. Subjects were recruited by means of posted announcements, newspaper advertising, and referrals from local health professionals. Basic criteria for participation in this study, explained at time of first contact, included a baseline smoking rate of at least ten cigarettes per day (self-reported), an understanding that hypnosis would be used as part of the program, a stated desire to quit, and a commitment to complete the entire study, including all follow-up sessions.

Subjects were randomly assigned to one of three groups. Two groups were designated as treatment conditions and the third group was designated as a waiting-list control condition. Initially, both treatment conditions had 18 subjects each, and the control group had 14 members. In terms of attrition, one subject in the first treatment condition dropped out of the study after one session and never completed treatment. A second subject completed treatment, was not abstinent, and dropped-out before follow-

up. A third subject stopped attending after the second follow-up session and was not abstinent at the time. Five subjects were lost from the second treatment condition. Of these, one did not return following screening and never began the treatment phase. One subject dropped-out after the first treatment session and never completed the program. Two subjects dropped-out after treatment and did not attend follow-up. Of these latter two, neither were abstinent when they stopped attending. The last subject stopped attending after the first follow-up session, but was abstinent one month after treatment. The waiting list control condition consisted of 14 subjects who were assigned to a waiting list for three months after screening. Of these, three could not be reached three months after initial screening and one subject who was reached declined to participate. No data were available for these four subjects. Ten control subjects did return three months after initial screening. As a result, complete data were available for 15 subjects in the first treatment condition, 13 subjects in the second treatment condition, and 10 subjects in the waiting list control condition.

Description of subjects according to age, sex, number of years smoking, average number of cigarettes smoked per day, and education level are listed in Table 1.

TABLE 1

Description of Subjects According to Age, Sex, Number of Years Smoking, Average Number of Cigarettes Smoked Per Day, and Education Level

Variables	Treatment ¹			Treatment ²			Control		
	<u>N</u>	<u>M</u>	<u>SD</u>	<u>N</u>	<u>M</u>	<u>SD</u>	<u>N</u>	<u>M</u>	<u>SD</u>
Sex									
Male	7			4			4		
Female	<u>8</u>			<u>9</u>			<u>6</u>		
TOTAL	15			13			10		
Age		39.20	8.72		40.07	6.95		40.8	7.98
Years Smoking		22.00	9.59		19.92	7.10		21.0	6.46
Daily Cigarettes Smoked		25.33	11.72		22.84	11.11		22.7	7.57
Years of Education		15.06	2.78		15.61	3.27		15.3	3.12

¹ Lapse Rehearsal

² Continued Abstinence

Dependent Variables

The dependent variables measured in the present study included: smoking rate, abstinence, smoking abstinence self-efficacy, and subject personality type.

Smoking Rates

During initial screening, participants were asked to report the number of cigarettes they smoked per day on the smoking questionnaire (Appendix B). Subjects were also asked to report the number of cigarettes they were smoking on the last treatment day, at one month follow-up, two month follow-up, and three month follow-up. At one month follow-up, subjects reported their smoking rate on the first follow-up questionnaire (Appendix C) while, second and third month smoking rates were reported using the second follow-up questionnaire (Appendix D). The first follow-up questionnaire was much longer than the second because it assessed information about certain aspects of the program which was not necessary to assess at later follow-ups.

Abstinence

In this study abstinence was assessed by asking subjects if they have smoked any since their quit day and if so are they currently smoking. Subjects who were smoking were asked on the next question to report the number of cigarettes smoked per day. These same questions appeared on all of the follow-up questionnaires used during the program.

Both smoking rate and abstinence measures were obtained through subject self report responses to questionnaire items. Some evidence has accumulated which suggests that

smokers may have trouble responding to self-report smoking questionnaires accurately (Vogt, Selvin and Hulley, 1979). Biochemical methods of assessing exposure to smoking can be used. Expired air carbon monoxide (CO) is elevated in smokers as a consequence of the CO in inhaled cigarette smoke (Vogt, 1982). Another biochemical method of assessment involves measuring thiocyanate levels. Serum or salivary thiocyanate is elevated in smokers because of the trace amounts of cyanide in tobacco smoke. Measuring blood nicotine levels has also been used to assess exposure to smoking (Russell, Jarvis, Iyer, and Feyerabend, 1980). All of these methods have shortcomings. Carbon monoxide and serum thiocyanate levels may be elevated because of exposure to other environmental factors, while nicotine levels may be artificially low because of its short half-life (Vogt, 1982). Although these biochemical techniques are useful for measuring overall exposure to tobacco products, they can only assess the number of cigarettes smoked indirectly. In addition, the use of these biochemical methods requires the use of special equipment which is expensive, and may be impractical in many studies.

Self-report assessment of smoking behavior has been used in numerous studies of smoking (Frederiksen, Martin and Webster, 1979). Frederiksen et al., have noted that subjects themselves may be best suited to monitor their own

smoking behavior. The accuracy of self-report measures has been substantiated in several studies. Keutzer, Lichtenstein and Mees (1968) have reported a correlation of .94 between self-report and informant collected data. Fix, Daughton, Kass and Bell, (1979) reported a correlation of .70 between self-report and carbon monoxide levels. Colletti et al. (1982) has shown that subjects informed of a pending carbon monoxide measure prior to self-report measures and subjects not informed of pending carbon monoxide measure demonstrated no significant differences between carbon monoxide and self-report data.

As Baumgartner (1984) noted, although biochemical measures have been shown to provide accurate, objective data, these measures have also been utilized to show that self-report data may provide accurate information also. In the present study, all data regarding smoking rates and abstinence were measured using subjects self-reports.

Smoking Abstinence Self Efficacy

The purpose of using a measure of abstinence self-efficacy was to obtain subjects' assessment of their ability to avoid cigarette smoking and remain abstinent following treatment. The instrument used to measure smoking abstinence self-efficacy was developed by DiClemente (1981) and consists of 12 items which are rated using a 7-point

Likert scale (Appendix E). Each item depicts a situation in which smokers may have difficulty abstaining from smoking and asks subjects to judge how likely they are to avoid smoking in that situation. Scores on each item are summed to obtain a global score for each subject. The higher a smoking self-efficacy score, the more strongly the subject expects to avoid smoking and remain abstinent. DiClemente (1981) has reported this instrument to have good internal consistency. Individual items from the instrument correlated with the total obtained score between .58 to .76 with a mean correlation of .68. DiClemente (1981) has shown that the situation depicted by the smoking abstinence self-efficacy accurately corresponds to those which precipitate relapse. Of 65 subjects who relapsed, only 5 out of the total of 65 subjects described precipitating events which did not relate to a situation depicted on the instrument. DiClemente concluded that this provides partial support for the construct validity of the self-efficacy instrument. Baumgartner (1984) has used the abstinence self-efficacy instrument to assess abstinence expectancy in a stop-smoking program and reported finding a significant positive relationship between abstinence self-efficacy and general self-efficacy in an abstinence self-efficacy treatment group.

Personality Type

In order to determine what impact, if any, personality type may have in this study, all subjects were tested using the Myers-Briggs Type Indicator (Myers and McCaulley, 1986). The MBTI is designed around the basic concepts of Jungian psychology and assesses personality on four dimensions: Introversion-Extroversion, Intuitive-Sensing, Thinking-Feeling, and Judging-Perceiving. According to Myers and McCaulley (1986), the aim of the MBTI is to identify, from self-report of easily recognized reactions, the basic preferences of people in regard to perceptions and judgement, so that the effects of each preference can be established by research and put to practical use (p. 1). In this study results of the MBTI were used to determine how subjects' basic preference on each of the indices correlated with and could be used to predict abstinence following treatment. All subjects in both treatment and control conditions were administered the MBTI at the initial screening. Obtained scores were then correlated with abstinence at 3 month follow-up.

Treatments

The purpose of the present study was to compare a hypnotic stop-smoking program incorporating lapse suggestions and imagery (LR) with a hypnotic stop smoking

program using continued abstinence suggestions and imagery (CA) to determine the merits of each program in promoting initial abstinence and preventing relapse. The results of each treatment was then compared at three month follow-up with a waiting-list control group which received no treatment.

Both treatment conditions were designed to be the same except for the actual suggestions and imagery used to directly address smoking. A survey of more successful hypnotic stop smoking programs reported in the literature was used to select program components which could be implemented in this study. In addition, the findings of Holroyd (1980) and Agee (1983) were incorporated as a guide in developing treatment conditions. Specifically, it was determined that the treatment package would involve group hypnosis, multiple treatment sessions, motivational suggestions to increase expectancy of a positive outcome, and suggestions for reducing withdrawal discomfort. Because aversive techniques have generally shown little effectiveness (Lichtenstein and Keutzer, 1969; Lando, 1975; Sutherland, et al., 1975), and given the equivocal results obtained with aversive covert conditioning techniques (Gerson and Lanyon, 1972; Sipich, et al., 1974), it was decided that only suggestions which were generally positive and non-aversive would be used.

Although Holroyd (1980) has reported finding no significant advantages when subjects are trained to use self-hypnosis as part of a smoking cessation program, because of the limited number of treatment sessions employed in this study and because the use of self hypnosis has been a substantial part of many studies (Berkowitz, Ross-Townsend and Kohlberger, 1979; Watkins, 1976), it was reasoned that teaching subjects to use self-hypnosis and instructing them to practice several times per day would allow subjects to extend their stop smoking efforts beyond the group sessions. As DePiano and Salzberg, (1986) note, one factor which is often not considered in studies where subjects are taught self-hypnosis concerns the actual amount of time subjects practice the techniques. It may be that practiced in a regular, systematic way self-hypnosis does have some clinical value in smoking cessation. In order to better assess the value of self-hypnosis, subjects in the present study were asked on the follow-up questionnaire to record how much time was spent over the course of the program practicing self-hypnosis.

Treatment Regimen

Subjects in both treatment conditions (lapse rehearsal and continued abstinence) underwent a brief hypnotic induction and were then exposed to a package of suggestions

and instructions designed to boost motivation, reduce discomfort and teach self-hypnosis as an aid to smoking cessation. Following administration of these suggestions and instructions, subjects received either lapse rehearsal or continued abstinence suggestions and imagery to address the maintenance of abstinence.

Hypnotic Induction

The hypnotic induction used in this study involved suggestions for eye closure, increased heaviness of one arm, and suggested amnesia for a short series of numbers. The particular induction used was chosen because it can be carried out in less than 10 minutes and is designed to produce a deep state of hypnosis (Elman, 1981). The experimenter did not continue deepening the relaxation until all subjects had responded to the suggestions used in the initial induction. This was assessed by lifting each subjects arm to test for the presence of suggested heaviness and asking subjects to signal using an ideomotor response when a series of suggested numbers could not be remembered any longer.

Although it has long been known that wide differences in the ability to experience hypnosis exist (Hilgard, 1965; Spiegel and Spiegel, 1978), the impact of level of susceptibility on clinical outcomes has been questioned.

(Perry, Gelfand, and Marcovitch, 1979; Watkins, 1976.) Perry and Mullen (1975) investigated the relationship between level of hypnotic susceptibility and abstinence among smokers treated with hypnosis and found no significant correlation, although a larger number of highly susceptible subjects were abstinent. Gardner and Olness (1981) have stated that in clinical work it is better to think in terms of hypnotic responsiveness rather than susceptibility, because with hypnosis the locus of control resides with the client not the practitioner. Wadden and Flaxman (1981) have suggested that the importance of susceptibility may vary with type of problem treated. They reason that when a condition being treated is of a volitional nature, such as smoking or weight loss, level of susceptibility is unrelated to treatment outcome.

Given the volitional nature of cigarette smoking, it was not deemed necessary to use standardized susceptibility measures to assess level of hypnotic susceptibility objectively. Instead, subjects' self-reports of experiencing an alteration of awareness and the experimenters direct observation of subjects during each session were regarded as evidence of a satisfactory induction.

Deepening

Following the brief hypnotic induction, subjects were given suggestions to drift into deeper relaxation and feel more comfortable with each breath. Following these suggestions, subjects were instructed to imagine a suggested scene in which they rode an elevator down to a beautiful garden where they could relax more completely and learn some things which would help them. The suggestion and imagery used for deepening are in Appendix F.

Motivational Suggestions

The purpose of employing motivational suggestions was to increase subjects' confidence in their ability to quit smoking. The suggestions focused on four general reasons for quitting (health, reaction of others, expense, and personal satisfaction) which are among the most commonly listed reasons people give for wanting to quit smoking. When responding to the smoking questionnaire all subjects in the present study indicated reasons for quitting which fell into two or more of these general areas. The motivational suggestions used are in Appendix G.

Comfort and Weight Control Suggestions

Comfort and weight control suggestions were incorporated into the treatment regimen to help subjects

with two physical problems often encountered when stopping smoking - withdrawal discomfort and weight gain. The comfort suggestions given included instructions for using a post hypnotic cue (rubbing the thumb and finger together) to reduce discomfort and trigger pleasant thoughts and memories. The weight suggestion emphasized that subjects continue to eat the way they did before stopping smoking, and eat an amount just sufficient to give them the energy they need. These suggestions are based on those used by LeCron (1964) as part of his stop smoking suggestions. The comfort and weight control suggestions are in Appendix H.

Self-Hypnosis

Suggestions, instructions, and post-hypnotic cues were given to subjects to be used to induce self-hypnosis away from the sessions. Subjects were taught how to use verbal suggestions and imagery along with hypnotic relaxation to extend the work done in each session. It was repeatedly emphasized that the use of self-hypnosis is a learned skill which requires daily practice to be effective. The self-hypnosis suggestions employed are contained in Appendix I.

Lapse Rehearsal

Subjects assigned to the lapse rehearsal condition received the basic ego-strengthening and withdrawal discomfort suggestions. Following this, subjects in this

condition received suggestions and imagery which were designed to incorporate the ideas of Marlatt and Gordon (1985) regarding relapse. Specifically, subjects in the lapse rehearsal group were given suggestions which conveyed the theme that if a lapse episode should occur they would stay calm, not interpret this as failure, and would use the lessons learned to regain abstinence. Following these suggestions, subjects imagined several scenarios in which they lapsed after obtaining initial abstinence and then recovered from the lapse. The actual suggestions and images used are contained in Appendix J.

Continued Abstinence

Subjects assigned to the continued abstinence condition received the basic ego-strengthening and withdrawal discomfort suggestions. Afterwards, subjects in this condition were given suggestions and imagery which conveyed the idea that they must maintain abstinence, that one puff of a cigarette is a "danger signal", and that they are strong enough to break the habit and remain abstinent. The actual suggestions and imagery used were patterned after those suggested by LeCron (1964), and are typical of those used in many hypnotic smoking cessation programs. Following the administration of suggestions, subjects in the continued abstinence condition imagined several scenarios in which

they were tempted to smoke but successfully managed to maintain abstinence. The actual suggestions and images used are contained in Appendix K.

Control Group

The subjects assigned to the control condition received no treatment until the conclusion of the study. Subjects were told during the initial screening that if they were assigned to the control condition that they would have to wait several months before undergoing treatment. Subjects in the control condition were given no directions regarding their smoking while they were waiting.

Leaders

In an effort to control for possible experimenter effect, two group leaders were employed in this study. It was decided before the study began that the inductions and suggestions for each group would be administered by one leader, and a coin flip would be used to determine which leader would conduct each session. The result was that both leaders conducted several sessions under both lapse rehearsal and continued abstinence conditions. Both leaders had received training in clinical hypnosis previously and had conducted numerous hypnotic inductions. Both leaders had also worked with smoking cessation previously, but neither had used the actual procedures employed in this

study before. To further control bias, all suggestions and images used were read verbatim from a prepared script.

Procedures

People responding to announcements offering the program, and those who inquired after hearing about the program from other sources, were given some basic information by telephone and were told of the requirements for participation. Those who were eligible and interested were scheduled to attend a preliminary screening. During the screening it was explained that the goal of the program was to offer help to make the process of quitting smoking easier and more successful. Subjects were told that hypnosis would be involved, and that hypnosis was a tool which involved relaxation and concentration and could help people change habits if they wished to do so. It was emphasized that attendance throughout the program was important and necessary. Following these introductory remarks, subjects completed the consent form (Appendix A), the smoking questionnaire, the forty-eight item counseling evaluation test (McMahon, 1976), and the Myers-Briggs Type Indicator. The experimenter then instructed subjects that they would be called with a starting date within two weeks.

Subjects were initially assigned at random to one of two treatment groups or the control group. Because both

treatment groups were judged too large to insure proper instruction, each treatment group was divided into two smaller groups which met on different evenings of the week. All four treatment groups (two lapse recovery and two continued abstinence) met one night per week for 90 minutes over a 3-week period. Following the conclusion of treatment, each group returned once per month for three months to assess any ongoing changes in smoking status between the end of treatment and a three month period.

First Session

During the first treatment session, subjects in both treatment conditions were introduced to the other members of their group. Each member was then asked to explain their reasons for wanting to quit smoking and what they hoped to gain from doing so. Subjects were then exposed to a brief group hypnotic induction which emphasized relaxation, increased heaviness and comfort. Once each group member had responded to these suggestions, it was suggested to subjects that they could relax more deeply with each breath as they imagined themselves riding down an elevator to a beautiful place.

Following the induction and deepening, the experimenters read the motivational suggestions to the

group. Group members were then awakened and allowed to take a break before continuing.

During the second half of the first session, group members were exposed to the same hypnotic induction a second time followed by the same deepening suggestions and imagery. After induction and deepening, the experimenters read the comfort and weight control suggestions to group members followed by instructions and suggestions for self-hypnosis. The first session was then terminated and subjects were instructed to reconvene in one week.

Second Session

At the start of the second session subjects were asked about any difficulties encountered during the preceding week, and any questions were answered. Subjects then received the same induction, deepening, and motivational suggestions used in the first session. Subjects then took a short break, followed by reinduction and deepening, comfort and weight control suggestions, treatment suggestions and imagery (lapse rehearsal or continued abstinence) and instructions/suggestions for self-hypnosis. As a result, session two was the same as session one with the addition of one of the two treatment suggestion/imagery formats.

At the end of the second session, subjects were told to write a list of ten reasons they had for wanting to quit

smoking and post it in a prominent place in their home. Subjects were also told to practice inducing self-hypnosis several times per day followed by imagining themselves as a non-smoker. Finally, subjects were told to stop-smoking on the night before the next treatment session one week later.

Session Three

At the start of the third session, group members were questioned regarding their smoking over the past twenty-four hours, and the number of subjects who were abstinent was recorded. Subjects then received the same induction and treatment suggestions used during the second session, including either lapse rehearsal or continued abstinence suggestions and imagery. At the end of the third session, group members were instructed to reconvene in one month for the first follow-up session.

Follow-up

The function of each follow-up session was to assess how participation in the program affected subjects' smoking. Initial abstinence was assessed on the evening of the third group meeting which was set-up to coincide with quit day. Following quit-day, all subjects returned at 1, 2, and 3 month intervals after treatment to assess any changes that may have occurred since the end of treatment. At the time of the one-month follow-up, subjects responded to a more

detailed follow-up questionnaire designed to assess not only smoking/abstinence status but also any changes in attitude, amount of time spent reviewing materials during the treatment phase, ease of learning self-hypnosis, and the ease of actually quitting smoking. This information was desired in order that something could be learned about subjects' reaction to and experiences with the treatments. At months two and three, a less detailed follow-up questionnaire was used since it was unnecessary to collect information regarding treatment experiences at these later follow-ups. No attempt was made to contact control group members during the follow-up period.

Hypotheses

There are seven hypotheses, stated in the null, which this study advanced:

Ho, The use of hypnotic suggestions and imagery which convey the idea of recovery from a lapse, including an imagined lapse and recovery episode, will not significantly increase the number of treatment groups subjects who achieve initial abstinence from smoking when compared with subjects receiving suggestions and images of continuous abstinence.

- Ho₂ The use of hypnotic suggestions and images which convey the idea of recovery from a lapse, including and imagined lapse recovery episode, will not significantly increase the number of treatment group subjects who remain abstinent at 3 months follow-up when compared to the abstinent rate over the same 3 months period for subjects who receive continuous abstinence suggestions and images.
- Ho₃ Neither treatment condition, lapse rehearsal or continuous abstinence, will significantly increase the number of subjects who are reported abstinent 3 months after treatment when compared with control subjects who receive no treatment over the same 3 month period.
- Ho₄ Among treatment groups subjects who do not initially achieve or later maintain abstinence, no significant change in the number of cigarettes smoked will be found for subjects in either treatment condition at one, two or three months after treatment.
- Ho₅ There will be no significant differences in reported abstinence self-efficacy ratings between subjects in the lapse recovery or continuous

abstinence conditions at one, two, or three month follow-up.

Ho₆ There will be no significant correlation between personality type and subjects' ability to achieve and maintain abstinence in lapse recovery or continuous abstinence conditions.

Analysis of Data

The present study employed a repeated measures design. Statistical procedures used included 2 x 2 chi-square, 2 x 3 chi-square, treatments by periods analysis of variance, Pearson correlation coefficient, and a multiple regression analysis.

The first and second hypotheses (Ho₁ and Ho₂) concerning differences in abstinence between treatments, both initially and at follow-up, were compared using a two by two and a two by three chi-square statistic, respectively. To test the third hypothesis (Ho₃) comparing the abstinence rates for both treatment groups with the abstinence rate for the control groups a three by two chi-square was used.

In order to assess the significance of any changes in the number of cigarettes smoked by subjects who failed to achieve or maintain abstinence, (Ho₄), analysis of variance was employed to compare the number of cigarettes smoked per

day by treatment groups and by follow-up periods. Analysis of variance was also used to assess changes in abstinence self-efficacy ratings between subjects in both treatment conditions over the duration of the program, and to compare the significance of any changes in self-efficacy ratings between treatment groups and the control group (H_{05}).

Finally, single and multiple correlation analyses were performed to determine the relation, if any, between personality type and abstinence in both treatment groups (H_{06}).

CHAPTER 3

RESULTS AND DISCUSSION

Results

The primary purpose of this study was to compare the differential effects of two suggestion and imagery formats within the context of a hypnotic smoking cessation program. The two formats, lapse rehearsal and continuous abstinence, differed in the actual content of the treatment portion of the suggestions and images prevented, while all other aspects of the two formats were kept constant. The two dependent variables in this study were abstinence from smoking and smokers abstinence self-efficacy. A second purpose of this study was to determine the value, if any, of using personality type as measured by the Myers-Briggs Type Indicator to predict abstinence in a hypnotic smoking cessation program. Five null hypotheses were developed to address the specific questions raised by this study.

The first hypotheses (H_0) predicted that subjects in a treatment condition receiving lapse rehearsal suggestions and images and subjects in a treatment condition receiving continuous abstinence suggestions and imagery would not significantly differ in the number of subjects who achieve initial abstinence from smoking. The data pertinent to this

hypothesis were analyzed using a 2 x 2 chi square analysis. Results of the chi square indicate a value of 1.36, which was not significant at the .05 level. The two treatment formats used in this study did not differ significantly in the number of subjects who were successful in achieving abstinence initially following treatment. Therefore, the first null hypotheses cannot be rejected. A summary of the chi-square analysis for initial abstinence is contained in Table 2.

TABLE 2

Chi-Square for Differences in Abstinence Between Lapse Rehearsal and Continued Abstinence Conditions at Completion of Initial Treatment

	Abstinent		Not Abstinent		Total	Chi-Square
	Observed	Expected	Observed	Expected		
Lapse Rehearsal	14	12.32	1	2.67	15	1.36
Continued Abstinence	9	10.67	4	2.32	13	
TOTAL	23		5		28	

A second question raised in this study concerned whether or not subjects in the two treatment conditions would differ significantly in the number reporting abstinence three months after treatment. The second null

hypotheses (H_{02}) predicted that neither treatment condition, lapse rehearsal or continued abstinence, would produce a significant difference in the number of subjects reported to be abstinent 3 months after treatments. Further, it was predicted that there would be no significant differences in reported abstinence between either treatment condition or the waiting list control condition when assessed at 3 month follow-up.

The data pertaining to this hypothesis were analyzed by the use of 2 x 3 chi square statistic. Results of the chi-square produced a value of .049. This value was not significant at the .05 level. The conclusion drawn from this analysis indicates that none of the group formats, lapse rehearsal, continued abstinence, or control, used in this study differed significantly in the number of subjects reported abstinent from smoking at the final 3 month follow-up. A summary of the chi-square for abstinence at 3 month follow-up is listed in Table 3.

A third question which was advanced in this study asked how the two treatment conditions would differentially affect the number of cigarettes smoked per day among those who continued to smoke over the course of the program. A third null hypothesis (H_{03}) was generated which predicted that no significant differences between treatments would be observed when comparing the number of cigarettes smoked per day

before treatment with that reported at 1 month, 2 months, and 3 months after the completion of treatment.

TABLE 3

Chi-Square for Differences in Reported Abstinence Between Lapse Rehearsal and Continued Abstinence Conditions Three Months after Initial Treatment

	Abstinent		Not Abstinent		Total	Chi-Square
	Observed	Expected	Observed	Expected		
Lapse Rehearsal	3	3.15	12	11.84	15	.049
Continued Abstinence	3	2.73	10	10.26	13	
Control	2	2.10	8	7.89	10	
TOTAL	8		30		38	

To test this hypothesis, a treatments by periods analysis of variance was performed. The analysis produced an overall groups by trials F value of 0.465, which failed to be significant at the .05 level. Although there were no significant differences between treatments over time, the significant within periods variance and inspection of the group means for each treatment condition indicated that subjects in both treatment conditions did reduce the number of cigarettes smoked per day during the period from before treatment to one month follow-up. However, at two and three month follow-ups, the number of cigarettes smoked per day had increased but continued to remain below that reported

before treatment. Table 4 presents a summary of the treatments by periods analysis of variance. Table 5 presents the mean number of cigarettes smoked over the duration of the treatment program.

The fourth question in this study concerns how subjects abstinence self-efficacy scores change as a result of treatment. The fourth null hypothesis (H_{04}) predicted that no significant differences would be observed in abstinence self-efficacy between subjects in either treatment condition over time.

TABLE 4

Treatments by Periods Analysis of Variance for Number of Cigarettes Smoked by Non-Abstainers in Lapse Rehearsal and Continued Abstinence Conditions Over the Duration of Treatment Program

Source	Sum of Squares	D.F.	Mean Square	F-Ratio
Between	9313.11	27	1344.93	
Treatments	334.53	1	334.53	0.96
Error (T)	8978.58	26	345.33	
Within	7574.28	84	90.17	
Periods	4754.22	3	1584.74	44.61 *
Treatments by Periods	49.56	3	16.52	0.46
Error (P)	2770.56	78	35.52	
TOTAL	16887.39	111	152.13	

* Significant Beyond the .001 Level of Confidence

TABLE 5

Mean Number of Cigarettes Smoked by Non-Abstainers in Lapse Rehearsal and Continued Abstinence Conditions Over the Duration of Treatment Program

	Before Treatment	1 Month Follow-up	2 Month Follow-up	3 Month Follow-up
Lapse Rehearsal	25.33	7.73	12.20	15.13
Continued Abstinence	22.84	5.53	8.61	9.53

The data pertaining to this hypothesis were analyzed using a treatments by periods analysis of variance. The results indicate a treatments by periods F value of 1.411. This value is not significant at the .05 level, indicating no significant differences in abstinence self-efficacy between treatments over the period from before treatment to 3 months after treatment.

The significant within periods variance and inspection of the treatments by periods mean self-efficacy scores indicate that scores did increase from before treatment to the follow-up at 1 month. However, scores had dropped by the 2 month follow-up and continued to decrease by the 3 month follow-up. Table 6 presents a summary of the analysis of variance. Table 7 presents the mean abstinence self-efficacy scores over the duration of the treatment program.

TABLE 6

Treatments by Periods Analysis of Variance for
Self-Efficacy Scores in Lapse Rehearsal
and Continued Abstinence Conditions

Source	Sums of Squares	D.F.	Mean Squares	F.Ratio
Between	16053.66	27	594.58	
Treatments	415.68	1	415.68	0.69
Error (T)	15637.96	26	601.46	
Within	15749.16	84	187.49	
Periods	2022.12	3	674.04	4.03 *
Treatments by Periods	706.80	3	235.60	1.41
Error (P)	13019.76	78	166.92	
TOTAL	31802.82	111	286.51	

* Significant Beyond the .05 Level of Confidence

TABLE 7

Mean Self-Efficacy Scores for Subjects in Lapse Rehearsal
and Continued Abstinence Over the Duration of Treatment

	Before Treatment	1 Month Follow-up	2 Month Follow-up	3 Month Follow-up
Lapse Rehearsal	51.40	56.06	50.73	46.73
Continued Abstinence	46.61	63.76	57.46	52.53

The fifth question in this study concerned whether or not a correlation exists between personality type and abstinence from smoking. The fifth null hypothesis (H_{05}) predicted that no significant correlation exists between personality type, as determined by the Myers-Briggs Type Indicator (MBTI), and abstinence. Multiple regression analysis and Pearson correlation coefficients were used to examine the correlations between the four primary preference indices of the MBTI and overall abstinence measured at the end of the study for all treatment and control subjects.

Results of the multiple regression analysis produced a multiple R of .3874 with an F value of 1.457. This result failed to be significant at the .05 level of confidence. Considered together, the four primary personality indices of the MBTI did not correlate significantly with abstinence from smoking at the end of this study. However, the multiple regression analysis did indicate one significant correlation between the Thinking/Feeling Index and abstinence. Analysis of the Pearson correlation coefficients between each of the eight separate dimensions, which comprise the four bipolar preference indices, and abstinence indicated significant correlation between the Thinking dimension and abstinence. Correlation of the Thinking dimension of the MBTI with abstinence produced an r of .334, which reached significance at the .05 level.

Results of the multiple regression analysis is presented in Table 8. Pearson correlation coefficients of each of the eight dimensions of the MBTI with abstinence are presented in Table 9.

TABLE 8

Multiple Regression Correlates Between the Four Primary Indices of the MBTI and Abstinence for All Subjects Measured at the Conclusion of the Program

Variable	Correlation With Abstinence
Introversion/Extroversion (I/E)	.0731
Sensing/Intuition (S/N)	-.2050
Thinking/Feeling (T/F)	.3348 *
Judging/Perceiving (J/P)	-.0752
Multiple	.3874

* Significantly different from zero at the .05 level of confidence.

Although no other questions were put forth at the beginning of this study, subjects responses to questionnaire items were surveyed for any trends which could be determined. DePiano and Salzberg (1986) have questioned whether the amount of time spent actually practicing self-hypnosis affects outcome in those studies where self-hypnosis is used.

TABLE 9

Correlations Between Abstinence and Each Dimension of the
Myers-Briggs Type Indicator for Subjects in All
Conditions at the End of Program

Dimension	Correlation with Abstinence
Introversion	- .073
Extroversion	.073
Sensing	.205
Intuitive	- .205
Feeling	- .334
Thinking	.334 *
Judging	.075
Perceiving	- .075

* Significantly different from zero at the .05 level of Confidence

In the present study, subjects were asked to report how many hours were spent each week practicing self-hypnosis. Subjects in the lapse rehearsal condition averaged 2.0 hours per week of practice. The amount of time practiced for subjects in the group ranged from one-half to five hours per week with a standard deviation of 1.32 hours. Subjects in the continued abstinence condition average 1.69 hours of self-hypnosis practice per week with a range of 0.0 to 4.0 hours and a standard deviation of 1.21 hours. Subjects were

also asked to rate how difficult it was for them to initially quit smoking and how difficult it was to learn self-hypnosis. Subjects rated themselves on both questions using a ten point Likert scale where 10 was considered very difficult. Correlations between the number of hours spent practicing self-hypnosis and ease quitting were calculated for each group. Subjects scores in the lapse rehearsal condition correlated -0.10 , and subject scores in the continued abstinence condition correlated 0.14 between hours practiced and ease of quitting smoking. Correlations between the number of hours reported spent practicing self-hypnosis and the reported ease of learning to use self-hypnosis were $.022$ for the lapse rehearsal condition and $.026$ for subjects in the continued abstinence condition. None of the correlations were significant.

Discussion

The primary purpose of this study was to investigate how two different suggestion and imagery formats, lapse rehearsal and continued abstinence, differentially effect several aspects of outcome within the context of a hypnotic smoking cessation program. A secondary purpose of this study was to carry out a preliminary investigation of possible correlations between personality type and abstinence from smoking.

The first and second questions posed in this study addressed the differential effects of lapse rehearsal and continuous abstinence suggestions and imagery on abstinence measured at different points in time. The first question asked whether the two treatment conditions would differ in the number of subjects who obtain abstinence initially following treatment. It was reasoned that if both treatment conditions were equal except for changes in the suggestions and imagery used to address relapse, no significant differences between conditions should be noted in the achievement of initial abstinence. Results of the data analysis supported this reasoning. A majority of subjects in both treatment conditions did achieve initial abstinence from smoking (93.3% of lapse rehearsal and 69.2% of continued abstinence subjects reported initial abstinence). The number of subjects who achieved initial abstinence suggests that both treatment conditions did produce some initial change. It is likely that the initial change noted in both groups resulted from the influence of the motivational suggestions and imagery which were not varied between groups. Although a larger percentage of subjects in the lapse rehearsal condition reported initial abstinence, the chi-square analysis failed to demonstrate a significant difference between treatment conditions. Thus, initial abstinence from smoking was not influenced by any

differential effects of lapse rehearsal or continued abstinence suggestions and imagery used in this study. The conclusion which can be drawn from this analysis suggests that both treatment conditions, lapse rehearsal and continued abstinence, did initially impact smoking, but neither of the conditions was significantly more effective in promoting initial abstinence.

The second question in this study concerned what differences in abstinence from smoking might be observed at the end of the program between lapse rehearsal, continued abstinence, and the waiting control condition. Shiffman et al. (1985) has stated that relapse occurs when a person is in a high risk situation and displays a deficient coping response. Marlatt and Gordon (1980 and 1985) have advanced the idea that in order for a person to maintain abstinence, one must be able to both recognize and cope with situational and cognitive factors which can precipitate a lapse and/or lead from a lapse to a full relapse. Because hypnosis had often been employed to enhance the suggestions and imagery used in behavioral rehearsal, it was reasoned that the use of hypnosis to heighten suggestions and imagery associated with lapse management may lessen the likelihood of relapse and increase the rate of abstinence at the end of the program 3 months after treatment. To assess this reasoning, subjects exposed to hypnotically enhanced lapse rehearsal

suggestions and imagery were compared with subjects receiving the more traditional suggestions and imagery of continued abstinence (no lapse). The comparison also included a control group which received no treatment.

Results indicated no significant differences between either treatment or control conditions at 3 months follow-up. Several explanations maybe be advanced to explain the non-significant differences between treatments and control. First, the suggestion and imagery which was varied for each group represented a small portion of the entire treatment package. The larger portion of both treatment conditions included motivation to stop smoking, ego-strengthening, comfort, and self-hypnosis suggestion, all of which were held constant between treatments. As a result, the treatment components which were varied may have had little impact when compared with treatment components which were not varied. Had the suggestions and imagery which were varied between conditions accounted for a greater percentage of each treatment protocol there may have been a noticeable difference between groups.

A related factor which may have mitigated against more significant differences between groups concerns limited exposure to treatment suggestions and imagery. In this study, subjects were not exposed to the varied lapse rehearsal or continued abstinence position of the treatment

until the third treatment session. The rationale for this was to spend the first half of the initial treatment time building subject motivation to stop smoking before focusing more directly on cessation. Because of this decision, subjects were only exposed to suggestions and imagery which addressed relapse twice during treatment. Had subjects received exposure to the portion of the package dealing with relapse earlier in the program, a larger difference between treatment and control conditions may have emerged at 3 months follow-up.

Another possibility which may help explain the lack of differences between groups is the standard form of suggestions and imagery used. Although such continuity of suggestions, instructions, and imagery was necessary to increase precision and reduce uncontrolled variance, it seems likely that the format used may have failed to adequately address the individual needs of group members. As Sanders (1977) notes, smoking behavior is a multi-determined habit which involves individual characteristics, beliefs about smoking, and environment. It may be that the lapse rehearsal treatment would have bettered the no-treatment control condition had subjects been allowed to develop their own images which may have corresponded better to their own unique high risk situations. Nuland and Field (1970) were able to increase the rate of abstinence obtained

six months after treatment from 25% to 60% when suggestions were individualized. Had some method been employed in this study which would have allowed treatment to be individually tailored, a more robust difference between conditions may have been obtained.

Finally, the failure to obtain a significant difference between conditions, including control, must be understood in light of the small sample size of each condition. With samples as small as those used in the study, the influence of a small number of subjects in any of the conditions could have had a disproportionate effect which would be normalized with a larger sample.

The third question in this study concerned the number of cigarettes smoked per day over the length of the program by those persons who did not achieve and/or maintain abstinence. It was found that subjects in both treatment groups who were not abstinent throughout the program did reduce the number of cigarettes smoked per day before treatment and one month after treatment. Starting at the 2 month follow-up, subjects in both groups had begun to increase the number of cigarettes smoked per day, and by the 3 month follow-up, this increase had continued. This pattern of a reduction in smoking rate followed by a gradual regression to pretreatment levels of smoking is the typical pattern reported for most smoking cessation programs.

Although many subjects in both treatment conditions reported smoking fewer cigarettes per day at 3 month follow-up than before treatment, this is most likely related to the limited duration of follow-up. It is assumed that if subjects in this study had been tracked for 6 months, 9 months, or 1 year, a larger number of subjects would report a daily smoking rate more closely approaching pretreatment levels.

At no point during this program did subjects in either treatment condition differ significantly in the number of cigarettes smoked per day. As a result, it must be concluded that the lapse rehearsal suggestions and imagery did not influence the rate of smoking, among those who were not abstinent, beyond that obtained over the same period with the use of continued abstinence suggestions and imagery.

One point which must be understood when considering the observed changes in smoking rate observed among the treatments used in this study is the goal of the program. The goal of both treatment conditions was complete abstinence from smoking rather than a reduction in the number of cigarettes smoked. As a result, no attempts were directed toward reducing cigarette consumption. Therefore, subjects' rate of return to smoking represents a trend beyond that controlled for in the design of this study, and it was somewhat more predictable that neither treatment

condition would differentially influence the number of cigarettes smoked.

The fourth question addressed in the present study raised the issue of possible differential effects of the two treatment conditions on abstinence self-efficacy. It was reasoned that subjects who were adequately prepared to manage high risk situations will experience an increased sense of abstinence self-efficacy as they think ahead to maintaining abstinence in probable high-risk situations. At the same time, Social Learning Theory (Bandura, 1977) predicts that successful coping with high risk situations will increase one's sense of self-efficacy and further lessen the probability of relapse. Then, there may be an interaction between abstinence self-efficacy and abstinence with each influencing the other.

Subjects in both treatment groups did raise their abstinence self-efficacy scores during the period from before treatment to follow-up one month later. At the second follow-up, two months after completion of treatment, subjects in both groups reported lower abstinence self-efficacy scores, and by 3 months follow-up scores had declined further. During the length of the program there were no significant differences in abstinence self-efficacy between treatment conditions. The relationship between the number of cigarettes smoked over the program and abstinence

self-efficacy scores did support an interaction between abstinence self-efficacy and abstinence as predicted by Social Learning Theory. Abstinence self-efficacy increases as the number of cigarettes decrease, presumably implying more successful attempts at coping, whereas failure experiences have the opposite effect. It is reasoned that as subjects in both treatment conditions began smoking more cigarettes over time after treatment, failing to cope with more high risk situations, their abstinence self-efficacy scores declined.

Two factors which must be considered in assessing abstinence self-efficacy in this study involve the limitations imposed by the abstinence self-efficacy measure and the way it was used. First, the instrument used in this study presents twelve situations which represent typical high risk settings for smokers. Subjects rate on a 7-point Likert scale how likely they would be to maintain abstinence in that situation. It may be that some of the situations depicted are of limited relevance to certain people (eg. with a spouse who is smoking; at a bar or cocktail lounge having a drink). Therefore, with some subjects the abstinence self-efficacy measure itself may have limited validity. Second, in the present study subjects were given the same instrument in the same form at each assessment point. As a result, repeated trials may have rendered the

instrument less valid as an accurate measure of self-efficacy due to overuse and the effects of a conditioned response set. The contention that the abstinence self-efficacy measure was detecting group differences is supported by the analysis of variance which revealed between group variances which were greater than the within group variance.

The final question raised in this study concerned the possible correlation between personality type and abstinence. Since no studies were located in which personality type and abstinence had been correlated, the inclusion of this question was meant to provide a preliminary assessment of how these variables may correlate. Because the sample size used in this study was too small to assess all sixteen possible personality type permutations which can be obtained from the Myers-Briggs Type Indicator, due to an insufficient number of subjects on some of the types, the four primary personality preference indices were used. These four indices were then correlated with abstinence measured at the end of the program for all subjects. Multiple regression analyses indicated that considered together, the four preference indices did not significantly correlate with abstinence in this study. As a result, personality type as measured by the four primary preference indices on the Myers-Briggs Type Indicator cannot

be used to predict abstinence. A significant correlation between the Thinking/Feeling Index and abstinence was found.

When the individual correlations between each of the eight preference dimensions and abstinence were considered separately, a significant positive correlation between the Thinking dimension and abstinence was found. The Thinking dimension on the Myers-Briggs and abstinence correlated with an r of .334, indicating that approximately 11% of the variance can be attributed to the Thinking dimension of the Thinking/Feeling Index. Although this correlation did reach significance at the .05 level, there are two points which need to be considered which may explain this modest correlation.

First, despite the fact that all groups, treatment and control, were pooled, the sample size in this study was rather small. Because of this, the obtained correlation between the Thinking dimension and abstinence may be unique to the sample used in this study. Had a larger and more representative sample been available, subject preference may have been distributed more evenly and the modest correlation observed in this study may have not held-up.

In addition, the modest correlation obtained between the Thinking dimension and abstinence may be accounted for by statistical aberration. Because fewer degrees of freedom are used in the individual correlations, a smaller F value

will reach significance when only one index rather than four is correlated with abstinence. In view of these considerations, it may be that the obtained correlation between the Thinking dimension on the Myers-Briggs and abstinence is an artifact of this study. Additional studies employing larger samples are needed to more precisely examine personality type and abstinence.

In this study no significant correlations were found between the amount of time subjects spent practicing self-hypnosis away from the treatment sessions and reported ease of stopping smoking. In addition, no significant correlations were found between ease of learning self-hypnosis and ease of stopping smoking. This seems to suggest that the addition of self-hypnosis training was of little value to subjects in this study. Although most subjects were able to learn to use the techniques which were taught, learning had little impact on either the hours spent practicing or making cessation of smoking easier. Holroyd's (1980) contention that training in self-hypnosis is not an important component of a smoking cessation program is validated by the results of this study. Interestingly, reports obtained from the open-ended questions contained in the follow-up questionnaire frequently mentioned some generalized benefits that subjects attributed to the self-hypnosis practice. The benefits mentioned most often

included less tension and anxiety, more energy and increased calmness.

In summary, the results of this study suggest that there are no significant differences between the use of lapse rehearsal and continued abstinence suggestions and imagery within the context of a hypnotic smoking cessation program.

Although both treatment conditions did promote initial abstinence from smoking for the majority of subjects, no differential effects were noted between groups. In addition, the initial changes in smoking rate were soon lost and subjects showed an increase in smoking rates at each follow-up point. By the end of the program (3 months follow-up) there were no significant differences between treatment or control groups, and it is reasoned that had subjects been tracked beyond 3 months, most who are not abstinent would return to pretreatment rates of smoking. As Maes, Spielberger, Defares, Sarason (1988) noted, all methods of treatment produce high to very high rates of quitting at the end of therapy with modest effects 6 months and 1-2 years later (p. 80). It appears, despite the focus on prevention of relapse, that the program used to treat smokers in this study was not different.

To assess how the two treatment conditions effect subjects' perceived ability to remain abstinent, a measure

of abstinence self-efficacy was employed in the study. Although subjects in both treatment conditions increased their abstinence self-efficacy between pretreatment and one month follow-up, no differences between treatment conditions were noted. As the rate of smoking increased over time for non-abstainers, abstinence self-efficacy scores declined, suggesting that there is a correlation between the measure of abstinence self-efficacy used in the study and abstinence.

This study found no significant correlations between the four personality preference indices on the Myers-Briggs Type Indicator and abstinence. Although a modest correlation was observed between the Thinking Dimension and abstinence, this may represent an aberration of the present study. Preliminary results suggest that personality type does not predict abstinence for subjects seeking assistance to stop smoking. Finally, subjects' responses to questionnaire items used to assess the number of hours spent practicing self-hypnosis away from sessions, ease of quitting smoking, and ease of learning self-hypnosis suggest little support for the inclusion of self-hypnosis training in a smoking cessation program.

CHAPTER 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to compare lapse rehearsal and continued abstinence suggestions and imagery as methods of promoting the achievement and maintenance of abstinence from smoking. The work of Marlatt and Gordon (1980, 1985) suggested that subjects prepared for a lapse from abstinence and recovery from a lapse may be more likely to avoid full relapse and maintain abstinence from smoking. Because hypnosis has long been used to enhance the reception of suggestions and the vividness of mental imagery, it was reasoned that rehearsing lapse recovery as part of a hypnotic smoking cessation program may increase abstinence self-efficacy and promote abstinence from smoking.

Subjects for this study were solicited from Texas A&M University and the surrounding community. The final sample from which all data were collected consisted of 38 subjects. Criteria for participation included a smoking baseline of at least 10 cigarettes per day, an expressed desire to stop smoking, an understanding that hypnosis would be used, and a commitment to complete the entire study, including attendance at all follow-up sessions. Subjects were

randomly assigned to one of two treatment conditions or a control condition.

Both treatment groups were exposed to a brief hypnotic induction followed by deepening suggestions and imagery, motivational suggestions, comfort and weight control suggestions, and instructions in self-hypnosis. Following administration of this part of the program, subjects were exposed to either lapse rehearsal or continued abstinence treatment formats while experiencing hypnosis. Both treatment conditions ran for 3 weeks, meeting once per week for 90 minutes. After completion of treatment, subjects in both treatment conditions returned for follow-up at monthly intervals for a period of 3 months. Subjects assigned to the control condition were placed on a waiting list following initial screening and were not contacted again until the end of the program, at which time they were questioned about their smoking status and offered treatment. All group sessions were conducted by one of two leaders who had experience using hypnosis for habit change, but neither of whom had previously employed the approach used in this study.

A treatment by periods repeated measures design was employed. Data were collected at five different time periods: pretreatment baseline, initial posttreatment, one month posttreatment, two months posttreatment, and three

months posttreatment. Pretreatment measures taken during initial screening included baseline measures of smoking rate and abstinence self-efficacy. The Myers-Briggs Type Indicator was also administered during initial screening. Immediately following treatment smoking status was assessed, and at one, two, and three month follow-ups smoking rate and abstinence self-efficacy were each measured again.

The data generated in this study were analyzed using 2 x 2 chi-square, 2 x 3 chi-square, treatments by periods analysis of variance, Pearson correlation coefficients, and a multiple regression analysis. All tests of significance were made at the .05 level of significance. No significant differences between treatment conditions were noted in the achievement of initial abstinence from smoking. In addition, no significant differences in abstinence were reported between treatment or control conditions 2 or 3 months posttreatment. Self-efficacy scores did increase for both treatment conditions between the end of treatment and one month follow-up, but no significant differences in abstinence self-efficacy were noted between groups at any points in this study. Similarly, among those not abstinent, the reported number of cigarettes smoked per day did decrease for both treatment conditions between the end of treatment and one month follow-up, but no significant

differences between groups in number of cigarettes smoked was noted at any point in the program.

To determine whether personality type, as measured by the Myers-Briggs Type Indicator, could predict abstinence from smoking, correlations between subjects reported preferences and abstinence were analyzed using Pearson correlation coefficients and multiple regression analysis. Considered as a group, the four preference indices of the MBTI failed to correlate significantly with abstinence when measured at the end of the study. One significant correlation was obtained between the Thinking dimension of the Thinking/Feeling Index and abstinence, but given the size of the sample and the modest correlation obtained, this was regarded as resulting from a possible statistical aberration.

Conclusions

Based on the findings of the present study, it may be concluded that having subjects imagine a lapse from abstinence, and a subsequent recovery from that lapse, does little to increase the likelihood that one will achieve or maintain abstinence from smoking beyond that obtained with the use of the more traditional continuous abstinence focus. Although it was reasoned that having subjects imagine a lapse and recovery episode would increase abstinence self-

efficacy beyond that observed with the continued abstinence focus, this study suggests that this is not the case. Perhaps subjects' abstinence self-efficacy is enhanced as much by perceiving themselves as able to maintain abstinence without lapsing as it is by perceiving themselves as being able to recover from a lapse once it occurs.

Although the goal of the treatments used in this study was not to reduce the number of cigarettes smoked per day, the findings of this study suggest that the inclusion of lapse rehearsal suggestions and imagery does not significantly alter smoking rate beyond that achieved with continued abstinence suggestions and imagery.

Although this study found no significant correlation between the four primary preference indices on the Myers-Briggs Type Indicator and abstinence, there was one significant correlation found between the Thinking dimension of the Thinking/Feeling Index and abstinence. Although the obtained correlation was modest, and may be an anomaly of the present study, this seems to suggest that there may be some relationship between those personality characteristics associated with the Thinking dimension of the MBTI and abstinence. Further research will be needed to validate and clarify this relationship.

Finally, subjects' responses to items on the follow-up questionnaire used to assess time spent practicing self-

hypnosis, ease of learning self-hypnosis, and reported ease of quitting smoking suggests that subjects in this study did not derive any direct benefit from the training in self-hypnosis which was provided.

Recommendations

Due to the ever growing concern over the health hazards of cigarette smoking, and the influence of social pressure to not smoke, increased numbers of long-term smokers are expressing an interest in stopping smoking. Many of these smokers will find it difficult to stop smoking of their own accord and will seek help. To maximize the likelihood of successful outcome, better smoking cessation procedures will need to be developed. One aspect of smoking cessation which needs to be studied further is the relapse process. It is hoped that a better understanding of the relapse process will culminate in more powerful techniques to prevent relapse. As Shiffman et al. (1985) have noted, initial cessation rates of 70% to 100% are not uncommon. However, initial abstinence is frequently lost within the first months, and 75% to 88% of those who "quit" will be smoking again within six months (Hunt and Matarazzo, 1973).

This study investigated one possible approach for reducing the incidence of relapse within a hypnotic smoking cessation program. Although the use of the lapse rehearsal

technique employed did not reduce the rate of relapse, there were several limitations in this study that should be addressed in future research.

First, it would have been highly desirable to use a larger sample size. The small number of subjects used in this study greatly limits the certainty of the conclusions reached. In addition, the small sample employed prevents accurate generalizations of the obtained findings beyond the present study. A second limitation of this study which should be addressed in future research concerns the few number of treatment sessions employed. Subjects in the present study only underwent three treatment sessions before they agreed to stop smoking, and of these the first session was limited preparatory suggestions to increase motivation and did not include exposure to the lapse rehearsal or continued abstinence suggestions or imagery. Hence, subjects in this study were only exposed to the actual treatment portion of the package twice before quitting smoking. Had subjects received the treatment suggestions and imagery over a longer period, more pronounced effects may have been obtained.

Another limitation of the present study which should be addressed in future work on smoking cessation is the limited duration of follow-up. Although the literature suggests that significant relapse will occur within 3 months (Hunt

and Bospalec, 1974; Byrne and Whyte, 1987), it is possible that some differences between conditions which were undetected in this study may have emerged if a longer follow-up had been undertaken. A final improvement to the present would be to include a more precise method of assessing smoking status. All of the conclusions reached in this study result from subjects' self-reports and, therefore, must be assumed to contain some unknown measure of error due to misreporting.

In addition to the above improvements which could be made to the present study, there are several areas of related research which this study did not address that could be important for future research. First, the merits of individual versus group presentations of the same smoking cessation package should be studied. Most of the studies in which treatment is presented in an individual form involve the use of idiosyncratic methods which are tailored to the individual. Group treatment approaches, on the other hand, employ standard methods which are not tailored to individuals and are often quite different than those used individually. Missing from the literature are studies which compare the identical treatment regimen presented in both groups and individual formats. The lapse rehearsal suggestions and imagery used in this study may have promoted

a different outcome had they been administered on an individual basis.

Another aspect of smoking cessation which needs to be addressed concerns ways to maximize the impact of positive social support. A number of subjects in the present study expressed a need for additional help in maintaining abstinence away from and between sessions. One option may be to form adjunctive support groups consisting of persons undergoing treatment for smoking who could meet and assist one another in coping with quitting smoking and maintaining abstinence. The value of incorporating these type of support groups into a smoking cessation program needs to be researched.

Finally, the possible correlation between emotional/ social adjustment and perceptions of deprivation should be explored. It may be that persons experiencing personal or social problems at the time of undergoing treatment for smoking may experience more intense feelings of deprivation when they stop smoking and, at the same time, may be less well prepared to cope with the feelings of deprivation which accompany cessation from smoking.

Further research in these areas, and others, could represent important steps in developing more effective methods to assist smokers who desire to stop smoking.

LIST OF REFERENCES

- Agee, L.L. (1983). Treatment procedures using hypnosis in smoking cessation programs: A review of the literature. Journal of the American Psychosomatic Dentistry and Medicine, 30, 111-126.
- Araoz, D.L. (1982). Hypnosis and sex therapy. New York: Brunner/Mazel.
- Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavior change. Psychological Review, 89, 191-215.
- Barkley, R.A., Hastings, J.E., and Jackson, T.L., Jr. (1977). The effects of rapid smoking and hypnosis in the treatment of smoking behavior. International Journal of Clinical and Experimental Hypnosis, 25, 7-17.
- Baumgartner, T. (1984). The effects of an abstinence self-efficacy induction programmatic focus on cigarette smoking relapse (Doctoral dissertation, University of Mississippi, 1984). Dissertation Abstract International, 45, 2444A.
- Berkowitz, B., Ross-Townsend, A., and Kohlberger, R. (1979). Hypnotic treatment of smoking: The single-treatment method revisited. American Journal of Psychiatry, 136, 83-85.
- Bernstein, D.A. (1970). The modification of smoking behavior: An exhaustive review. In V.A. Hunt (Ed.), Learning Mechanisms in Smoking. Chicago: Aldine.
- Bonekat, W.H., Miler, Robert, M. and Staats, B.A. (1987). Smoking and cough snycope: Follow-up in 45 cases. The International Journal of the Addictions. 22(5), 413-419.
- Bowers, K.S. (1978). Listening with the third ear: on paying inattention effectively. In F.H. Frankel and H.S. Zamansky (Eds.), Hypnosis at its bicentennial. New York: Plenum.
- Brownell, K.D., Marlott, G.A., Lichtenstein, E., and Wilson, T.G. (1986). Understanding and preventing relapse. American Psychologist, 41, 765-782.

- Byrne, D.G., and Whyte, H.M. (1987). The efficacy of community-based smoking cessation strategies: a long-term follow-up study. The International Journal of the Addictions, 22(8), 791-801.
- Cautela, J.R. (1966). Treatment of compulsive behavior by covert sensitization. Psychological Record, 16, 33-41.
- Cautela, J.R. (1975). Covert conditioning in hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 23, 15-27.
- Cohen, S.B. (1969). Hypnosis and smoking. Journal of the American Medical Association, 208, 335-337.
- Colletti, G., Supnick, J., and Abueg, F.R. (1982). Assessment of the relationship between self-reported smoking rate and ecolyzer measurement. Addictive Behaviors, 7, 183-188.
- Critenbaum, C., King, M., and Cohen, W. (1985). Modern clinical hypnosis for habit control. New York: Norton.
- Delahunt, J., and Curran, J.P. (1976). Effectiveness of negative practice and self-control techniques in the reduction of smoking behavior. Journal of Consulting and Clinical Psychology, 44(6), 1002-1007.
- DePiano, F.A., and Salzberg, H.C. (1986). Clinical applications of hypnosis. New Jersey: Ablex Publishing Corporation.
- DiClemente, C. (1981). Self-efficacy and smoking cessation maintenance: A preliminary report. Cognitive Theory and Research, 5, 175-187.
- Elman, D. (1981). Hypnotherapy. Glendale: Westwood Publishing Co.
- Erickson, M.H. and Rossi, E.L. (1979). Hypnotherapy: An exploratory casebook. New York: Irvington.
- Eysenck, H.F., and Rachman, S. (1965). The causes and cures of neuroses. San Diego: Knapp.
- Fagerstrom, K.O. (1982). A comparison of psychological and pharmacological approaches in smoking cessation. Journal of Behavioral Medicine, 5, 343-352.

- Fix, A. Daughton, D., Kass, I., and Bell, C. (1978). Immediate carbon monoxide estimates and self-reported smoking. Perceptual and Motor Skills, 49, 675-678.
- Frederiksen, L., Martin, J. and Webster, J. (1979). Assessment of smoking behaviors. Journal of Applied Behavior Analysis, 12, 653-664.
- Gardner, G.G., and Olness, K. (1981). Hypnosis and hypnotherapy with children. New York: Grune and Stratton.
- Gerson, P., and Lanyon, R.I. (1972). Modification of smoking behavior with an aversion-desensitization procedure. Journal of Consulting and Clinical Psychology, 38, 399.
- Gordon, T., Kannel, W.B., and McGee, D.E. (1974). Death and coronary attacks of men after giving-up cigarette smoking. Lancet, 1, 1345.
- Haley, J. (1977). Problem solving therapy. San Francisco: Jersey-Bass.
- Hall, J.A. and Crasilneck (1970). Development of a hypnotic technique for treating chronic cigarette smoking. International Journal of Clinical and Experimental Hypnosis, 18, 283-289.
- Hilgard, E.R. (1965). Hypnotic susceptibility. New York: Harcourt Brace World Inc.
- Hilgard, J.R. (1970) Personality and hypnosis: A study of imaginative involvement. Chicago: The University of Chicago Press.
- Holroyd, J. (1980). Hypnosis treatment for smoking: an evaluative review. International Journal of Clinical and Experimental Hypnosis, 28, 341-357.
- Hunt, W.A., Barnett, L.W., and Branch, L.G. (1971). Relapse rates in addiction programs. Journal of Clinical Psychology, 27, 455-456.
- Hunt, W.A., Bepalec, D.A. (1974). An evaluation of current methods of modifying smoking behavior. Journal of Clinical Psychology, 30, 431-438.

- Hunt, W.A., and Matarazzo, J.E. (1973). Three years later: Recent developments in the experimental modification of smoking behavior. Journal of Abnormal Psychology, 81, 107-114.
- Johnson, E., and Donoghue, J.R. (1971). Hypnosis and smoking: A review of the literature. American Journal of Clinical Hypnosis, 13, 265-272.
- Jung, C. (1923). Psychological Types. New York: Harcourt Brace.
- Kaplan, H.S. (1979). Disorders of sexual desire. New York: Brunner/Mazel.
- Katz, N.W. (1980). Hypnosis and the addiction: A critical review. Addictive Behaviors, 5, 41-47.
- Keirse, D., and Bates, M. (1984). Please understand me. Del Mar: Prometheus Nemesis.
- Keutzer, C., Lichtenstein, E., and Mees, H. (1968). Modification of smoking behavior: a review. Psychological Bulletin, 70, 520-533.
- Kline, M.V. (1970). The use of extended group hypnotherapy sessions in controlling cigarette habituation. International Journal of Clinical and Experimental Hypnosis, 18, 270-282.
- Krasnegor, N. (1980). Analysis and modification of smoking behavior: a review. Behavior Modification, 4, 35-56.
- Kroger, W.S., and Fezler W.D. (1976). Hypnosis and behavior modification: Imagery conditioning. Philadelphia: J.P. Lippincott.
- Lambe, R., Osier, C., and Frank, P. (1986). A randomized controlled trial of hypnotherapy for smoking cessation. Journal of Family Practice, 22(1), 61-65.
- Lando, H.A. (1975). A comparison of excessive and rapid smoking in the modification of chronic smoking behavior. Journal of Consulting and Clinical Psychology, 43, 350.
- Lando, H.A. (1977). Successful treatment of smokers with a broad-spectrum behavioral approach. Journal of Consulting and Clinical Psychology, 45, 361-366.

- Lando, H. (1978). Toward a clinically effective paradigm for the maintenance of non-smoking. Behavior Therapy, 9, 666-668.
- Lando, H. and McGovern, P. (1982). Three-year data on a behavioral treatment for smoking: A follow-up note. Addictive Behaviors, 7, 177-181.
- Lazarus, A.A. (1977). In the mind's eye. New York: Rawson.
- LeCron, L.M. (1964). How to stop smoking through self-hypnosis. Englewood Cliffs, N.J.: Prentice Hall.
- Lichtenstein, E. (1982). The smoking problem: A behavioral perspective. Journal of Consulting and Clinical Psychology, 50, 804-819.
- Lichtenstein, E., and Keutzer, C.S. (1969). Experimental investigation of diverse techniques to modify smoking: a follow-up report. Behavior Research and Therapy, 7, 139.
- Maes, S., Spielberger, C.D., Defares, P.B., and Sarason, I.G., (1988). Topics in health psychology. New York: Wiley and Sons.
- Marlatt, G.A. (1978). Craving for alcohol, loss of control, and relapse: A cognitive-behavioral analysis. In P.E. Nathan, G.A. Marlatt and T. Loberg (Eds.). Alcoholism: New Directions in Behavioral Research and Treatment. New York: Plenum.
- Marlatt, G.A., and Gordon, J.R. (1980). Determinants of relapse: Implications for the maintenance of behavior change. In P. O. Davidson and S. M. Davidson (Eds.), Behavioral medicine: changing health lifestyles (pp. 410- 452). New York: Pergamon.
- Marlatt G. A., and Gordon, J.R. (Eds.), (1985). Relapse prevention: Maintenance strategies in addictive behavior change. New York: Guilford.
- Martin, J.E., Prue, D., Collins, Jr. F., and Thames, C. (1981). The effects of graduated filters on smoking exposure: risk reduction or compensation? Addictive Behaviors, 6, 167-176.
- Masters, W.H., and Johnson, V.E. (1970). Human sexual inadequacy. Boston: Little, Brown.

- McMahon, F.B., (1976). The forty-eight item counseling evaluation test: Revised. Manual. Los Angeles Western Psychological Services.
- Miller, M.M. (1976). Hypnoaversion treatment in alcoholism, nicotine and weight control. Journal of the National Medical Association, 68, 129-130.
- Myers, I.B., and McCaulley, M.H. (1986). Manual: A guide to the development and use of the Myers-Briggs Type Indicator. Palo Alto: Consulting Psychologists Press.
- Nuland, W. (1970). A single-treatment method to stop smoking using ancillary self-hypnosis: Discussion. International Journal of Clinical and Experimental Hypnosis, 18, 257- 260.
- Nuland, W., and Field, P.B. (1970). Smoking and hypnosis: A systematic clinical approach. International Journal of Clinical and Experimental Hypnosis, 18, 290-306.
- Ockene, J.K., Hymowitz, N., Sexton, M. and Broste, S.K. (1982). Comparisons of patterns of smoking behavior change among smokers in the multiple risks factor intervention trial. Preventive Medicine, 11, 621-638.
- Pederson, L. L., Scrimgeour, W.G., and Lefcoe, N.M. (1975). Comparison of hypnosis plus counseling, counseling alone, and hypnosis alone in a community service smoking withdrawal program. Journal of Consulting and Clinical Psychology, 43, 920.
- Pederson, L. L., Scrimgeour, W.G., and Lefcoe, N.M. (1979). Variables of hypnosis which are related to success in a smoking withdrawal program. International Journal of Clinical and Experimental Hypnosis, 27, 14-20.
- Perry, C., Gelfand, R., and Marcovitch, P. (1979). The relevance of hypnotic susceptibility in the clinical context. Journal of Abnormal Psychology, 88, 592-603.
- Perry, C., and Mullen, G. (1975). The effects of hypnotic susceptibility on reducing smoking behavior treated by an hypnotic technique. Journal of Clinical Psychology, 31, 498-505.
- Pomerleau, O. (1981). Underlying mechanisms in substance abuse: Examples from research on smoking. Addictive Behaviors, 6, 187-196.

- Rabkin, S.W., Boyko, E., Shane, F., and Kaufert, J. (1984). A randomized trial comparing smoking cessation programs utilizing behavior modification, health education or hypnosis. Addictive Behaviors, 9(2), 157-173.
- Rogers, R., Deckner, C., and Mewborn, R. (1978). An expectancy-value theory approach to the long-term modification of smoking behavior. Journal of Clinical Psychology, 34, 562-566.
- Russell, M.A.H. (1980). Nicotine and its regulation. Journal of Psychosomatic Research, 24, 253-264.
- Russell, M.A.H., Jarvis, M., Iyer, R., and Feyerabend, C. (1980). Relation of nicotine yield of cigarettes to blood nicotine concentration in smokers. British Medical Journal, 1, 1972.
- Sanders, S. (1977). Mutual group hypnosis and smoking. American Journal of Clinical Hypnosis, 20, 131-135.
- Schubert, D.K. (1983). Comparison of hypnotherapy with systematic relaxation in the treatment of cigarette habituation. Journal of Clinical Psychology, 39(2), 198-202.
- Schwartz, J.L. (1969). A critical review and evaluation of smoking control methods. Public Health Reports, 84, 483.
- Shewchuk, L.A., Dubren, R., Burton, D., Forman, M., Clark, R. R., and Jaffin, A.R. (1977). Preliminary observations on an intervention program for heavy smokers. International Journal of the Addictions, 12, 323-336.
- Shiffman, S. (1982). Relapse following smoking cessation: A situational analysis. Journal of Consulting and Clinical Psychology, 50, 71-86.
- Shiffman, S., Read, L., Maltese, J., Boykin, D., and Jarvik, M.E. (1985). Preventing relapse in ex-smokers: A self-management approach. In G.A. Marlatt and J.R. Gordon (Eds.) Relapse Prevention. New York: Guilford Press.
- Shorr, J. (1974). Psychotherapy through imagery. New York: Intercontinental Medical Corporation.
- Shorr, J. (1977). Go see the movie in your head. New York: Popular Library.

- Singer, J.L. (1975). The inner world of daydreaming. New York: Harper and Row.
- Singer, J.L. (1979). Imagery and affect in psychotherapy: Elaborating private scripts and generating contexts. In A.A. Sheikh and J.T. Shaffer (Eds.), The Potential of Fantasy and Imagination. New York: Brandon House.
- Singer, J.L. and McCraven, V. (1961). Some characteristics of adult daydreaming. Journal of Psychology, 51, 151-164.
- Sipich, J.F., Russell, R.K., and Tubias, L.L. (1974). A comparison of covert sensitization and nonspecific treatment in the modification of smoking behavior. Journal of Behavior Therapy and Experimental Psychiatry, 5, 201.
- Spiegel, H. (1970). A single treatment method to stop smoking using ancillary self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 18, 235-250.
- Spiegel, H., and Spiegel, D. (1978). Trance and treatment: clinical uses of hypnosis. New York: Basic Books.
- Stanton, H.E. (1978). A one-session hypnotic approach to modifying smoking behavior. International Journal of Clinical and Experimental Hypnosis, 26, 22-29.
- Straatmeyer, A.J. (1984). Hypnotic aversive and positive imagery in the cessation of smoking and the maintenance of nonsmoking behavior. Journal of Mental Imagery, 8(2), 57-66.
- Susskind, Dorothy (1970). The idealized self-image and the development of learned resourcefulness. In E. Dengrove (Ed.), Hypnosis and Behavior Therapy. Springfield, Illinois: Charles Thomas, pp. 317-329.
- Sutherland, A., Amit, Z., Golden, M., and Rosenberger, Z. (1975). Comparison of three behavioral techniques in the modification of smoking behavior. Journal of Consulting and Clinical Psychology, 43, 443.

United States Department of Health, Education, and Welfare (1971). The health consequences of smoking. A report of the Surgeon General: 1972. United States Department of Health, Education, and Welfare, Public Health Service, Health Services and Mental Health Administration. Department of Health Education and Welfare, Public Health Service, Health Services and Mental Health Administration. Department of Health Education and Welfare Publication No. (HSM) 71-7513.

United States Department of Health, Education, and Welfare (1972). The health consequences of smoking. A report of the Surgeon General: 1972. United States Department of Health, Education, and Welfare, Public Health Service, Health Services and Mental Health Administration. Department of Health, Education, and Welfare Publication No. (HSM) 72-7516.

United States Department of Health, Education, and Welfare, Public Health Service (1979). Smoking and health. A report of the Surgeon General. Department of Health, Education, and Welfare Publication No. 79-50066). Washington, D.C.: United States Government Printing Office.

United States Public Health Service (1964). Smoking and Health. Report of the Advisory Committee to the Surgeon General of the Public Health Service. United States Department of Health, Education, and Welfare, Public Health Service, Centers for Disease Control. Public Health Service Publication No. 1103.

United States Public Health Service (1975). The health consequences of smoking, 1975. Washington, D.C.: United States Department of Health, Education and Welfare. Department of Health Education and Welfare Publication No. (CDC) 77-8704.

United States Public Health Service (1977). The Smoking Digest. Washington, D.C. : United States Department of Health, Education and Welfare.

United States Public Health Service (1979). Smoking and Health. A report of the Surgeon General. United States Department of Health, Education, and Welfare, Public Health Service, Office of the Assistant Secretary of Health, Office on Smoking and Health. Department of Health, Education, and Welfare Publication No. (PHS) 790-50066.

- Vogt, T.M. (1982). Cigarette smoking: History, risks, and behavior change. International Journal of Mental Health, 11(3), 6-43.
- Vogt, T.M., Selvin, S., and Hulley, S.B. (1979). Comparison of biochemical and questionnaire estimates of tobacco exposure. Preventive Medicine, 8, 23.
- Von Dedenroth, T.E. (1968). The use of hypnosis in 1000 cases of "Tobaccomaniacs." American Journal of Clinical Hypnosis, 3, 194.
- Wadden, T.A., and Flaxman, J. (1981). Hypnosis and weight loss: A preliminary study. International Journal of Clinical and Experimental Hypnosis, 29, 162-173.
- Watkins, H.H. (1976). Hypnosis and smoking: A five-session approach. International Journal of Clinical and Experimental Hypnosis, 24, 381-390.
- Wilson, S.C., and Barber, T.X. (1983). The fantasy-prone personality: Implications for understanding imagery, hypnosis, and parapsychological phenomena. In A.A. Sheikh (Ed.). Imagery (pp. 340-387). New York: Wiley.

APPENDIX A

CONSENT TO ACT AS A SUBJECT IN AN EXPERIMENTAL STUDY

CONSENT TO ACT AS A SUBJECT IN AN EXPERIMENTAL STUDY

TITLE: A Comparison of Two Methods for Achieving and Maintaining Abstinence from Smoking.

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DESCRIPTION: Participation will require attendance at one information and three group treatment sessions held one week apart. You will also attend six follow-up sessions held at one month intervals.

During the first information session, you will be asked to supply information about yourself and your smoking history. You will also complete two paper and pencil tests to help the investigator learn more about you and your experiences. After the above information has been collected, the procedural details of the study will be fully explained and any questions answered. Following this, you will receive an outline of the steps to be followed in the program. This first session will last approximately 90 minutes.

During each of the three remaining treatment sessions, you will experience group hypnosis and suggestions to help you stop smoking more easily. You will be asked to stop smoking on the evening before the third session. Each of these three treatment sessions will require approximately 90 minutes.

Following the third treatment session, you will be asked to attend one follow-up session each month for a period of six months. At each of these sessions abstinence data will be collected. Each follow-up session will last 15 minutes.

DESCRIPTION (Continued):

If you are selected as a member of the waiting-list group, you will participate in the information gathering condition described above. Following this, you will receive no treatment for a period of six months. After six months you will receive treatment which is equal to the best treatment offered the other groups. Assignment to one of the three groups used in this study, including the waiting list group, will be done randomly.

RISK AND BENEFITS: The possible benefits of participation in this study include gaining the numerous health advantages that occur when one stops smoking. In addition, you will learn how to use self-hypnosis techniques which may have a variety of applications in daily life. Another benefit may be the satisfaction of helping to promote research on smoking behavior. The only identified risk of participation include some normal discomfort associated with nicotine withdrawal. This discomfort may include: difficulty with concentration, slight dizziness, increased nervousness, and headaches of minor to moderate severity. These discomforts are most likely to occur immediately following withdrawal and are typically of limited duration.

CONFIDENTIALITY: The information that you give about yourself and your smoking history, as well as all test results, will be kept confidential. This information will be kept secured in a locked cabinet in the primary investigator's office. At the conclusion of the study all materials will be destroyed by shredding. Any data kept for later use will be coded so that no identification of your participation in this study can be made.

Information shared in the group will remain in the group to the extent agreed upon by group members. You will be asked to sign a group confidentiality contract to acknowledge your agreement.

RIGHT TO WITHDRAW: You are free to discontinue your participation in this study at any time. Withdrawal from this study will not affect your status with the University in any way.

COMPENSATION FOR ILLNESS OR INJURY: In the event of physical illness or injury resulting from this research, no monetary compensation will be made.

VOLUNTARY CONSENT: I certify that I have read the preceding or it has been read to me, and that I understand its contents. I acknowledge that I have been given the opportunity to ask questions regarding the study, hazards, discomforts, and benefits that were not clear to me, and that questions I asked were fully answered. I understand that further questions will be answered by Dr. Sykes or Mr. Lutz. A copy of this consent form has been given to me. My signature below means that I freely agree to participate in this experimental study. Also, by signing I am stating that I have not been asked to waive any rights which I may have to take action against either the Research Investigators, Texas A&M University or the University of Mississippi.

Date

Signature

APPENDIX B
SMOKING QUESTIONNAIRE

SMOKING QUESTIONNAIRE

1. Name: _____
2. Address: _____
3. Age: _____ (years)
4. Occupation: _____
5. Married:___ Single:___ Divorced:___ Widowed:___
6. At what age did you start smoking? _____
7. Why did you start smoking? _____

8. Has your smoking increased recently? Yes ___ No___
9. Do you smoke:
 - a) Cigarettes Yes ___ No ___
 Number per day at present: _____
 Maximum number per day: _____
 What brand of cigarettes do you smoke? _____
 - b) Cigars Yes ___ No ___
 Number per day at present: _____
 Maximum number per day: _____
 - c) Pipe Yes ___ No ___
 Ounces of tobacco per week: _____
10. Does your environment include other smokers:
 - a) at home Yes___ Heavy___ Light___ No___
 - b) at work Yes___ Heavy___ Light___ No___
 - c) socially Yes___ Heavy___ Light___ No___
11. Do you inhale the smoke? Yes ___ No ___
 Regularly? Yes ___ No ___
12. At what time of day, if any, do you smoke more heavily?
 State reason if apparent

13. List the reasons why you smoke NOW: (e.g. enjoyment, habit, boredom, something to do, tension, can't stop, gives a "lift", can't work without, etc.)

14. Have you in the past REALLY tried to stop smoking?
Yes _____ No _____

If yes, list approximate dates. _____

a) How long did you go without smoking before restarting? _____

b) Why did you restart? _____

c) How did you feel and what reactions (physical and mental) occurred when you stopped -- especially in the first one or two days? _____

15. Why do you NOW want to stop smoking? (If for health reasons please give details, especially if specific symptoms such as cough are present.) _____

16. Do you feel your motivation to stop smoking now is:

Excellent___ High___ Moderate___ Low___ Nil___

17. List as many benefits as you can that YOU personally will gain once you stop smoking. _____

18. In what way will others benefit when you stop smoking?

19. Have you ever experienced hypnosis before? Yes___ No___

If yes, when and under what circumstances? _____

APPENDIX C

ONE MONTH STOP-SMOKING FOLLOW-UP QUESTIONNAIRE

ONE MONTH STOP-SMOKING FOLLOW-UP

1. Name: _____
2. Date: _____
3. Age: _____
4. Male: _____ Female: _____
5. Married: _____ Single: _____ Divorced: _____
6. Have you smoked (even one puff!) since your quit-day?
Yes _____ No _____
7. Are you currently smoking: Yes _____ No _____
Number per day at present: _____
Maximum number per day: _____
What brand of cigarettes are you currently smoking?

8. Briefly describe any changes in your smoking behavior
since joining the group:

9. Thinking back to quit week, how difficult was it for
you to quit smoking?

1	2	3	4	5	6	7	8	9	10
Very Easy									Very Difficult
10. What, if anything, was or is the most difficult part of
quitting for you?

11. What, if any, uncomfortable experiences did you have
during quit week?

12. Approximately how much total time did you spend on the entire program during each week?

Week 2	Hours _____	Minutes _____
Week 3	Hours _____	Minutes _____
Week 4	Hours _____	Minutes _____

13. Approximately how much time was spent doing self-hypnosis during each week?

Week 2	Hours _____	Minutes _____
Week 3	Hours _____	Minutes _____
Week 4	Hours _____	Minutes _____

14. How much time was spent reviewing the written materials?

Week 2	Hours _____	Minutes _____
Week 3	Hours _____	Minutes _____
Week 4	Hours _____	Minutes _____

15. What verbal suggestions did you use with self-hypnosis?

16. What visual imagery did you use with the self-hypnosis?

17. How easy was it for you to learn self-hypnosis?

	1	2	3	4	5	6	7	8	9	10	
Very											Very
Easy											Difficult

18. Have you retained your ability to use self-hypnosis?

Yes ___ No ___

19. If so, have you used it for any problem solving other than smoking? Yes ___ No ___

If yes, what for? _____

20. Will you continue to make use of self-hypnosis?

Yes ___ No ___

Why or why not _____

21. Do you feel anything about the program was poorly examined? Yes ___ No ___

If yes, what aspect of the program? _____

22. Overall, how did the program compare with the expectations you had when you started?

23. In the following space please feel free to record any other comments you wish to make. Your complete honesty will be appreciated.

APPENDIX D

TWO AND THREE MONTH STOP-SMOKING FOLLOW-UP QUESTIONNAIRE

TWO AND THREE MONTH STOP-SMOKING FOLLOW-UP

1. Name: _____
2. Date: _____
3. Age: _____
4. Male: _____ Female: _____
5. Married: _____ Single: _____ Divorced: _____
6. Have you smoked (even one puff!) since your quit-day?
Yes _____ No _____
7. Are you currently smoking: Yes _____ No _____
Number per day at present: _____
Maximum number per day: _____
What brand of cigarettes are you currently smoking?

8. Briefly describe any changes in your smoking behavior during the past month.

9. In the following space please feel free to record any other comments you wish to make. Your complete honesty will be appreciated.

APPENDIX E
ABSTINENCE SELF-EFFICACY INSTRUMENT

APPENDIX F
DEEPENING SUGGESTIONS

DEEPENING SUGGESTIONS

Now, as you continue, you can listen to and absorb some information which will increase your overall well being. As you listen to me just let yourself drift deeper into relaxation. . . . let that nice, comfortable feeling soak in more completely with each breath that you take.

The more you allow yourself to just drift and float along the more comfortable and pleasant this time will be for you. Relaxing so completely as you just drift along. . . . shutting-out all outside sounds except my voice. . . . nothing but my voice and your relaxation are important right now. Relaxing deeper and knowing that good things will happen as a result of this.

"As you remain comfortably relaxed, just imagine in your mind that you are in a store or building with an elevator. See yourself standing in front of the elevator on the tenth floor. Notice the lights above the elevator, and you can see that the elevator is somewhere above the tenth floor . . perhaps 11 or 12. Go ahead and push the down button. Let me know by moving the index finger on your right hand when the elevator doors open at the tenth floor. Good! Now, step into the elevator and make yourself comfortable. You can stand or even have a chair waiting for you. It's your elevator, and just let yourself be comfortable. As the elevator doors close, the tenth floor

light is still on and doesn't go off until the elevator begins to move down very slowly. As the elevator moves down, just let yourself relax deeper and deeper. I will count as the elevator makes its nonstop trip to the first floor. The tenth floor light is out, and the ninth floor light comes on. Deeper and deeper relaxed. . . 8 . . . just really let yourself relax deeper and deeper. . . 7 . . . so comfortable. . . 6 . . . that's right. . . deeper and deeper relaxed . . . 5 . . . when you get to the first floor . . . 4 . . . so relaxed now . . . the door will open . . . 3 . . . and when you get off, you will find yourself . . . 2 . . . in a beautiful garden . . . completely relaxed and just listening to my voice . . . 1 . . . The doors open. . . go ahead . . . just step into the beautiful garden . . . find a comfortable bench or other comfortable spot and just sit down and enjoy the splendor of the garden."

APPENDIX G

MOTIVATION/EGO STRENGTHENING SUGGESTIONS

MOTIVATION/EGO STRENGTHENING SUGGESTIONS

You are here, NOW, because you want to give-up smoking cigarettes. There are many reasons why this is an excellent decision that you have made. Let's review some of these reasons.

a.) HEALTH

You are aware that cigarette smoking causes lung cancer, bronchitis, emphysema, and numerous other health problems. I doubt that you would willingly expose yourself to some type of infectious disease, knowing that it would kill you at some point. And now you've made that same decision not to expose yourself to the many diseases of smoking.

b.) REACTION OF OTHERS

Your cigarette is often a barrier between you and someone that you care about and who cares about you. Because some people are very sensitive to cigarette smoke, your smoking keeps you from enjoying the close relationship with others that you would like. The foul smell of smoke on your breath and clothes is also something that may keep others from being as close to you as they would like.

Another thing to consider is the reaction of children to your smoking. In a relationship with kids, your smoking is a signal to the child that he/she should do the same

thing to be like you - - - a real adult. Is this the message that you really want to send?

c.) EXPENSE

As a smoker you burn-up a lot of money with cigarettes. If you smoke just one pack a day, this totals \$540.00 in a years time. This same money will buy you much more happiness and joy when spent on other things.

d.) PERSONAL SATISFACTION

Finally, and perhaps most important of all, is your personal satisfaction. Whenever you accomplish something that you desire, you receive a great feeling of pride and satisfaction. When you succeed at something which others think is hard to do, like giving-up cigarettes, there is an even greater sense of joy and happiness when you succeed.

and you WILL SUCCEED.

The joy and happiness that you will experience from giving-up cigarettes will more than make-up for the slight discomfort that some people feel. The positive feelings that you will have will be much greater than the temporary satisfaction that you got from cigarettes in the past.

In the past when you first learned to smoke, you were perhaps curious about smoking. You wanted to feel grown-up. . . an adult. You may have wanted to be "one-of-the-gang" to do as your friends were doing . . to present a certain image to others.

Now that you are an adult - really adult - you view smoking in a very different way. You no longer want that image of yourself; you no longer need to smoke to prove anything about yourself. You are mature and a sign of this maturity is your strong determination to stop smoking.

Now, as you think about not smoking, perhaps you may have had a little apprehension. It is natural to have some doubts. But as you come closer to giving-up cigarettes, you'll find yourself eager to be free of this habit. You will become more and more convinced that you'll give-up smoking with ease. . . . you'll be more convinced that you can give-up smoking without difficulty. You are more determined everyday to become an ex-smoker.

APPENDIX H
COMFORT AND WEIGHT CONTROL SUGGESTIONS

COMFORT AND WEIGHT CONTROL SUGGESTIONS

Perhaps you are worried about possible discomforts after you stop smoking including: difficulty with concentration, increased nervousness, some dizziness, maybe an occasional headache, or whatever you think may be unpleasant. Now for some people these discomforts never even appear at anytime.

However, what I want to share with you is the knowledge that you can, and will "turn down" the volume of any of these discomforts should they occur - like you would the sound on your television or radio - so that they won't bother you in any way.

Right now what I want you to do is to take your thumb and finger and gently rub them together. . . Good. . . from now on this is your cue . . . your signal for "turning down" any discomfort that you may feel when you stop smoking. As you use this cue over and over again. . . you lower. . . reduce. . . and silence the discomfort just like turning down the sound on your TV or radio. In place of any possible discomfort. . . you will notice comfortable, pleasant feelings coming over you. You will feel more confident and determined to not smoke.

Another concern that some people have is gaining weight when they quit smoking. When you stop smoking food does taste better, but that doesn't mean you will eat more.

Although other people overeat when they quit smoking, you are aware of this and will be careful to eat properly. You will eat only enough to give you the amount of energy you need. You will watch to see that you do not eat more than you did before you stopped smoking. Your appetite will be fully satisfied with an amount of food just sufficient to keep you in good health and with the energy you need. You will maintain your weight at the proper level for your body.

You are learning how to use your subconscious mind to help yourself. You may have some thoughts of smoking and perhaps some mild desires to still smoke. . . but your mind will easily cope with and keep such thoughts to a minimum so that they will seldom, if ever, trouble you.

APPENDIX I

SELF-HYPNOSIS SUGGESTIONS

SELF-HYPNOSIS SUGGESTIONS

Because you have done so well tonight. . . you will be able to relax by yourself. . . deeply . . . whenever and wherever you choose to do so.

To enter this relaxed state by yourself . . . you will merely think to yourself, "Now, I will relax for a few minutes" and then you will count backwards from 20 towards 1. As you count. . . watch the numbers fade farther away as you become deeper and deeper relaxed. Now, I don't know how fast you will do this. . . and it really doesn't matter. . . it is kind of like swimming. Some people plunge into the deep water right away. While others wait a little longer BEFORE THEY GO IN DEEP and find it more enjoyable.

Each time you do this, somewhere between the number twenty and number one, all of the numbers will fade out. . . and you will notice that your body is comfortably relaxed and your mind is cleared of all distracting thoughts. You will be floating along. . . deeply and comfortably relaxed. . . and very aware of your thoughts.

You will be very aware of yourself. . . your thoughts will be turned inward. . . you can see things clearly. . . think deeply about yourself. . . and make important decisions. . . and understand how to achieve your desired goals more easily.

Although you will be very relaxed and comfortable. . .

like you are just before you fall asleep at night . . . you will not fall asleep when you are relaxing. When you are done, you will open your eyes. . . take a deep breath. . . and wake yourself fully. Upon wakening, you will always feel refreshed, alert, and confident of yourself.

APPENDIX J

LAPSE REHEARSAL SUGGESTIONS AND IMAGERY

LAPSE REHEARSAL SUGGESTIONS AND IMAGERY

If, after you give-up smoking, a thought of smoking, a desire for a cigarette comes to you, you will regard this as a normal occurrence and will stay calm. Not smoking is a matter of choice, self-determination and desire. Giving-up smoking is easy once you have a real desire and are determined to stay quit. You are stronger than any habit once you decide to break that habit. You have to stop smoking and will do so on the agreed upon day. After you give-up smoking your strength and determination grows stronger each day.

After you give-up smoking, should you make a mistake and once again smoke a cigarette, you will immediately recognize the significance of what you have done and will throw that cigarette away. You will regard any smoking after you quit as a temporary setback. You will not feel defeated by your experience and will, in fact, regard it as an important lesson which will bring you to think about and recommit yourself to full abstinence in the future. You are proud that you can control yourself in this way and, as a result, achieve your desire to not smoke anymore.

Now, using your imagination, visualize yourself in a social situation with a group of people . . . maybe friends or relatives. There are people of both sexes present that you see. You are among these people talking and listening

to what is being said. You are happy and at ease. You begin to notice that some others are smoking. You first smell the familiar smell of fresh cigarette smoke. . . and then you see the white cigarette dangling in someone's hand. Perhaps they are holding it in a provocative manner as people at parties sometimes do. You watch carefully as one or more people raise their cigarettes to their mouths and draw in on them. . . . more aware than you have been before.

After a minute or so, someone sees you looking at their cigarette and offers you one. You pause for a second and then accept the cigarette. The person who gives it to you reaches out and lights it for you. You draw in a large puff from that cigarette. This first puff is followed by another and then another. As you inhale each time you are surprised that you are actually smoking, since this is something that you don't want to do. You ask yourself "Why am I doing this right now?" You are aware of how irritating the smoke really is. Somehow it is not the way that you imagined that it would be. It is most unpleasant. Also, you realize how much you wish that you had abided by your decision to not smoke anymore. Your mind flashes on all of the reasons that you have for not smoking anymore. As you take another puff you become more convinced that you really don't want to smoke anymore. As you start to take still another puff, you

are struck with a desire to throw that cigarette away in a nearby ashtray. . . without further thought. . . you do.

Now, what I would like you to do is to imagine another scene, in your mind, where you are in the presence of someone who is important to you. Perhaps a business associate, a respected teacher, or anyone you are likely to have contact with whom you admire. Imagine that this person offers you a cigarette. . . see yourself accepting the cigarette, lighting it, and taking that first puff. . . once again, this puff is followed by several more puffs. . . but again, notice how disappointed you are with yourself. . . and notice how really bad that smoke tastes each time you inhale. You throw the cigarette away in a nearby ashtray. At this moment you again realize how strong you are. Your determination to not smoke is much stronger than your desire to smoke again. This temporary lapse has allowed you to experience smoking once again and reject it. You have decided to remain a non-smoker.

Now, imagine that you are at home all alone one night. You are feeling bored with nothing to do. Perhaps you have had a rough day, and you are feeling kind of uptight and/or frustrated. You think about driving to the store to buy some cigarettes. Suddenly, you remember a cigarette that you stashed before you quit "just in case." You go and dig out that smoke and light it up. You take a first puff,

followed by several more puffs in rapid succession. Again you notice how really disappointed you are with yourself. . . . you notice how really bad that smoke tastes each time you inhale. You make a decision to throw that cigarette away at once. As you do this, you realize how determined and strong you are. Your determination to not smoke is much stronger than your desire to smoke again. This temporary smoking has caused you to see how bad smoking really is. You have decided to remain a permanent non-smoker.

At this moment you realize how strong you are. You realize that your determination to not smoke is stronger than your desire to smoke again. You have just now made a decision to give-up smoking for good. This temporary lapse has allowed you to reevaluate your commitment to yourself. As a result, you have decided to remain a non-smoker.

APPENDIX K

CONTINUED ABSTINENCE SUGGESTIONS AND IMAGERY

CONTINUED ABSTINENCE SUGGESTIONS AND IMAGERY

After you stop smoking, if a thought of smoking, a desire for a cigarette, comes to you in your mind, you will regard this as a danger signal. You will immediately counteract this thought by thinking to yourself "I don't need or want to smoke, and I will not smoke since I have quit." After this, you will distract your mind with some type of activity, either mental or physical or both. As each day passes, your desire to smoke will fade farther and farther away, until soon you will have no desire to smoke. You will have given-up smoking for all of the reasons that you have, and you definitely do not want to smoke again.

Now, using your imagination, visualize yourself in a social situation with a group of people. . . maybe friends or relatives. There are people of both sexes present that you see. You are among these people talking and listening to what is being said. You are happy and at ease. You begin to notice that some others are smoking. You first smell the familiar smell of fresh cigarette smoke. . . and then you see the white cigarette dangling in someone's hand. Perhaps they are holding it in a provocative manner as people at parties sometimes do. You watch carefully as one or more people raise their cigarettes to their mouths and draw in on them.

After a minute or so, someone sees you looking at their cigarettes and offers you one. You are tempted for a few brief seconds. . . but you notice that before you can really consider the offer, your head shakes no in response. You smile and say that you do not smoke.

Now, what I want you to do is imagine another scene, in your mind, where you are with someone important to you. Perhaps a business associate, a respected teacher, or anyone you are likely to have contact with whom you look-up-to or admire. Imagine that this person offers you a cigarette. . . . and then see yourself refusing the cigarette. . . and notice how proud and happy you feel.

Now, imagine that you are home all alone one night. You are feeling bored with nothing to do. Perhaps you have had a rough day, and you are feeling kind of uptight and/or frustrated. You think about driving to the store to buy some cigarettes to help you relax some. But now notice how you quickly get rid of that idea. . . you renew your desire to remain a nonsmoker, and you find some activity to distract yourself with.

Having given-up smoking, the very thought of smoking is distasteful. The smell of tobacco smoke is unpleasant. After giving it up you know that you will never smoke again. What a relief to have no desire to smoke at all. You are happy to have let go of this habit. You will never smoke again.

BIOGRAPHICAL SKETCH

Ronald Lee Lutz was born on June 15, 1954 in Milwaukee, Wisconsin to Ronald and Idell Lutz. At the age of six, Ronald moved with his family to Sacramento, California, where he attended public schools and graduated from Luther Burbank Senior High School in 1972. Following graduation from high school, Ronald studied Social Science at Sacramento City College and graduated with an Associate of Arts degree in 1974. From 1974 through 1982, Ronald was a student at California State University, Sacramento. After earning a Bachelor of Arts in Social Science degree in 1976, Ronald began graduate work in psychology and completed his Master of Arts degree in 1982.

From 1982 to 1984, Ronald was employed half-time as a Registered Psychological Assistant in the practice of Alvyn M. Freed, Ph.D. in Sacramento. It was in this position that Ronald received his initial training in the use of clinical hypnosis. During this same period Ronald worked as a Counselor with adolescent males at The Stanford Home and as a Behavior Therapist with The Lunglife Smoking Cessation Clinic, both located in Sacramento. In 1985, Ronald was associated with American River Manor, a private psychiatric hospital in Sacramento, where he was a counselor and member of the multi-disciplinary treatment team assigned to the adult unit.

Ronald married Renate Maria Wilson on July 13, 1985, and entered the doctoral program in Educational Psychology at The University of Mississippi later that same year. While working to complete his doctorate, Ronald was employed for two years, from 1986 through 1988, as an Associate Psychologist at North Mississippi Retardation Center in Oxford, Mississippi.

In September of 1988, Ronald began a predoctoral internship in The Student Counseling Service at Texas A&M University. On October 28, 1988, Ronald and Renate became the parents of Allison Elizabeth Lutz. Upon completion of internship in September 1989, Ronald accepted a position as a Senior Staff Psychologist in The Student Counseling Service at Texas A&M University. Ronald and his family currently make their home in College Station, Texas.