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THE EFFECT OF SOCIAL SUPPORT ON THE MODIFICATION OF SMOKING BEHAVIOR

by

Mary Patricia Rodgers

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Psychology)
in The University of Michigan
1977

Doctoral Committee:

Associate Professor James D. Papsdorf, Chairman
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CHAPTER I

REVIEW OF THE LITERATURE

The primary focus of the research examines the effect of varying degrees of social support on smoking modification. A secondary aspect involves both the personality of the smoker and the process of quitting. Since there is no single body of literature that deals with these various aspects, the review will be divided into three major sub-sections:

(1) A review of the smoking modification literature with particular emphasis on studies that pertain to extended experimenter (E) contact and to the utilization of group support.

(2) A review of the social support literature and the theoretical assumptions that suggest that increased support might result in increased ability to terminate smoking behavior.

(3) A review of literature related to the personality of smokers vs. non-smokers and of quitters vs. recidivists.

Smoking Modification

"Of course I can quit drinking. I've done it hundreds of times."

W. C. Fields

A study of the smoking modification literature is a study of failure (Bernstein, 1970; Lichtenstein and Keutzer, 1971). There have been rare incidents of success. Not only have the studies conducted been unproductive as far as revealing new information about smoking modification, they have also been unsuccessful as far as illuminating their own failings.

According to McFall and Hammen (1971), Ss in all studies, irrespective of procedure or population used,

> tend to share an end treatment rate of about 30-40% of baseline and a four- or six-month rate near 75% of baseline (p. 81).

The same authors report that in studies reviewed, quit rates

> ranged between 7% and 40% with a mean of 26% at the end of treatment, and ranged between 9% and 17% with a mean of 13% at follow-up (p. 21).

The usual results of smoking modification studies are that participants decrease their smoking or even quit, but only on a temporary basis (Flaxman, 1974). McFall and Hammen have shown that minimal treatment that involves only structure, face validity, and self-monitoring of the target behavior was sufficient to induce 11% of their motivated volunteers to stop smoking completely for a six-week

period and 5% to remain abstinent for six months. The 11% is very close to the 13% average quit rate for all smoking programs regardless of technique utilized.

Despite these rather dismal success rates, a review of what other social scientists have done to systematically assist smokers is both warranted and necessary. Studies that have utilized either extended E contact or group support will be examined first since these pertain most directly to the present research effort.

Extended Contact with the Experimenter

Flaxman (1974) suggests that the failure of most smoking programs may be largely attributed to the short time span over which they are conducted. Hunt and Matarazzo's (1973) chart of 87 follow-ups on successful smoking program participants shows a negatively accelerated relapse rate that asymptotes at about three months post-treatment (see Figure 1). Their graph is not only interesting in its portrayal of relapse rates but is important in its comparison of smoking to other "addictive" behaviors.

Smith, Layden and Chapman (1971) attempted to counteract this high relapse rate by manipulating social support in the maintenance phase of their program. These Es divided 23 Ss into two groups. The first received two

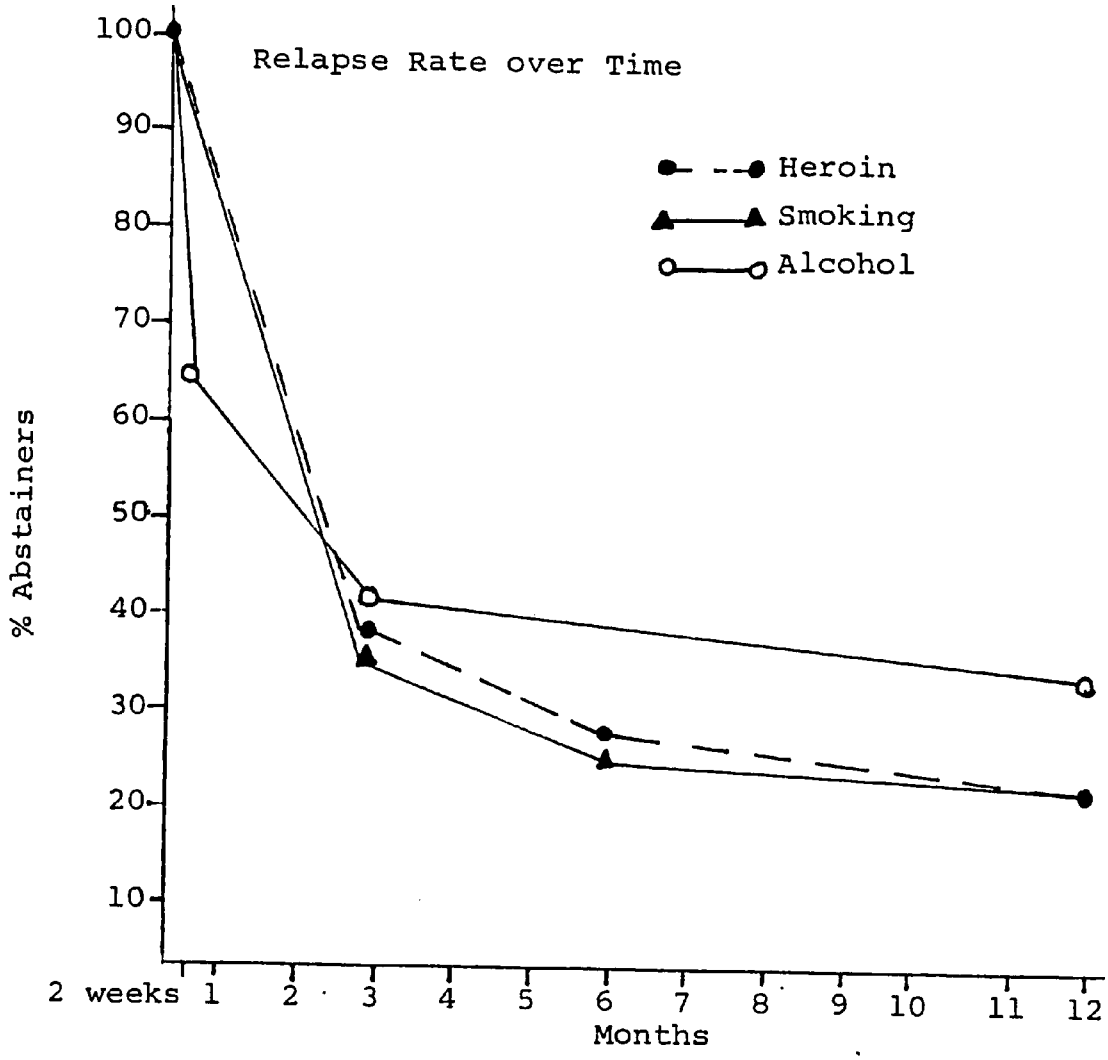


Fig. 1.--Graph of Hunt and Matarazzo's Summary of Relapse Rates of Smokers as Compared to Other Addictive Behaviors

groups. The first received two weeks of post-treatment therapist monitoring while the second received 11. At a 12-month follow-up, six of the 11 Ss in Group II were not smoking while the same was true for only three of 12 in Group I. This result suggests a positive correlation between smoking reduction and length of monitoring. The small sample size, however, renders the conclusion tentative at best.

Stojiljkovic (1969) produced outstanding results using a combination of aversive conditioning and regular "stabilization" sessions at 15, 30, 60, and 90 days post-treatment. Follow-up methods were not specifically detailed in this study. However, the claimed 51% abstinence rate at 18 months merits further investigation of the "stabilization" procedure as a possible contributor to the impressive outcome.

Schmahl, Lichtenstein and Harris (1972) examined the effects of support frequency following rapid paced inhalation in the presence of hot, smoky air. Telephone contact, on a bi-weekly vs. monthly basis was made by a clinical assistant who inquired into smoking frequency and provided praise for success. Somewhat unexpectedly, bi-weekly support was less successful than monthly support with abstinence rates of 50% vs. 71%, respectively. The fact, however, that post-treatment contact and support

appear to be consistent ingredients in this and other exceptionally effective aversive satiation procedures lends credibility to examining this variable as a separate entity. This is especially warranted since the rapid-paced inhalation procedure may be physiologically dangerous as the resulting nicotine intoxication is accompanied by pronounced elevation in blood pressure and tachycardia.

The search upon which the present study is most closely patterned is that of Nisonoff and Papsdorf (1975). Their investigation studied the effects of postal support and self-control methods on smoking modification. These researchers provided equivalent self-control training to two groups of 14 Ss each. One of the groups (postal support) received weekly support postcards for three months following treatment. Comments were tailored to each client's specific problems, questions and progress. Clients in the no support condition received no further contact after their initial training.

A three-month follow-up revealed significant differences between the groups with the no postal support group returning to 70% of its baseline frequency and the postal support group returning to only 38.5% baseline. The postal support group had an abstinence rate of 42% at three-month follow-up, while the no support group had only a rate of 14%. These data clearly suggest that the post-

treatment phase is a critical period in self-management intervention. The present study represents an extention of the Nisonoff-Papsdorf (1975) investigation. Its primary focus is on the question of whether face-to-face support following treatment provides a still more potent reinforcer of termination behavior.

Before moving to an examination of the social support literature and to the theories that suggest support as a potentially critical variable, a few smoking studies that have utilized group support will be reviewed briefly. These studies did not manipulate quantity or length of support as a variable, but they provide a review of ways in which groups have been utilized as part of smoking modification programming.

Studies Utilizing Group Support

The best controlled evaluation of group approaches to smoking treatment was conducted by Schwartz and Dubitzky (1967), Keutzer, et al. (1968). In their study, they compared drugs, individual counseling, and group counseling in an eight-week treatment program. Using 85% reduction from pre-treatment as success criterion, one-third of the smokers in all treatments were successful at the end of treatment, while one-fifth were still successful at a four-month follow-up. Only 22% of those assigned to drug treat-

ment were successful, compared to 42% for individual counseling and 34% for group meetings. Percentage of success at the four-month follow-up decreased respectively to 18%, 24% and 20%.

Another well-controlled study that relates to the present one was conducted by Ober (1967). Ober compared operant self-control, aversion, and transactional analysis treatment groups with each other and with a non-treated control group. Ten group sessions were provided. As predicted, both at termination of treatment and at the end of a one-month follow-up period, the smoking rates of all treated subjects were significantly lower than the non-treated control group. The percentage of reduction after one month for the three conditions, operant, aversion and transactional analysis, was 49%, 58%, and 57%, respectively. Contrary to prediction, the operant and aversive procedures were not significantly more effective than the transactional anslysis treatment. Another interesting finding was that, although the members of the transactional analysis group had the poorest rates immediately after treatment, they showed no recidivism between the end of treatment and the one-month follow-up.

Other studies that have focused on the use of group treatment are: Lawton (1962) took 19 adult volunteers and saw them for nine sessions over six weeks. At termination,

12 of the 17 remaining subjects were not smoking. Eighteen months later, however, only three were abstaining. In a later and better controlled study, Lawton (1967) compared four group methods of smoking withdrawal: (1) educative (emphasizing cognitive processes); (2) a "non-directive-verbal-superficial" type of therapy group; (3) a combination of educative and group-therapy approaches; and (4) a therapy group with massed, rather than spaced, meetings. Compared to a non-treated control group, the group programs were clearly superior. The overall success rate of subjects who completed the entire program was 26% at one-week treatment; 18% at seven months and 18% at 15 months. There was no demonstrated superiority of one treatment method over another.

Horn in a 1964 study attempted to assist subjects in changing their smoking habits without actually giving up smoking. In his study, complete cessations and reductions in number of cigarettes was about the same in the 20% who attended only one or two group sessions and the 80% who attended three or more sessions. This would tend to suggest that the program had little to do with the reduction effort and appears contrary to the thrust of the present study.

Bachman (1964) showed better results using an eight-week pilot group-therapy approach, which was patterned after Alcoholic Anonymous. He reports that 57 of his

subjects (51.8%) stopped smoking completely by end of treatment. These results are made somewhat tentative by the fact that Bachman excluded some of his treated subjects in the calculations of his final results. However, he did report that 34 of 73 subjects (46.5%) were still not smoking at follow-up periods ranging from two months to one year after completion of therapy.

While most of these group-oriented approaches do not look specifically at the quality or quantity of therapist contact and support, they do seem to indicate that group support is about as effective as other methods utilized in smoking reduction. As previously mentioned, the present study will attempt to isolate and contrast varying degrees of support in the post-treatment phase as a salient variable in determining treatment effectiveness. This is not a variable that has been specifically controlled for in the aforementioned group studies.

In addition to controlling for post-treatment monitoring, a unique aspect of the present research will be the delineation of the quality as well as the quantity of post-treatment contact. In the literature, adequate descriptions of the content of group effort and of specific interventions that have been attempted with smokers are notably lacking. The present study will address these issues and will describe in some detail the group process that was used in the present study.

Since the majority of the smoking literature is comprised of studies contrasting outcome results of varying treatment procedures (Marston and McFall, 1971; Lichtenstein, Harris, Buchler, Wahl and Schmahl, 1973; Winnett, 1973), other methods and types of programming will be briefly mentioned before concluding this section of the review.

Other Approaches to Smoking Modification

Many of the various approaches to smoking modification have utilized some form of aversive conditioning. Berecz (1972) used a self-administered shock procedure. Imaginal aversive conditioning was applied by Cautela (1970) and Gerson and Lanyon (1972). Several investigators have used satiation procedures, having Ss smoke several cigarettes for every one desired, etc. (Marston and McFall, 1971). As previously mentioned, one of the most successful of the recent aversive techniques involved the utilization of rapid pace inhalation in the presence of hot smoky air (Lichtenstein, et al., 1973). Using this technique, Lichtenstein reports 50% of Ss abstinent at a six-month follow-up.

Other investigators have experimented extensively with gradual vs. abrupt quitting (Logan, 1970; Flaxman, 1974; Azrin and Powell, 1968; Upper and Meredith, 1970).

These studies have innovated and utilized a variety of procedures and techniques, i.e., self-locking cigarette cases (Azrin and Powell), non-tobacco cigarettes (Spence, 1970), timed-interval buzzers (Upper and Meredith, 1970), the establishment of stimulus hierarchies by time of day (Marston and McFall, 1971), cigarette holders that control amount of inhalation (Logan, 1970), etc. Major approaches are summarized by Keutzer in his 1968 review. These include: drug treatment (lobeline), hypnotherapy, psychodynamically-oriented counseling, a wide variety of self-management and self-control training regimes, smoking clinics, and hypnosis.

Summarizing, the two most salient aspects of the smoking modification literature are: (1) the diversity of approaches utilized, and (2) the striking similiarity of results regardless of treatment procedure employed. Review of the smoking modification literature also underscores the lack of attention that has been paid to variables associated with the quality and quantity of therapist contact and support. This neglect is surprising in view of Lichtenstein's (1971) suggestion that interpersonal variables may play a critical role in determining the success of smoking clinics (Nisonoff and Papsdorf, 1975).

Since few studies have dealt with social support as a primary variable, we will now turn to a separate con-

sideration of the social support literature and evaluate the theoretical bases that motivated the speculation that support in the post-treatment phase might be a leading variable in the successful modification of smoking.

Social Support Literature

Research into the effects of social support has been examined in the areas of psychosomatic medicine, psychological stress, social psychology, clinical psychology, psychiatry, medical sociology, and epidemiology, etc. The ways that support[1] has been defined and measured are as diverse as the researchers who have studied it (Pinneau, 1975). In his review of the social support literature, Pinneau wisely defines social support not as an entity but as a field of research that includes many different types and dimensions of positive social relationships. For the purposes of the present review, the term support will be used to include all positive qualities of interpersonal relationships.

Three types of social support can and are distinguished by Pinneau. These differentiations proved useful in conceptualizing differential treatments in the present research. The three are:

(1) Tangible Support: assistance through an intervention in the person's objective environment or circumstances. For example: providing a loan of money or other resources, writing a letter of recommendation to a prospective employer, driving a person to the hospital.

(2) Appraisal or Information Support: i.e., a psychological form of help that contributes to the individual's body of knowledge or cognitive system. For example, informing the person about a new job opportunity, explaining a method for solving a problem, or informing the person of the safety of his or her family.

(3) Emotional Support: i.e., communication of information that directly meets basic socio-emotional needs. For example: a statement of esteem for the person, attentive listening (communicating interest or positive valuation), or a warm embrace.

Because appraisal and emotional support involve communications and contributions to the person's cognitive system, distinguishing between them constitutes a somewhat arbitrary division. Nevertheless, it is important to differentiate between the meaning of the terms since the present study utilized slightly different forms and degrees of support in the varying conditions.

What follows is a review of past studies that demonstrate, in a variety of settings, the effect of support on human behavior. Since tension is apparently such a prime factor in both the utilization of cigarettes and in recidivism, studies that focus on support as an important variable in the reduction of psychological and

physiological strain will be highlighted. Research that reports findings with humans will be predominately described. In conclusion, a few relevant animal studies will receive brief mention.

Social Facilitation

The most general theoretical question related to social facilitation is: What is the effect of another's presence on behavior? As Zajonc (1965) points out in his excellent review of social facilitation, the mere presence of another can be shown to have either inhibitory or facilitative effects.

Zajonc tentatively concludes that in situations where criterion behavior is simple and well learned, the presence of another has an enhancing effect, while in situations that involve complex behavior and learning, the presence of another has an inhibitory effect. He does not, however, differentiate "mere presence" from a "supportive relationship." Pinneau (1975) points out that the nature of the relationship and the interaction between individuals must be considered in attempting to draw conclusions about the effects of other individuals.

Schachter's (1959) extensive studies on the psychology of affiliation conclusively demonstrate that people become seekers of others when they become upset, moody or threatened. Schachter concludes that the desire of anxious

subjects to be with others is determined by: (a) their needs for direct reduction of anxiety and/or (b) their needs for evaluation of their emotional state (Schachter, 1959). Wrightsman (1960) following Schachter's work set out to examine these two possible determinants. He hypothesized: (1) that being with others would be more effective in reducing anxiety than being alone; and (2) that pressure toward uniformity in level of anxiety developed when groups of persons were placed in ambiguous emotional situations. The first hypothesis was not confirmed except for first-born Ss. The second hypothesis, however, received strong support. Wrightsman concluded that people do evaluate their level of anxiety through a process of social comparisons. His findings underscore that emotional states, much like cognitive factors, are susceptible to social influence (Wrightsman, 1960).

Sarnoff and Zimbardo (1961) take Schachter to task for over-generalizing in terms of emotional states. They differentiate fear and anxiety and demonstrate that the greater the fear aroused, the more likely persons are to seek affiliation; the greater the anxiety elicited, the more subjects should choose to be alone (differentiations based on Freud, 1949). Sarnoff and Zimbordo's theory postulates that the probability of affiliation increases under conditions of fear, suggesting that affiliation

mediates fear through the potentiality for catharsis and distraction as well as through the emotional comparison offered by interpersonal contact. Their differentiation between fear and anxiety is potentially useful for explaining differential reaction to group support and will be subsequently discussed and applied to the present research.

Much of the theoretical background for Schachter, Wrightsman, and Sarnoff's work emanates from early conceptions of Festinger (1954). Festinger postulated a drive to evaluate one's own abilities and opinions. He hypothesized that when no objective method of evaluation was possible, persons used social reality to aid in self-evaluation. He made the point that for social comparisons to be informative, the person's comparison objects should be other persons whose levels of ability and opinions were similar to their own.

This theory relates to the present smoking modification project in that: (1) the emotional aspect of termination was ambiguous to participants since the situation was novel; (2) the reference group did consist of persons at the same ability level and of persons confronted with a common problem so that social comparisons could be thought of as informative.

Subjects in the present study did reveal a high interest in the chance to evaluate their own level of emo-

tion by comparing it with others. It was hypothesized that on-going group support would provide a forum for persons to do this on a continued basis thereby reducing strain. One particular question addressed in the present study stems from Wrightsman's work and has to do with his results concerning first borns. In the present study, it was postulated that first born children might find social support especially helpful in alleviating strain and, therefore, be more successful in their smoking modification effort.

Other experimental studies that support the relationship between increased support and reduced strain are as follows: Kissel (1965) measured galvanic skin response of male college subjects who were given a failure experience (doing an unsolvable puzzle). Ss were studied with friends present, strangers present, and while alone. Ss in the "friend" condition showed a significantly lowered GSR than other groups. Those in the "stranger" condition tended also to have smaller GSR than alone subjects. Craig and Weiss (1971) demonstrated that the presence of another could increase tolerance for pain or electric shock. Amoroso and Walters (1969) examined the effect of affiliation during waiting periods berween testing sessions and found significant reduction of strain with affiliation.

Besides these more experimentally oriented studies, a number of field studies present data relating affiliation and social contact to mental and physical health. Segal, et al. found group affiliation negatively related to psychiatric utilization among college students (Segal, Weiss and Sokol, 1965). Number of social contacts and activities has been related by Bradburn (1969) to ratings of positive feelings and to reported happiness by Phillips (1967). Cassel suggested (1974) that lack of meaningful social contact was the source of lowered resistence to disease among victims of tuberculosis. Nuckolls, Cassel and Kaplan (1972) found a relationship between social support and pregnancy complications (fewer complications with increased support). They suggest that social support may act to buffer the individual from other sources of stress so that less strain and illness results from experienced stresses.

The type of associational data reported above does not suggest a causal significance between social support and physical and psychological resistence. It also does not suggest a relationship between support and smoking modification. Nevertheless, the research thus far summarized strongly implies a relationship between support and the reduction of strain. If a relationship between strain and smoking can be established it seems reasonable to hypo-

thesize in the direction of increased smoking cessation with increased support.

Strain is obviously not the only reason people smoke. The reasons for starting and continuing smoking are undoubtedly numerous, complex and individual (Logan, 1970). Strain, however, has been isolated by many researchers (Davis, 1956; Tomkins, 1966; McArthur, 1958; Kissen, 1960; Cartwright, et al., 1959; Horn, 1964; Scwartz and Dubitsky, 1968) as a factor that plays a major role in smoking behavior. Kissen (1960) concludes that "cigarette consumption increases in relation to the occurance of emotionally stressful situations. Such situations, therefore, appear to play a part in the perpetuation of smoking" (p. 368).

"Nervous" traits, anxiety, and over-reaction to stimuli have been found to be very prevalent among smokers. Many researchers have found that smoking is initiated in stressful times and situations, i.e., the assumption of the first wage-earning job (Cartwright, 1959); the entering of military service (Haenszel, et. al., 1956). Other indirect substantiation of the relation of smoking and strain is suggested by the fact that smoking is much more prevalent in conditions that are usually associated with increased stress. Examples of these conditions are: increased prevalence of smoking in urban as opposed to rural areas, among divorced and widowed as opposed to married

persons, among the unemployed and lower socio-economic groups as opposed to those who are financially more stable, among women as they appear to be moving into more ostensibly stressful and competitive roles. All of these various relationships again do not substantiate a causal relationship between stress and smoking, but they do indirectly suggest such a relationship.

The most direct and uniform evidence of the relationship between stress and smoking comes from the self-reports of cigarette smokers. With great consistency, investigators have reported that smokers state that they tend to smoke, or to smoke more, under temporary stress-producing experiences (Surgeon General's Report, 1964). Physiologically, cigarettes are powerful muscle relaxants (Papsdorf, 1975). Smokers repeatedly report utilizing cigarettes to calm themselves and most indicate a significant increase in their tension level with the termination of smoking.

To reiterate, strain does not play a part in all smoking. It is, however, a factor of significant enough magnitude to be considered and evaluated in relation to the role of support. Since postulations within the study particularly suggest support as an intermediate variable in the reduction of strain, smokers who report tension-reduction as their primary motivation for smoking will be given special consideration and it is speculated that support

will be particularly significant in affecting reduction and cessation with persons whose motives for smoking are stress related.

Given the logical link between strain and smoking, it is ironical to report that the one study in the social support literature that deals with the particular problem of smoking cessation suggests results contrary to what might be inferred from the findings reviewed in the social support research. Caplan, Cobb and French (1975) analyzed previously collected NASA data and reported on the relationship between amount of worker support and smoking cessation. In their study, they utilized a composite measure of support that included support from supervisors, peers and subordinates. Using this measure, men who had quit smoking were found to have lower support than men who were still smoking. The researchers thought that this unexpected reversal might be partially accounted for by the confounding of support with high work load, i.e., responsibility for things and people being negatively related to quitting. To unmask this possibly confounding element, they created a two-way table of quit rate by support and stress, i.e., men with low support-low stress, men with low support-high stress, etc. Taking stress into account, men with low support and low stress still had over twice the quit rate as men in any other category. The rest of the categories were

approximately equal in their quitting rates. An increased ability to quit smoking accompanied low levels of stress only when support was low. Stated another way, the quitting of men with high stress was not affected by being supported, but quitting under low stress was made less likely by being well supported. These results are difficult to incorporate into a general theory about the benefits of social support. They are less difficult, however, to address with regards to the present research endeavor for the following reasons:

(1) In Kaplan's study, support was not specific to the target behavior of "smoking." Kaplan looked at the person's general level of work support and related this to quitting or not quitting.

(2) As mentioned in considering Festinger's theory, support from a group of persons with heterogeneous ability, opinions and problems, is less effective than support from a group of persons with common problems and a common frame of reference.

For these two reasons, Kaplan's results, while certainly of interest, do not cast serious doubt on the present research propositions. They certainly do, however, raise some questions about the nature of smokers as a group. These questions will be more directly addressed in the

personality sub-section of the review.

In concluding this section, we will briefly examine a few relevant animal studies since these were among the first to suggest that social stimuli may operate as buffers against psychological stress. Davitz and Mason (1955) performed an experiment in which fearful rats in a stressful situation were calmed by the mere presence of a calmer rat for whom the situation did not have the same psychological meaning. The presence of another fearful rat did not have such an effect. Later studies demonstrated that the Davitz and Mason results varied in different situations and with animals from varying backgrounds.

Research on the relationship of early socialization experiences to the effect of the presence of another in behavior change was performed by Angermeier, Philhour and Higgins (1965). The presence of other animals did not diminish or end the escape behavior of animals reared alone, whereas the behavior of rats reared with others was effected.

Other animal studies reported in Zajonc (1965) are not as directly related to stress reduction, but demonstrate the effect of the presence of another: Bayer (1929) experimented with the effect of others on eating patterns in chickens. He found markedly increased eating (even when satisfied) in the presence of another. This same

finding is well replicated by Tolman and Wilson (1965) and by Harlow (1932). Chen (1958) reported dramatic findings on the amount of work accomplished by pairs of ants in contrast to the rate of production of a single ant. Some animal studies, especially those involving more complicated learning tasks, report an inhibitory effect in the presence of another (Allee and Masure (1934) with parakeets), Gates and Allee (1933) with cockroaches).

No general conclusion can be drawn about the mere presence of other animals since any buffering or aggravating effect is not universal to all situations or to animals of all backgrounds. It also remains unclear by what processes animals influence one another. It is, however, safe to conclude that even with infra-humans, there is almost always some difference in behavior, given the presence of another.

This brings to a close our overview of the social support literature. The major conclusion warranted is that support, especially with humans, can and does function to reduce strain. Since strain is apparently one major factor in both the initiation and maintenance of smoking behavior, the further inference upon which the present study is based, is that continued support in the maintenance phase of a smoking modification program will affect higher abstinence rates post-treatment. It is thought that this

effect will apply generally, but particularly will be seen among smokers who indicate the reduction of tension as a primary motive for their smoking behavior.

The only other aspect of the present study that has not been reviewed in terms of existing literature relates to personality variables. We will now briefly consider literature relevant to this set of variables since they constituted a subsidiary, but important, part of the research project.

Personality Variables

Two elements will be highlighted in this section of the review: (1) characteristics of smokers and non-smokers and (2) characteristics of those able to quit smoking vs. recidivists. Some comment on smoker vs. non-smoker characteristics is relevant since it has been suggested that smokers who are more like non-smokers in personality are more likely to stop smoking (Flaxman, 1974). Analyzing both of these elements will provide a general frame for understanding the underlying assumptions upon which the hypotheses of the present study are based.

Let us begin not with personality factors, *per se*, but with some demographic information that does relate to the "who" of the problem. Presently, 70,000 million Americans smoke, approximately 37% of the adult population.

Despite the rather extensive information dissemination campaign since the Surgeon General's Report in 1964, the total percent of the population that smokes has remained approximately the same as the percentage that pre-dated the Surgeon General's Report (40% of adult population in mid-1950s). The population has shifted some in that more women and girls are smoking. This has counterbalanced some of the gains that have been made in male quitting. In 1974, a governmental survey on adolescent smoking patterns reported 31% of boys and 26% of girls age 17 and 18 smoking regularly. In 1968, percentages were 18% for girls and 30.2% for boys.

Besides this change in increased proportions of females smoking, the only other major shift is in the larger number of smokers who are dissatisfied with the habit and want to quit. In 1964, one in fave smokers had tried to quit. Today, four in five have tried. As reported earlier, most are unsuccessful and the usual pattern is short-term success, long-term recidivism.

With this general pattern in mind, let us move to a more specific review of what characterizes the smoker and the non-smoker. Although there has not been widespread research in this area, the research findings are fairly consonant (Matarazzo and Saslow, 1960; Straits and Sechrest, 1963; Coan, 1973; Smith, 1970; Eysneck, 1960; McArthur, et al., 1958).

Typically, individuals who smoke are characterized as more extroverted and anti-social than those who do not smoke (Smith, 1970; Coan, 1973). Smith (1970) also states that smokers are probably also more impulsive than non-smokers. Straits and Sechrest (1963) describe the typical smoker as a "convivial person lacking strong identification with cultural standards," and the non-smoker as "less at ease socially, sober, and imbued with a strong ethic" (Straits, 1963, p. 282).

Eysneck's (1960) study tested three major hypotheses about smokers: (1) that they would be more extroverted, (2) less rigid, and (3) more neurotic than non-smokers. In studying 2,360 male subjects, he found strong confirmation for the first hypothesis, weak confirmation for the second, and no confirmation for the third.

Coan (1973) utilized a six-hour battery of instruments designed to examine most major variables of adequate functioning. He found that smokers tended to be more extroverted, more distress prone, more liberal, more open to experience and more inclined to favor spontaneity than non-smokers.

Matarazzo and Saslow (1960) summarized data differentiating characteristics of smokers from non-smokers in chart form (see Chart 1). In contradiction to Eysneck, Matarazzo and Saslow suggest trends that indicate the

Differentiating Characteristics	Nondifferentiating Characteristics
Age Sex Foreign-born parents Current marital status, marital history Occupation, including unemployment Military service, current or history of Frequency of job changes Urban-rural residence Residence, United States coastal versus non-coastal Income Social class, including social mobility College graduation history Delicate motor coordination Characteristics from 20-year study summarized in Table 5 Body sway suggestibility Driving accidents Participation in sports Taylor anxiety score Psychological Tension level (CMI) Psychiatric versus medical status Psychosomatic symptoms, number of Emotional status ("neuroticism") Extraversion-introversion	Race, United States white versus United States nonwhite Hollingshead Index of Socioeconomic Status Education, highest grade attained IQ Mental and motor functioning, immediate effects upon

Chart 1.--Summary of Differentiating Characteristics of Smokers and Non-Smokers

From: Matarazzo and Saslow's 1960 review.

Differentiating Characteristics	Nondifferentiating Characteristics
Number of hospitalizations	
Coffee consumption	
Alcohol consumption	
Weight increase	
Dark adaptation	
Cancer-scientist versus psychologist-scientist	
Smoking habits of parents	
Educational level of parents	
Own education-age concordance	
Parochial versus public school attendance	
Participation in school activities	

Chart 1.--(Continued)

smoker to be more "neurotic" than the non-smoker.

The best overall review of personality and smoking is provided by Smith (1970). Smith reviews empirical studies of the relation between smoking and personality, summarizes results from various studies, and indicates sample size, measurement procedure, and levels of significance. After reviewing a broad range of studies that utilized standardized tests, peer ratings, and special questionnaires, he concludes that: (1) smokers are more extroverted than non-smokers; (2) smokers have more antisocial tendencies than non-smokers; (3) smokers appear to be more externally oriented than non-smokers; and (4) smokers appear to have stronger oral needs than non-smokers (further verification suggested).

On the question of mental health, Smith underscores the problem of definition. Varying researchers have measured a wide variety of traits under the heading of "neuroticism," "anxiety," "psychosomatic distress," "emotionality," etc. They produced no internally consistent picture as far as the relationship of these traits to smoking vs. non-smoking. Slightly more than half of all of the studies Smith reports show a significant association between smoking and some aspect of "mental health." In all instances where a significant association is found, the smokers have poorer mental health scores than do the non-smokers.

Other miscellaneous findings from the literature relate to the present study:

(1) Friedman and Rosenman (1959): male smokers were more competitive and hard-driving in their style of life than non-smoking males whose lives were more relaxed/easy-going.

(2) Jacobs and Knapp, et al. (1965) reported on the differences between smokers and non-smokers regarding "danger seeking" and "attitudes toward another." Reported trends indicated greater "danger seeking" among smokers. They also found that smokers were significantly more likely to report their mother as "controlling, cold and harsh."

(3) Koponen (1960), studying 1,418 males, found that the average U.S. male smoker scored significantly higher on his expressed needs for sex, aggression and dominance, and significantly below average in compliance, order, self-deprecation and association.

The only substantive long-term study of smokers engaged only male Ss. This study of smokers and non-smokers was part of the study of adult development conducted at Harvard (1939-1958). Heath (1958) summarized the contrasting characteristics of non-smokers and heavier smokers in chart form (see Chart 2).

Nonsmokers	Heavier Smokers
Bland affect	Cultural
Inarticulate	Lack of purpose and values
Well-integrated	Less well-integrated
Physical sciences	Practical organizing
Most stable personality	Less stable personality
Major in college: natural sciences	Major in college: social studies, arts and letters
Careers: chemistry, physics	Careers: social relations, education
Like: science research worker	Like: judge
Dislike: sales manager	Dislike: science research worker
Psychotype: cerebrotonia	Psychotype: viscerotonia
Answer questionnaires promptly	Delay answering questionnaires
Armed Service: Navy; well-adjusted, noncombat duty	Armed Service: Army; less well-adjusted, combat duty
Respiratory rate: slow	Respiratory rate: rapid
Sighs and swallows: diminished	Sighs and swallows: increased
Reflexes: increased	Reflexes: decreased
Less alcohol and coffee	More alcohol and coffee

Chart 2.--Heath's Summary of Contrasting Characteristics of Nonsmokers and Heavier Smokers

From: The Harvard (1939-1958) Longitudinal Study

McArthur (1958), again utilizing the Harvard data, looked at a question, more directly relevant to the present study, i.e., personality characteristics of successful quitters vs. recidivists. General findings indicated that early breast feeding habits and later personality integration appeared related to ability or inability to quit smoking. Among heavy smokers, the psychiatric labels of "sociable," "strong basic personality," and "practical" characterized people who were able to stop. "Weak basic personality," "asocial," "lack of purpose and values," "introspective," "ideational and inhibited" were some characteristics of the men who could not stop.

Data from this early study are supported in a more recent study by Schwartz and Dubitzky (1968). Schwartz and Dubitzky in a large-scale research project analyzed particular subject characteristics that are predictive of success in quitting smoking. They found that long-term smoking reduction is not likely without "a fairly high level of personal adjustment," and that chronic illness and anxiety are predictive of failure. As far as environmental characteristics are concerned, a social environment conducive to non-smoking predicts success. Overall recidivists (initial success followed by relapse) "are characterized by poor adjustment and low socio-economic status, along with high habit addition scores and/or perceptions

favorable toward cigarettes." Recidivism is also associated with using smoking for tension reduction. In line with this, Schwartz and Dubitzky found that the probability of success in quitting smoking is low for individuals who scored high on the habit-addictive complex and on the tension reduction scale of the Horn (1964) questionnaire. This suggests that both habit and affect are important in successful quitting.

Graham and Gibson reported two items that differentiate successes from recidivists. They indicated that recidivists rely more heavily than successes do on substitute behavior (such as chewing gum or eating candy) in their quit attempts, and that a higher percentage of recidivists than successes report having a larger number of withdrawal symptoms.

Waters (1971) measured the attitudes, demographic variables and personality characteristics of 424 non-smokers, former smokers, "unables" and "confirmed smokers." He found that a higher percent of smokers in contrast to non-smokers held a relatively positive attitude toward smoking and a lack of concern regarding health hazards.

One final approach to the question of successful quitters was raised by Premack (1970), who contrasted the large number of unsuccessful laboratory attempts to assist smokers with the rather large number of successful

voluntary quits. Approximately 21 million persons have quit smoking on their own (Horn, 1969). Premack constructed an informal theory of self-control, which he postulates might reflect the process involved in these successful non-laboratory quits. He suggested two important stages: (1) the realization of a behavior as inconsistent with an internal set of beliefs and attitudes; and (2) a decision to stop the unacceptable or incompatible behavior. Following the decision, Premack pointed out that the decision begins to operate as self-instruction. While this theory does not speak directly to personality variables, it does suggest some attitudes and thought processes of successful quitters. It also suggests looking at successful quitters as an important source of information for generating research hypotheses. It also suggests that persons who use clinics, therapists, support groups, etc. in order to quit are more field dependent and less self-reliant than those who quit on their own.

This brief overview summarizes personality variables that have been suggested by research findings to date. It should also provide a general frame for understanding the rationale underlying the direction and content of hypotheses generated within the present study.

CHAPTER II

METHODS

Introduction

Following past research efforts, the present study addresses itself to three principle questions:

(1) Will support following a self-management training program effect smoking abstinence rates of participants?

(2) Will differential amounts of support, especially face-to-face contact, be more effective than mail support in maintaining lower smoking rates and/or abstinence?

(3) Can information be generated from personality data, information from groups, or reports of success in quitters that will illuminate the difficulty smokers have in quitting and provide a basis for developing improved programs to help smokers to stop or to reduce smoking rates?

The theoretical background for these questions has been presented in the literature review. The major proposition concerning the effect of support follows from preliminary research as to the effect of extended experimenter contact in the post-treatment phase of smoking modification programs (Nisonoff-Papsdorf, 1975; Chapman, Smith and Layden, 1971). The social support literature strongly suggests the relationship between support and the reduction of strain. It is obvious that stress and tension are critical variables in the maintenance of smoking. It can also be safely inferred that strain will be increased at the time of an attempted smoking quit and in the immediate time following the attempt. For these reasons, it appears reasonable to hypothesize that support in this phase will reduce strain and result in an increased success. It is also reasonable to postulate that persons who acquire the smoking habit because they are field dependent are unlikely to quit on their own, but rather will need support to affect the cessation of their smoking behavior.

Success within the present study is defined both in terms of overall percent reduction and in terms of abstinence. The presumption underlying the current research reported here is that group support following treatment will constitute a more potent form of support than mail contact. Both forms of support, it is suggested, will

be more effective than no support in maintaining effective termination of smoking. What follows is a detailed description of the methodology utilized in investigating these research questions.

Subjects

Fifty-seven subjects participated in the research project. Nineteen of these were males and 38 were females. They ranged in age from 18 to 61, with half of them being less than age 30. Twenty-one Ss were professionals, 11 were students and the remaining 25 listed various occupations. Six Ss lived alone, 25 lived with a person who did not smoke, 13 lived with a roommate who smoked a lot, and 12 with a roommate who smoked some. The three most frequently mentioned reasons for starting to smoke were peer pressure (13), experimented and liked it (6), and being around smokers (5). Three-fourths of the sample indicated "health" as the major reason they wanted to quit. Forty Ss indicated that they inhaled 100% of the time, eight said their inhaling rate was between 75 and 99%, three reported a rate between 50 and 74% and one reported a rate between 0-49%.

Subjects were recruited from the general community via newspaper announcements and billboard posters. Interested Ss phoned the E who assigned them to one of three

treatment conditions: group support (GS), mail support (MS), and no support (NS). There were no significant differences in any demographic, smoking history factors or personality variables of Ss assigned to the three treatment groups. The mean number of cigarettes participants were smoking at the start of the program was 27 per day. The participants had been smoking on the average of 14 years and had made an average of 4.6 attempts to quit.

Procedure

Pre-Treatment Procedure

Prospective Ss phoned the E expressing potential interest in the program. Approximately 100 persons called in response to limited advertisement. The E took some preliminary data--number of cigarettes smoked presently, approximate length of time smoking. Given this information, Ss were semi-randomly assigned to one of the three treatment conditions. Exceptions to the random assignment were made for neighbors, friends, or partners so that homogeneity of reinforcement would be maintained among acquainted subjects. An immediate assignment to a group was necessitated by the fact that the Ss needed to be informed as to the length of commitment (two weeks as opposed to eight weeks with group support).

Following assignment, potential subjects were given a brief description of the project. All Ss were told that the program consisted of two two-hour workshops devoted to self-management training for smoking termination. They were also informed of a $5.00 program charge and of a $15.00 deposit, which was returnable contingent on weekly mailing of daily smoking rates and of return of final evaluation forms. Ss were further notified as to the research nature of the program and that they would be required to fill out approximately one and a half hours of test, questionnaires and follow-up materials.

Group Support (GS) subjects were given the above description of the program and the requirements. In addition, they were told that, following the two introductory meetings, Ss would break into small groups and meet for an additional six meetings. They were informed that this procedure would give them a chance for follow-up and for discussion of their reactions to quitting, etc. Postcard support was not mentioned with the mail support group since this made no difference in terms of program description, time commitment, etc.

Of the approximately 100 persons who called, 85 expressed interest in the program and were mailed cover letters welcoming them to the program and a map that provided them with directions to the program site, parking locations,

etc. Of the 85 who expressed interest, 60 persons actually appeared for the program. Eventually, three of these 60 were dropped from the research for various reasons (one did not attend the second session; one moved to Alaska, one was unable to be located at follow-up).

The self-management training program was administered to the subjects in groups of 19 over two two-hour workshops separated by one week. All of the workshops were conducted in February 1975, at The University of Michigan Modern Language Building. The initial two training sessions were identical for all groups, with approximately five minutes of the MS group's second workshop being devoted to describing the mechanics of the postal support system, and approximately five minutes of the GS's second sessions being devoted to random assignment to one of two small groups. All sections of both workshops, as well as small group meetings, were conducted by the same experimenter.

First Workshop Session

During the first 15 minutes, participants completed a general smoking questionnaire and signed a consent form. Next, the concept of feedback was introduced, and its crucial role in inducing physiological and behavioral change was stressed. The advantages of self-monitoring as a type

of feedback were examined, and participants were told to keep both a chart and a notebook record of their daily progress over at least the next 12 weeks. The chart was to be drawn on the 20" x 12" piece of cardboard that was provided for each client. Small notebooks were also distributed, in which each participant was instructed to record the "why, when, where and whatever" of each and every cigarette smoked after he or she had "lit up" for the next seven days. This procedure, it was explained, would serve to provide each participant with clearer insight into the situational and emotional concomitants of his/her smoking behavior.

Stimulus control measures were also described and it was suggested that some of the participants might find it helpful to alter the location and time at which they smoke so as to render the habit unpleasant and inconvenient (Goldiamond, 1965). Participants were told to plan ways to make cigarettes as inaccessible as they could, and were provided with role play practice in methods of refusing cigarettes offered them. However, it was emphasized that none of these techniques were to be employed until the next session, at which time they would be instructed to go "cold turkey."

Participants were informed that they would be required to sign a contract at the end of the next session

specifying both the long- and short-term reinforcement contingencies they would enforce over a minimum of 12 weeks. To assist participants in their choice of effective short-term reinforcers, the Premack Principle was explained. It was suggested that everyday behaviors that were not necessarily deemed "enjoyable" (e.g., brushing one's teeth, reading the evening newspaper, watching national TV news) could, nevertheless, serve as potent contingent inducers for non-smoking behavior. The importance of positive social reinforcement in both a long- and short-term context was stressed, and clients were warned of various social deterrents to quitting.

Participants were next taught how to use a modification of Homme's (1965) converanting procedure,* which involves imagining a powerfully negative ultimate consequence of smoking (e.g., wheezing, then gasping for breath after smoking; dying of lung cancer), and following it with an image of a pleasurable long-term consequence of not smoking (e.g., running along a warm beach at a "ripe" old age). Subjects were instructed to converant only when the urge to smoke arose.

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*Coverant is simply a contraction of covert operant. Coverants are events lay persons would call mental. These include thinking, imagining, ruminating, reflecting, relaxing, daydreaming, fantasizing and so forth.

Other aspects of the initial training sessions included the teaching of several concepts from Transactional Analysis, and training in progressive relaxation. Some general material on the physiology of smoking and the function of smoking for tension reduction were discussed. Progressive relaxation was suggested as an alternative means of reducing tension. The session demonstrated the effectiveness of progressive relaxation and detailed the procedure that participants should follow when employing the technique individually. Other tension-reducing methods were shared. Some dietary suggestions were also introduced. The Transactional Analysis concepts were presented and a brief description of their relevancy to smoking cessation appear as Appendix A.

Before leaving, each S was given a packet of tests (see Appendix B). Each of the tests was reviewed with the Ss. Ss were instructed to fill out the tests and return them for their second training session. Most Ss paid their $20.00 at the end of the initial session ($15.00 deposit, $5.00 fee).

Second Workshop Session

The second workshop was primarily devoted to reviewing the concepts of the previous session and to assisting each of the subjects in deciding upon the specific behav-

ioral method that would be most beneficial in helping him/her to stop smoking.

Each participant was asked to describe which Premack and long-term reinforcers would probably help his/her program the most. Each also described the stimulus control methods that he/she anticipated would reliably discourage smoking behavior, and all subjects were encouraged to write in their notebooks the "when, where, what and why" associated with smoking each subsequent cigarette before it was smoked.

The converanting procedure was carefully rehearsed by each participant. Each identified the negative and positive coverants he/she felt would effectively deter smoking, and imaged each of these coverants in turn. Subjects again participated in a 20-minute progressive relaxation session and were encouraged to substitute progressive relaxation for cigarettes whenever nervousness or anxiety produced the urge to smoke (Cautela, 1970).

Participants then wrote a contract specifying what reinforcements and stimulus control methods they would apply and how many cigarettes they would reduce each week before quitting entirely if they were not committing themselves to "cold turkey" at once. The contracting procedure approximated that used by Tooley and Pratt (1967), in that clients exchanged the written promise of not smoking

in specified situations for the experimenter's social approval. A crucial aspect of the present study was its insistence that subjects quit smoking immediately, or within a three-week period at most. We emphasized the point that, as one smokes fewer cigarettes, the remaining cigarettes assume an enormous importance and will rarely be sacrificed (Levinson, Shapiro, Schwartz, and Tursky, 1971).

Basically, the major thrust of the entire training was to instill the potential quitter with a sense of his/her own control over smoking. It is somewhat difficult to convey the extent to which participants sensed that smoking and the possibility of quitting were outside of their ability and/or control. For this reason all techniques, concepts and methods that provided participants with a sense of control were reviewed. Specific suggestions such as use of diary, relaxation, coveranting, thought control techniques were reemphasized.

Before leaving, subjects were provided with 12 prestamped postcards, on each of which they recorded their daily smoking frequencies over a one-week period. The cards were to be returned on a weekly basis and subjects were informed that, with the receipt of each set of four postcards, they would receive $5.00 of their data deposit. It was emphasized that the data deposit would be returned regardless of their smoking status.

While this completed the second session for the subjects in the No Support condition, the subjects in the Postal Support condition were at this point introduced to the assistant who would correspond with them over the next 12 weeks. They were told that the assistant would comment on their progress in the clinic as well as on any points they raised on their monitoring postcards. The assistant made only positive comments on each weekly support postcard. Her comments were tailored to each participant's specific problems, questions and progress. Each subject in the MS group was mailed a supporting postcard every seven days over the 12-week period, regardless of when or whether his/her data postcards were returned. For specific examples of postcard comments see Appendix C.

Rather than being given postcards, the members of the group support condition were randomly assigned to one of two follow-up groups (10 in one group, nine in another). Ss were instructed that sessions would be conducted on a weekly basis for the next six weeks, and that sessions would mainly be devoted to a review and practice of techniques and to a discussion of problems and reactions related to their quit-smoking decision. Details of group sessions and E's subjective impression of group meetings appear in Chapter III. The experimental design in summary form appears as Chart 3.

<table>
<tr><th></th><th colspan="2">Week 1</th><th>Week 2</th><th>Week 3 thru 8</th><th>Week 8 thru 14</th><th>Week 14 thru 20</th></tr>
<tr><td><u>Group A</u>
No-Support Condition

(N = 19)</td><td colspan="2" rowspan="2">Behaviorally Oriented Quit-Smoking Clinic</td><td colspan="2" rowspan="2">Initiation of 3 mo. follow-up with Ss submitting weekly postcards indicating smoking rate. Ss receive no further contact from E in response to their postcards. At the end of 3 months Ss receive by mail post-treatment questionnaires and final smoking rates are assessed.</td><td rowspan="2"><u>Group A</u>
Ss in this group have concluded their participation in the research project</td></tr>
<tr><td><u>Group B</u>
Mail Support Condition

(N = 19)</td></tr>
<tr><td><u>Group C</u>
Group Support Condition

(N = 19)</td><td colspan="2">Same as Above</td><td>Initiation of 6 weeks of small group meetings (N = 10)

Group of 19 split into two smaller groups for these follow-up meetings (N = 9)</td><td>Initiation of 3 mo. follow-up with Ss submitting weekly postcards indicating smoking rates and receiving no further contact from E.</td><td><u>Group C</u>
Ss continue submitting weekly cigarette rates via postcard with no further contact from E. At the end of the 3-mo. follow-up Ss are mailed post-treatment questionnaires and their final smoking rates are assessed.</td></tr>
</table>

Chart 3.--Flow Chart of Experimental Design

Experimenter

The experimenter was a 31-year-old woman: a Ph.D. candidate in psychology at The University of Michigan. She had had an extensive training and experience with a wide variety of groups. All of the training sessions, as well as the small group follow-up sessions, were conducted by the same person.

Tests and Questionnaires

Ss provided a fairly extensive amount of paper-and-pencil information. A brief description of tests and questionnaires follows: A copy of all forms and instruments utilized in the research appears as Appendix B.

(1) Consent Form.--A form agreeing to participation and acknowledging rights and responsibilities.

(2) Smoking History Form.--A form asking for relevant demographic information and background information as to smoking and quitting patterns.

(3) Why Do You Smoke Questionnaire.--Questions differentiating six major reasons for smoking: stimulation, relaxation, tension reduction, addiction, and habit (from Horn, 1969).

(4) California Personality Inventory.--A reasonably well validated personality inventory consisting of 18 scales--two of these (self-acceptance and self-control) were utilized in the present study.

(5) Life-Script Questionnaire.--Thirty-nine open-ended questions aimed at description of self, family and assessment of general problem areas (from Berne, 1970).

(6) Leary Interpersonal Checklist.--a 128-item adjective checklist utilized in the present study to describe self, ideal self, mother and father (Leary, 1957).

(7) Rotter's Internal-External Locus of Control Scale.--A 29-item test (six filler items) pairing internally and externally oriented statements. Ss forced to indicate which of the two statements more clearly represents their belief (Rotter, 1966).

(8) EFT-Group Embedded Figures Test.--An 18-item timed perceptual test differentiating S's field dependence and independence (Ottman, Rashin and Witkin, 1971).

(9) Final Smoking Form.--A combination of closed and opened questions concerning smoking behavior at three-month follow-up. Questions revolve around general reaction and evaluation of program, as well as descriptions

of the process of quitting or not quitting, i.e., difficulty of quitting, number of quits during period, situations in which smoking reinitiated, withdrawal symptoms, weight gain, etc.

CHAPTER III

RESULTS AND DISCUSSION*

The results will be divided into two major sections: objective and subjective findings. These words are italicized to indicate their relative inaccuracy in communicating a desired meaning. Objective is defined as "pertaining to what is external or independent of the mind; "real" (my italics). Subjective is defined as "relating to, proceeding from, or taking place within an individual's mind or emotions; originating from or influenced by one's personal interests, prejudices: "illusory" (my italics), (Funk and Wagnall's Standard Dictionary).

The first half of the results, the objective findings will consist of data regarding smoking rates, personality tests, and evaluation forms. The subjective findings will consist of process notes throughout the proceedings, impressions drawn from group meetings, illustrative

*Due to the extensive amount of data to be reported, some discussion will be interspersed with the report of the results. The final chapter will summarize major findings, provide a more general discussion and suggest implications for further research.

transactions from tapes and any other characteristic behaviors observed by E over the six months of interaction with the 57 Ss. These findings, relying primarily on E's observations, can be considered "impressionistic." In no way would it be justified to term them illusory, or to think of the objective data as more real.

In dividing the findings into the two aforedescribed aspects, the actual words that more accurately capture the connotation are "figure" and "ground." It would prove helpful for the reader to think of the two sections as describing and filling in a total picture. The first half, the objective results, can be thought of as the figure--the more articulated part of the study; the second half, the subjective findings as the "ground"--the less obvious but no less important aspect of the "Gestalt."

Jules Henry in Culture Against Man describes the differentiation of foreground--background in a slightly different way. He speaks of the "noise" of a system. By this, he means information that is relevant but does not have to do with the ostensible or "up front" purpose or activities of the system. It is also in this regard the reader is directed to the subjective findings. There was obviously a great deal of information gathered during six months of contact with 57 persons that is not captured or accounted for in "empirical" results. The subjective

findings will provide at least a cursory summation of some of this information.

One final remark on the subjective findings relates to the differentiation between "hypothesis testing" and "hypothesis generating" research. As was repeatedly reiterated in the review of the smoking modification literature, successes in smoking modification have been minimal. For this reason, it is of particular relevance that no information gathered be neglected. Hypothesis generating in this particular study is at least of co-equal importance with hypothesis testing. For these reasons, the subjective findings are of particular relevance and even relatively broad-based speculations will be utilized for the purposes of suggesting future research queries.

Objective Findings

The objective results will consist of an analysis of post-treatment smoking rates as they relate to varying degrees of support and of an analysis of data collected from aforedescribed tests and questionnaires.

Following a report of the equivalency of groups at onset, this first section will be divided into three major areas: (a) a report on the major questions regarding the effect of differential amounts of support on percent reduction and on abstinence; (b) a report of background,

personality, and family variables as they contribute to information concerning the personality characteristics of the group as a whole; (c) a report of information gathered regarding the process of quitting as well as Ss' utilization and evaluation of the program.

As outlined previously, the three treatment conditions were as follows: (1) Group A--no support condition--referred to throughout the results and discussion either as Group A or as NS; (2) Group B--postal support condition--referred to either as Group B or PS; (3) Group C--group support condition--referred to either as Group C or GS.

Equivalency of Conditions at Onset of Program

An initial series of hypotheses predicted no significant differences on any background personality or smoking history variables among the three treatment conditions. An alpha level of .30 was choses *a priori* to determine that the groups were similar on the various pre-variables. In other words, probability values in excess of .30 were desired. Given this, it was considered that the treatment groups were equivalent at the outset of the program. There were no significant differences in any demographic, smoking history factors or personality variables of Ss assigned to the three treatment groups. Details of equivalency and tables reporting specific probabilities appear as Appendix D.

The Effect of Support on Reduction

Two aspects of success were measured as outcome criteria in the present study: (1) percentage reduction, and (2) abstinence rate. These two aspects were evaluated over four time periods: T2--immediately following program; T3--at one month; T4--two months; and T5--three months.

All groups were followed for three months after their last treatment contact. Since Group C's treatment was of an eight-week, as opposed to a two-week, duration, smoking data exist over a five-month period for this group. Results will be examined not only for differential amounts of reduction and/or abstinence, but also to determine differential patterns of abstinence and recidivism.

End-of-treatment data points are based on the smoking frequency reported on the first postcard received (one week after treatment), whereas the monthly data points are based on the average number of cigarettes smoked over the last 14 days of the corresponding month. These data are also based on postcard protocols. In the following report percent reduction and abstinence will be considered separately. Comparisons will be made between the three treatment conditions across the various time periods.

Percent Reduction

Smoking rates were examined immediately after treatment to determine: (1) whether the treatment had some effect, and (2) whether there were significant differences among the three groups immediately after treatment. Percent reduction for treatment A and B and C immediately following the program was .65, .78, and .81, respectively. The combined mean percent was .74, which is significantly different from zero. This clearly indicates the treatments as having some effect. Table 1 summarizes these findings.

Analysis of variance of percent reduction at the end of treatment (first postcard) fell short of significance indicating that the initial workshops for the three groups were equally effective in attenuating smoking. The larger percent reduction for Groups B and C seem to indicate that even the promise of support did have a differential effect on the reduction in the initial phase.

Figure 2 graphically portrays percent reduction over the three-month follow-up period for the three conditions. Table 1 presents comparisons of the three groups over the various time periods and provides probabilities as to significant differences between the groups. Treatment C was significantly better than treatment A at one, two, and three months ($p < .05$). Although treatment C was better than treatment B at all time periods, in no case

TABLE 1

PERCENT REDUCTION BY TREATMENT BY TIME PERIOD

Variable	Treatment Means A	B	C	P C > B	P B > A	P C > A	P C > (B&A)
*Cig Pre	32	29	28	.65	.65	.86	.41
% Reduction 1st Postcard	.65	.78	.81	.58	.88	.91	.82
% Reduction One Month	.41	.65	.70	.64	.96	.98	.92
% Reduction Two Months	.32	.61	.63	.53	.98	.98	.89
% Reduction Three Months	.23	.43	.51	.68	.90	.97	.91

*Probility values for number of cigarettes pre are non-directional as this was a pre measure.

These probabilities indicate likelihood that the one group is better than the other. High probabilities (above .95) were therefore desired on this table.

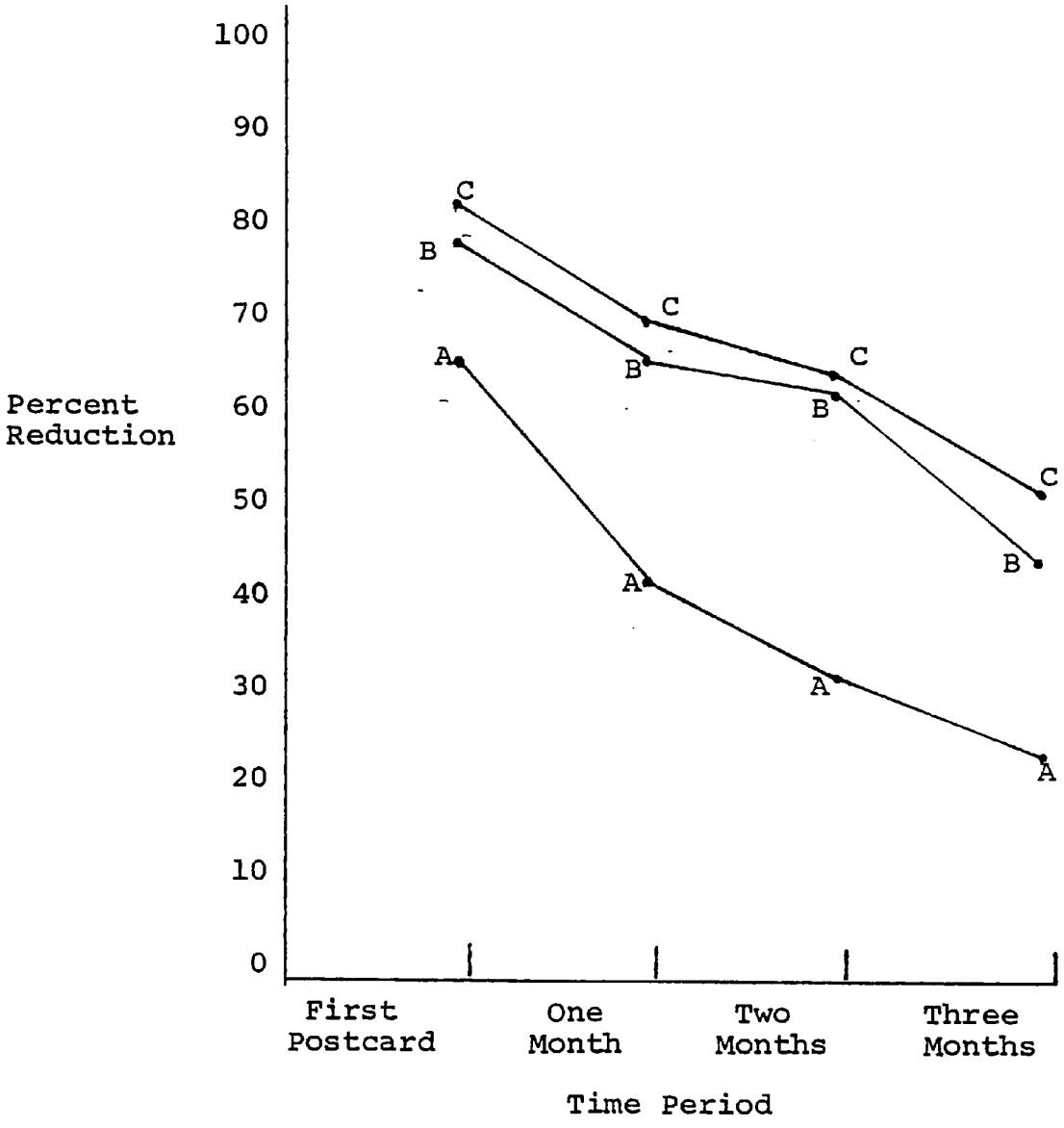


Fig. 2.--Percent Reduction for Each Treatment at Each Time Period

was the difference significant. Treatment B was significantly better than treatment A on two of the four occasions, one and two months ($p < .05$).

Group A (NS) returned to 77% of its baseline frequency by the third post-treatment month. In contrast, Group B (PS) relapsed at a lesser rate--35% of baseline at the end of the first follow-up month to 75% over the end of the third follow-up month. Group C's relapse rate was smaller still--30% of baseline at one month to 49% of baseline--three months. In general, the postulation that greater support would generate higher percent reduction was supported. Group support did result in larger percent reduction than postal support. Both were more effective than no support in attenuating smoking rates.

As indicated previously, Group C's treatment extended for a two-month period. This being so, it is reasonable to compare Group C's one-month post-treatment rate with the three-month report of A and B. Contrasting this, one sees that Group C had a significantly higher percent reduction at one month ($\bar{X} = .70$) than did the combination of Groups A and B at three months ($\bar{X} = .33$). This is important in two regards: (1) it reveals the effectiveness of group support, especially while it continued; and (2) it points to the fact that group support Ss were significantly reduced for a longer period of time than Ss in the

other two treatment conditions.

Figure 2 indicates the decline in treatment effect for the three conditions over the follow-up period. Table 2 provides the probabilities associated with the change in percent reduction from one time period to the next. There was a significant loss in treatment effect for Group A from T2 to T3 and from T3 to T4. Group B showed significant loss of effect later in the treatment process T4 and T5. Group C did not reveal early significant loss but showed significant decline in T3 and T4 and in T4 and T5. It should also be reiterated that Group C had no significant change in their percent reduction over the two-month period that their treatment continued. There is obviously a differential pattern of reduction across the treatment conditions. This pattern is even more striking with regards to abstinence and will be highlighted in the following section.

Abstinence Rates

Follow-up data pertaining to abstinence for the three treatment conditions are graphically portrayed in Figure 3. Table 3 summarizes the proportion of quitters for each treatment at each time period and provides associated probabilities over the three-month follow-up.

Analysis of varience of quit rates immediately after the two-week workshop indicates a significant

TABLE 2

PERCENT REDUCTION FROM PRE, BY TREATMENT

Group	N	T2 1st Postcard	p	T3 1 Month	p	T4 2 Months	p	T5 3 Months
A	19	.65	.02	.41	.04	.32	.06	.23
B	19	.78	.06	.64	.15	.61	.01	.43
C	19	.81	.08	.70	.04	.63	.04	.51

difference between number of quitters in Group C as compared with either Group A or B or the combination of the two ($p = .01$). Sixteen out of 19 Ss in Group C (84%) quit after the initial training as compared to only 42% and 47% for Groups A and B, respectively. Ss knowing they were going to receive further face-to-face contact quit at a significantly higher rate than did Ss in either of the other two treatment groups. The number of quitters in the other two treatment conditions were approximately the same, eight in Group A and nine in Group B.

The next time period at which data were collected and analyzed was at the first postcard mailing. For each of the three treatments, the first postcard was mailed one week after the last face-to-face contact. Analysis of variance of quit rates at this time period, while short of significance, revealed trends similar to those indicated with

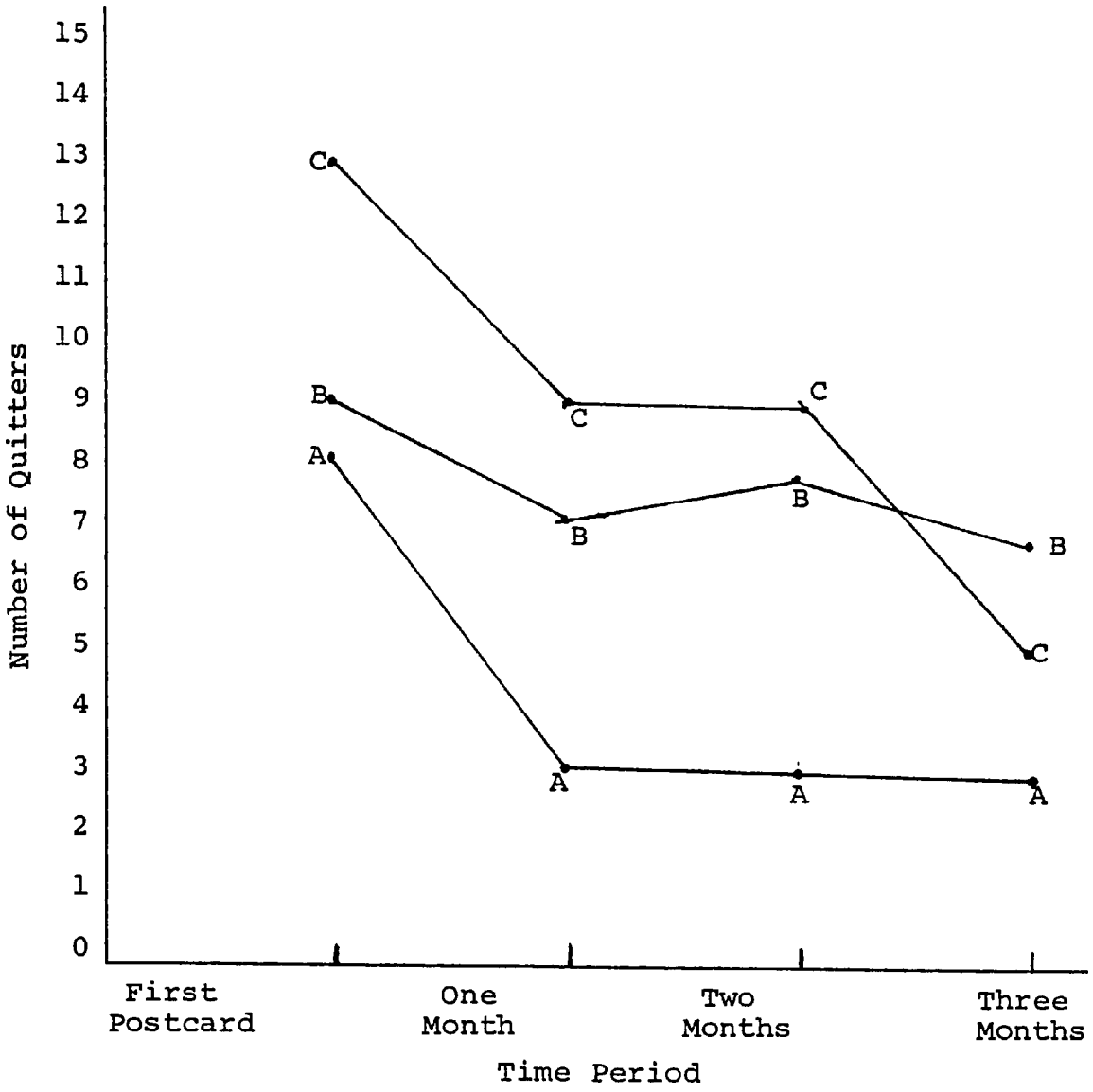


Fig. 3.--Number of Quitters Out of 19 in Each Treatment at Each Time Period

TABLE 3

PROPORTION OF QUITTERS FOR EACH TREATMENT AT EACH TIME PERIOD

Time Period	Treatment	Proportion of Quitters	Number of Quitters	Probabilities			
				C > A	C > B	C > (A&B)	B > A
One Week After Workshop	A	.42	8	.96	.95	.99	.63
	B	.47	9				
	C	.84	16				
First Postcard	A	.42	8	.94	.91	.96	.63
	B	.47	9				
	C	.68	13				
One Month	A	.16	3	.98	.74	.94	.93
	B	.37	7				
	C	.47	9				
Two Months	A	.16	3	.98	.63	.91	.96
	B	.42	8				
	C	.47	9				
Three Months	A	.16	3	.78	.24	.50	.93
	B	.37	7				
	C	.26	5				
One Month	C	.68	13	.99	.94	.99	NA
Three Months	A	.16	3				
	B	.42	8				

regards to reduction. Group C had a higher proportion of quitters (68%) than did either A or B (42% and 47%, respectively). As with percent reduction, the effectiveness of support in suppressing relapse over the three post-treatment months is readily apparent. There are in this set of comparisons, however, some interesting differences between group and postal support.

At three months post-treatment, the postal support group actually had the highest proportion of quitters (37%). Analysis of variance of proportion of quitters yielded a significant month's effect of C A at one month and two months ($p = .02$). B was better than A at one ($p = .07$), two ($p = .04$) and three months ($p = .07$). Group C, while better than Group B in the initial phases--immediately after workshop ($p = .05$) and at first postcard ($p = .09$) ended up with a lower proportion of quitters at three months. Group C's final quit rate was 26% while Group B's was 37% (see Table 4).

When Group C was compared at one month with Groups A and B at three months, Group C did show a significantly higher proportion of quitters than either A ($p = .01$), or the two combined ($p = .01$). This again points to the fact that while group support continued, it was highly effective. Upon termination of support, Ss returned to a rate of relapse which was more accelerated than the postal

TABLE 4

CORRELATION OF SELECTED VARIABLES--SMOKING HISTORY WITH PERCENT REDUCTION
(All Ss and by Sex)

N	Variable	Hyp.	Correlation	p	Sig.
	All Ss				
57	Age		-.13	.15	NS
55	Amount smoked originally	-	-.10		NS
52	Amount smoked past	-	.03	.23	NS
53	Length of time smoked	-	-.22	.05	Sig.
48	Length of success	+	.03	.63	NS
52	Percent inhale	-	-.15	.14	NS
	Males				
19	Age	-	.07	.61	NS
18	Amount smoked originally	-	-.11	.32	NS
19	Amount smoked past	-	-.38	.05	Sig.
18	Length of time smoked	-	.12	.68	NS
18	Length of success	+	.34	.08	NS
18	Percent inhaled	-	.09	.74	NS
	Females				
38	Age	-	-.21	.10	NS
38	Amount smoked originally	-	-.07	.33	NS
37	Amount smoked past	-	.25	.92	NS
33	Length of time smoked	-	-.37	.01	Sig.
35	Length of success	+	-.08	.38	NS
34	Percent inhaled	-	-.22	.10	NS

support group (Group B). These findings suggest several conclusions: (1) that group support did constitute the most potent form of support while it continued; (2) that the continuity of support provided by postal support had certain advantages over group support in terms of long-range effectiveness; and (3) that both forms of support were superior to the no-support condition in effecting abstinence.

Figure 4 graphically portrays these results. This figure takes the overall time C was followed (five months) into account and projects trends for the other two treatment conditions.

Background, Personality and Family Variables

This section of the results will be divided into two parts. The first part will report on selected personality variables that were correlated with percentage reduction at three months follow-up. The second part will detail findings from the Leary Interpersonal Checklist. On the Leary instrument, personality variables of quitters versus non-quitters will be examined in greater detail.

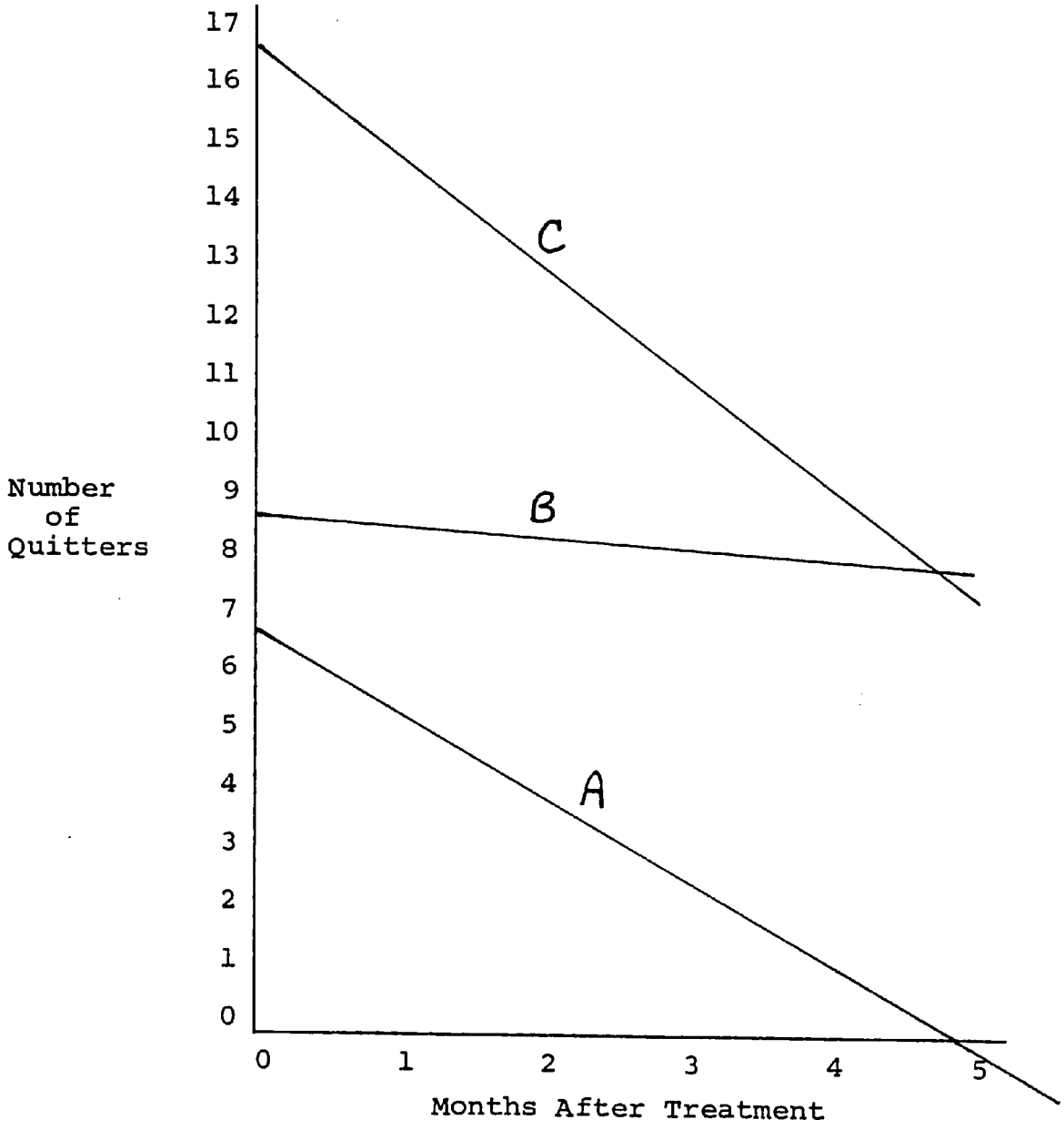


Fig. 4.--Quitting Trends for Each Treatment (Solid lines indicate lines of best fit)

Note: Observed number of quitters for C at five months was five; line of best fit for C would yield 5.76, whereas line of best fit for B would predict six quitters at five months after treatment. Prediction for Treatment A at five months is -1.0 quitters.

Selected Variables Correlated with Percent Reduction

In the study a large number of background and personality items were correlated (Pearson product moment correlation) with percent reduction in an attempt to isolate variables significantly related to success. The results were also examined by sex to look for differences between males and females on miscellaneous variables.

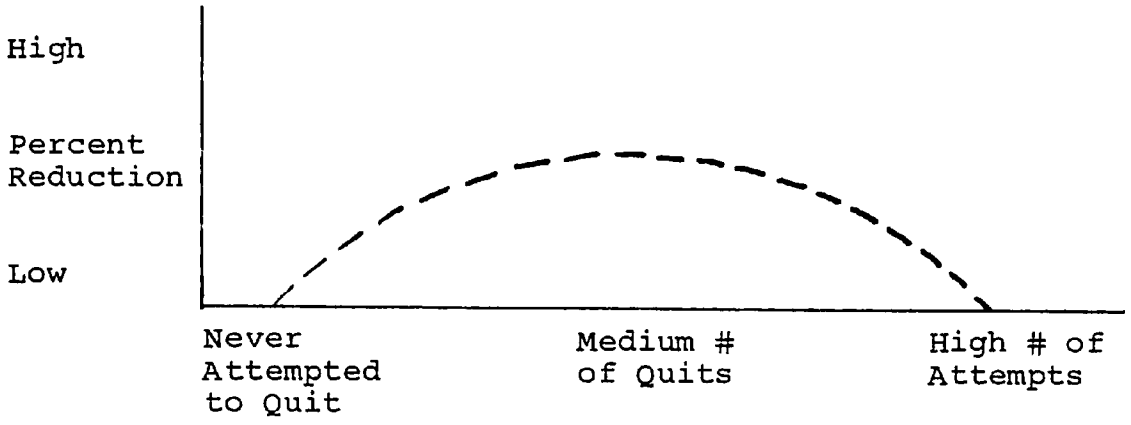
The two most general conclusions that can be drawn are: (1) that few variables were significantly correlated with percentage reduction; and (2) that there were few differences between male and female patterns. The differences that were significant or those that were clearly opposite to what was expected will be highlighted within this section.

Smoking History Variables

Few smoking history variables (amount smoked, number of previous attempts to quit, percent inhaled, etc.) were significantly correlated with percentage reduction. The one variable that was significantly related to success was length of time smoked--Ss who had been smoking a shorter time period were more likely to reduce ($r = -.22$). These and other smoking history results are presented in Table 4. Correlations are provided for the entire group

as well as broken down for males and females. The amount a person smoked was correlated negatively with success ($r = -.10$). This magnitude of correlation is not significant. The fact that amount smoked is not significantly correlated with success lends some credence to the superiority of abrupt quitting procedures and tends to reinforce the thought that the last few cigarettes increase in their value (Tooley and Pratt, 1967).

As far as attempts to quit, a second degree relationship was postulated between attempts to quit and percent reduction. Schematically, the postulations were as follows:



A regression analysis did not support this hypothesis ($p < .65$). There was no significant relationship between previous attempts to quit and percent-reduction.

Motivation for Smoking

Two aspects of motivation were examined and related to percent reduction: (1) motives for initiating smoking; and (2) motives for continuing smoking. Table 5 provides reasons for starting to smoke and mean percent reduction for all Ss. The most prevalent reason for initiating smoking was "peer pressure." There were no significant differences between percent reduction as related to reasons for initiating smoking. Ss who did indicate starting for reasons associated with "rebellion" had the lowest percent reduction. Those indicating "feeling cool" had the highest mean percent reduction.

A variation of the Horn questionnaire entitled "Why Do You Smoke?" (see Appendix B) was utilized to assess Ss' continuing motivation for smoking. The six factors Horn derives are: (1) stimulation, (2) handling, (3) pleasurable relaxation, (4) crutch: tension reduction, (5) craving: psychological addiction, and (6) habit. Results of correlations of these motives with percent reduction for the entire group and by sex appear in Table 6.

High habit scores were negatively correlated with success ($r = .21$). This finding approached significance. When looking at differences within the habit-addictive-tension (crutch) complex, it is clear that percentage reduction was highest within the tension category. This is

TABLE 5

MOTIVATION FOR INITIATING SMOKING AND MEAN PERCENT SMOKING REDUCTION

	Number	Percent	Mean
Peer pressure	13	.30	.53
Around smokers	5	.11	.33
Feel cool	3	.07	.78
Feel adult	4	.09	.40
Rebellion	4	.09	.08
Experiment, fun and liked it	6	.14	.55
Stress, depression	3	.07	.15
Not applicable	6	.14	.55

F for difference between groups = 1.58 p = .16 -NS

in line with theory presented earlier which suggested that support would act as an intermediary factor in the reduction of strain. Theory does not suggest support as having an effect that would relate directly to the habit-addiction complex.

A few sex differences that appear in relation to the Horn instrument are as follows: (1) stimulation and handling as reasons for smoking were more related to percent reduction for females than for males; (2) all of the reasons for smoking mentioned correlated in the same direction with reduction for both males and females.

TABLE 6

CORRELATION OF SELECTED VARIABLES--"WHY DO YOU SMOKE" WITH PERCENT REDUCTION
(All Ss and by Sex)

N	Variable	Hyp.	Correlation	p	Sig.
	All Ss				
52	Why smoke--stimulation	-	.12	.82	NS
52	Why smoke--handling	-	.12	.82	NS
52	Why smoke--pleasure	-	.07	.69	NS
52	Why smoke--crutch	-	.07	.69	NS
52	Why smoke--crave	-	-.12	.20	NS
52	Why smoke--habit	-	-.21	.06	NS
	Males				
18	Why smoke--stimulation	-	.03	.55	NS
18	Why smoke--handling	-	-.22	.19	NS
18	Why smoke--pleasure	-	.01	.52	NS
18	Why smoke--crutch	-	.19	.79	NS
18	Why smoke--craving	-	.02	.54	NS
18	Why smoke--habit	-	-.22	.19	NS
	Females				
34	Why smoke--stimulation	-	.23	.91	NS
34	Why smoke--handling	-	.34	.98	NS
34	Why smoke--pleasure	-	.12	.77	NS
34	Why smoke--crutch	-	.11	.74	NS
34	Why smoke--craving	-	-.11	.25	NS
34	Why smoke--habit	-	-.16	.17	NS

Past studies have indicated that Ss who score high on the habit-addictive complex and on the tension scales have greater difficulty quitting (Schwartz and Dubitzky, 1968). In the present study, the first three variables--stimulation, handling, pleasurable relaxation--were considered more extrinsically oriented reasons for smoking. These were compared with the latter three variables--tension reduction, addiction, and habit--which were considered more intrinsically motivating. Significantly higher percent of reduction was found among Ss who indicated the extrinsic motivation ($p = .02$). Those who did indicate the habit addictive complex did have the lowest percentage reduction. This was true for both males and females.

Self Acceptance and Self Control

One other series of important variables that were correlated with reduction were self-acceptance and self-control. Several measures were utilized in assessing these variables: Rotter, California Personality Inventory (CPI--self-acceptance and self-control scales), Group Embedded Figure Test (GEFT). Several interesting findings emerge relative to these factors. These results are summarized for the entire group and by sex in Table 7.

There is a very consistent pattern of control being negatively correlated with success which is opposite

TABLE 7

CORRELATION OF SELECTED VARIABLES--GEFT, ROTTER, CPI WITH PERCENT REDUCTION
(All Ss and by Sex)

N	Variable	Hyp.	Correlation	p	Sig.
	All Ss				
57	GEFT 2°	+	-.06	.63	NS
57	GEFT 3°	+	-.05	.65	NS
57	GEFT Total	+	-.06	.63	NS
57	Rotter	-	.25	.96	NS
57	CPI Self-Control	+	-.38	.99	NS
57	CPI Self-Acceptance	+	.12	.19	NS
	Males				
18	GEFT 2°	+	-.28	.88	NS
18	GEFT 3°	+	-.01	.52	NS
18	GEFT Total	+	-.19	.78	NS
17	Rotter	-	-.10	.66	NS
16	CPI Self-Control	+	-.33	.90	NS
16	CPI Self-Acceptance	+	.19	.23	NS
	Females				
36	GEFT 2°	+	.00	.50	NS
36	GEFT 3°	+	-.10	.72	NS
36	GEFT Total	+	-.04	.61	NS
33	Rotter	-	.41	.99	NS
34	CPI Self-Control	+	-.39	.99	NS
34	CPI Self-Acceptance	+	.10	.27	NS

*GEFT 2° + 3° = two parts or equivalent halves of the total.

of what was predicted. In generating hypotheses, two factors were considered: (1) personality theory strongly points to non-smokers as more internally controlled than smokers, i.e., the non-smoker is a person who perceives events as determined by factors intrinsic to himself as opposed to determined by fate, chance or the manipulation of others.

Thinking that there would be some similarity between those who quit and those who never smoke and inferring from a common sense viewpoint that those who saw themselves in charge would be more likely to reduce at a higher rate, it was inferred that those who reduced more would be the more internally controlled. The results on both the CPI self-control scale and on the Rotter were in the direction opposite to this prediction and were of sizable magnitude ($r = .41$--females; $r = .10$--males, Table 7). Ss with high external scores were much more likely to reduce their smoking than Ss with high internal scores. As can be inferred from the above, this difference was largely attributable to the very high positive correlation between female external scores and percentage reduction. The CPI self-control scale, contrary to the predicted direction, correlated negatively with percentage reduction for both sexes (Table 7).

The GEFT illuminates yet another unpredicted aspect of this same portrait. The GEFT, a perceptual test measuring field independence versus field dependence, indicates negative correlations between field independence and percent reduction (Table 7). Field independence is related not only to perception but to cognitive and affective style as well (Witkin, et al., 1971). The field independent person is characterized by articulated and analytical intellectual functioning, more differentiated body concept, a more highly internalized and developed standards of self and of the world and by specialized defenses. Being more differentiated and tending to see more diversified resources within the environment it was inferred that more field independent Ss would have higher reduction rates than field dependent Ss. As with the CPI and Rotter, correlations on the GEFT were opposite to those hypothesized ($r = -.06$--total group). The correlations did not approach significance, but for both males and females high scores on the GEFT (greater field independency) were negatively correlated with success.

Results from the three measures that evaluated control (Rotter, CPI and GEFT) do reveal internal consistency. These findings and their implications will of course be discussed in the final chapter.

Self-acceptance on the CPI did correlate positively with percent reduction ($r = .21$). This was in the hypothesized direction but was short of significance (see Table 7).

Living Situation

Another set of variables examined had to do with living situation. Since the study examined the effects of support, it was thought that whether the potential quitter lived alone or with another and whether or not the "other" smoked might prove significant. Percent reduction did correlate significantly with roommate or spouse smoking--a significantly higher percent reduction occurring when the living mates were non-smokers. Table 8 presents these results for the entire group and by sex. There was a relatively large sex difference on this variable. The finding was significantly true for females and not for males. There were no significant differences on other living situation variables.

Family Variables

The next series of questions examined quitting as it related to information gathered about the S's family of origin. Under this general heading, several variables were considered, i.e., parental smoking patterns, size of family, intactness of family, and birth order. Table 9

TABLE 8

LIVING SITUATION AS RELATED TO PERCENT REDUCTION

Variable	N	$\bar{X}$	p	Sig.
	All Ss			
Roommate not smoke	13	.78	.13	NS
Live alone	7	.55		
Live alone	7	.55	.19	NS
Roommate smokes	12	.35		
Roommate not smoke	13	.78	.01	Sig.
Roommate smokes	12	.35		
	Males			
Roommate not smoke	3	.78	.62	NS
Live alone	3	.89		
Live alone	3	.89	.15	NS
Roommate smokes	5	.62		
Roommate not smoke	3	.78	.29	NS
Roommate smokes	5	.62		
	Females			
Roommate not smoke	10	.78	.03	Sig.
Live alone	4	.29		
Live alone	4	.29	.32	NS
Roommate smokes	7	.16		
Roommate not smoke	10	.78	.01	Sig.
Roommate smokes	7	.16		

TABLE 9

PARENTAL SMOKING AND INTACTNESS OF FAMILY AS RELATED TO ABSTINENCE

Variable	N	Q	NQ	p	Sig.
Neither Parent Smokes	9	2	7		
One or Both Parents Smoke	36	9	27	.54	NS
One Parent Smokes	16	3	13		
Both Parents Smoke	20	6	14	.70	NS
Parents Divorced	3	1	2		
Parents Not Divorced	51	12	39	.65	NS
Both Parents Alive	31	10	21		
One or Both Parents Dead	24	3	21	.04	Sig.
Size of Family (Number of Siblings)		2.4	2.7	.78	NS

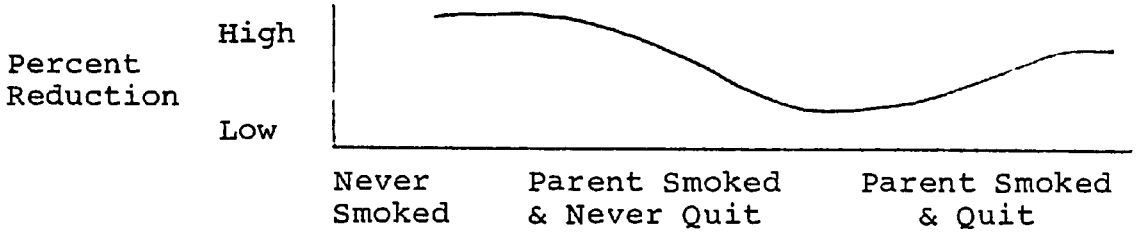
provides a synopsis of the findings and associated probabilities of significance resulting from chi-square analyses. Briefly, the results can be summarized as follows.

Quitting rates were slightly higher for Ss whose parents smoked. Quitting rates were higher if only one parent as opposed to both smoked. Quitters were from slightly smaller families than non-quitters. The mean number of siblings in the families of quitters was 2.4, while the families of non-quitters averaged 2.7. This difference was of course not statistically significant.

With regards to intactness of the family, two major factors were considered: (1) divorce, and (2) death

of either or both parents. The divorce rate of 5.5 percent for the total group is relatively low. Quitting or not quitting was not significantly related to whether or not parents were together or divorced (see Table 9). Forty-four percent of the total group had at least one parent deceased. This figure seems relatively large considering the age of Ss (one-half less than 30). There was a significant difference between quitting rates of Ss who reported both parents alive as opposed to Ss who reported one parent deceased. Ss reporting both parents still living were significantly more likely to quit than Ss with one parent deceased ($p = .04$).

Parental smoking patterns were also analyzed and related to abstinence. This set of variables looked at two aspects of parental smoking: (1) whether the mother or father ever smoked and (2) whether either or both quit. It was hypothesized that there would be a second degree relationship between the smoking history of parents and the percent reduction of Ss. The relationship postulated is schematically diagrammed below.



Percent reduction, it was thought, would be highest if either the mother or father never smoked; least if the mother or father smoked and never quit; and medium if the mother or father smoked and quit. The second degree relationships from the regression analysis were not significant when either mother or father smoking rates were analyzed. These results appear as Table 10.

Table 11 presents correlations of parental smoking with both percentage reduction and abstinence. As can be seen, results vary considerably with regard to maternal and paternal smoking. Maternal smoking is positively correlated with both percent reduction and abstinence while paternal smoking is negatively correlated with both outcome criteria.

The relationship of birth order to quitting or not quitting was also analyzed. Birth order was considered by treatment group since earlier research indicated first borns as being more influenced by support than later borns. Analysis of variance revealed no significant differences either by quitting or by treatment group relative to birth order. Tables 12 and 13 portray these results. There was a slight tendency for oldest and first borns to quit more than later borns. Also first borns in treatment C did quit at a higher rate than later borns. None of these findings were significant.

TABLE 10

RESULTS FOR CURVILINEAR HYPOTHESES EXAMINING PARENTAL SMOKING AND ABSTINENCE

	p	Sig.
Mother	.49	NS
Father	.81	NS

Life-Script Variables

The last set of variables examined in this section were those derived from the "Life-Script Questionnaire." The life-script questionnaire consisted of 34 open-ended questions which asked Ss for self description and some family history (see Appendix B).

A "script" is a personal life plan decided by an individual at an early age in reaction to his or her interpretation of external events (Woollams, Brown, Huige, 1974). The script questionnaire was utilized in the present study in two ways: (1) selected items were coded and contrasted with a mean percent reduction; and (2) the overall instrument was scanned to obtain global impressions of "script" issues for the group.

Ss' descriptions of themselves were compared with their descriptions of their mothers and fathers. There was a negative correlation between being either like

TABLE 11

CORRELATIONS OF PARENTAL SMOKING AND PERCENTAGE REDUCTION AND ABSTINANCE

		Reduction				Abstinence			
	Hyp.	%	N	p	Sig.	%	N	p	Sig.
Mother smoked	-	+.22	46	.93	NS	+.21	46	.92	NS
Father smoked	-	-.20	45	.10	NS	-.05	45	.37	NS

TABLE 12

BIRTH ORDER AND FREQUENCY OF QUITTING

Variable	Q	NQ	p	Sig.
Birth Order				
1. Oldest	8	22		
2. Second oldest	4	13		
3. Third oldest	1	2	.96	NS
4. Fourth oldest	1	4		
5. Fifth oldest	0	1		
Oldest in Family	8	22	.40	NS
Not oldest	6	20		

TABLE 13

BIRTH ORDER AND ABSTINENCE BY TREATMENT GROUP

Variable	N	Q	NQ	p	Sig.
Treatment C first borns	14	4	10	.36	NS
Treatment C later borns	5	1	4		
Treatment C first borns	14	4	10	.47	NS
Treatment A&B first borns	18	5	13		

mother or father and percent reduction (Not Significant). In other words, greater disidentification with parents correlated positively with percent reduction. These correlations and others obtained from the script questionnaire appear as Table 14.

Early memories from the Life-Script Questionnaire were coded in two ways: (1) for negative or positive content; and (2) in terms of the inclusion of trauma or injury in the early memory. It was hypothesized that negative early memories would correlate negatively with percent reduction and that low incidence of hurting or trauma would correlate positively with percent reduction. Findings were in the direction hypothesized but did not approach significance (Table 13).

Ss were also asked the question, "How do you think you might die and at what age?" For the total sample, projected age of death was positively correlated with percent reduction ($r = .22$; $p = .04$). The magnitude of this correlation is significant for the group as a whole.

"How do you think you might die" was coded as to the means of death--natural or non-natural--and violent or non-violent. Both of these were considered relative to abstinence. Table 15 indicates that the ratio of non-quitters to quitters was approximately 4:1 for Ss who thought they would die a natural death as well as for those who thought they would die an accidental death.

TABLE 14

CORRELATION OF SELECTED VARIABLES--LIFE SCRIPT QUESTIONNAIRE WITH PERCENT REDUCTION
(All Ss and by Sex)

N	Variable	Hyp.	Correlation	p	Sig.
		All Ss			
46	How much like mother	NA	-.18	.21	NA
45	How much like father	NA	-.03	.82	NA
47	Earliest memory	-	-.06	.34	NS
47	Earliest memory	+	.08	.29	NS
57	Age at death	+	.22	.04	S
		Males			
14	How much like mother	NA	-.30	.28	NA
13	How much like father	NA	-.05	.85	NA
15	Earliest memory	-	-.20	.23	NS
15	Earliest memory	+	.28	.15	NS
19	Age at death	+	.31	.09	NS
		Females			
32	How much like mother	NA	-.14	.41	NA
32	How much like father	NA	-.02	.90	NA
32	Earliest memory-186	-	.02	.56	NS
32	Earliest memory-187	+	-.01	.53	NS
38	Age at death	+	.17	.15	NS

TABLE 15

SELECTED LIFE SCRIPT VARIABLES BY QUITTING/ NON-QUITTING, WITH X^2 RESULTS

Variable	Quitters	Non-Quitters	p	Sig.
Natural death	7	25	.45	NS
Non-natural death				
Violent	3	8	.69	NS
Non-violent	6	24		

The fact that almost one-fourth of the Ss described themselves as dying an unnatural, accidental or violent death seemed high to the E. There were no significant differences along these lines between quitters and non-quitters. In fact, the proportion of quitters indicating violent death was slightly higher than the proportion of non-quitters.

Several other interesting points emerged from a consideration of the "How do you think you might die" question. First, on reading through the questionnaires, there is a striking impression of the immediacy of death for many of the Ss. Some examples of answers to the question which illustrates this immediacy are as follows:

1. 19-year-old female--"I think I'll die in my sleep and I feel I don't have much time left."

2. 23-year-old male--"Frustration, don't know what age but might be any day now."

3. 56-year-old female--"Of lung cancer, within next five years."

As previously mentioned it was also clear in reading through the scripts that there was a high proportion of violent or accidental deaths mentioned. In response to the same question, examples are as follows:

1. 26-year-old female--"suicide or accident at 40."

2. 32-year-old female--"instantly--auto accident 55 years old."

3. 29-year-old female--"of a stabbing in my 40's."

There was also a general orientation to early death. Not all Ss when asked at what age they thought they might die responded with an actual age. Several, of course, put "old age" or remarks like "til 99." Even considering answers such as these, the average age of projected death, when an age was mentioned, was 55.6. A distorted image of a long life was particularly captured in one 34-year-old male's response. He said, "I'll die of an old age--at 50."

Another aspect of responses to the projected death question involves the fact that many subjects mentioned

smoking-related diseases as the way they would die (approximately 60%). Seven Ss also made a distinction in response to this question giving two different ages and means of death depending on whether or not they quit smoking, i.e., (1) 34-year-old female--"Of some lung disorder in my 50's if I continue smoking. Otherwise, in my 80's." (2) 33-year-old female--"If I continue smoking--die of emphysema at 63 years. Otherwise will live till purpose in life is completed and I will choose my time to die and just do it." It is interesting to report that none of the Ss who make this type of differentiation did in fact quit.

Three final questions were spotted for consideration from the Life-Script Questionnaire.

1. What is the best thing that has happened in your life so far?
2. What is the worst thing that has happened in your life so far?
3. If, by magic, you could change anything about yourself, just by wishing, what would you wish for?

Table 16 is a descriptive display of Ss' answers to these questions and mean percent reduction by response. These findings are for the most part self-explanatory. There is no apparent pattern of responses that is associated with high percent reduction. It is of interest that the people who mentioned smoking as the thing they would

TABLE 16

PERCENT REDUCTION ON SELECTED VARIABLES--
LIFE SCRIPT

Variable	N	Mean
Best thing happened so far		
1. Education	6	.37
2. Marriage	9	.18
3. Important relation other than marriage	5	.37
4. Self acceptance	6	.06
5. Children	6	.49
6. Travel	2	.90
7. Leaving home	4	.50
Worst thing happened so far		
1. Job loss	1	1.00
2. Death of loved one	8	.35
3. School failure/education not completed	3	.61
4. Accident, injury, illness	7	.23
5. Divorce	4	.25
6. Loss of relationship	6	.33
7. Other	9	.40
If, by magic, you could change anything		
1. Personality change	15	.34
2. Educational improvement/intelligence	5	.43
3. Quit smoking	5	-.03
4. Job/employment	1	.12
5. Financial improvement (money)	2	1.00
6. Body change	10	.27
7. More self-confidence	8	.50

most like, by magic, to change, had the lowest percent reduction. On the other hand, Ss who mentioned economics or financial improvement as the thing they would most like to change, had the highest percent reduction.

As far as global impressions related to the script questionnaire, two elements are worthy of mention: (1) the extreme amount of resistance to the measure generally, and (2) the fact that drive and ambition were very prevelent in the scripts as an overriding theme. Both of these issues will be elaborated in subsequent discussion.

Leary Interpersonal Checklist

Since few smoking studies have addressed themselves either to a consideration of interpersonal variables or have assessed personality variables specifically characteristic of those wishing to quit smoking, the results will give particular attention to findings from the Leary Interpersonal Checklist. First findings that pertain to the group as a whole will be considered. Subsequently, differential profiles of quitters vs. non-quitters will be analyzed.

The Leary Interpersonal Checklist actually involves an intricately layered diagnostic code which theoretically can result in 65,536 personality types at five levels of the personality. Fortunately, this is reducable to an

eight-digit diagnostic code which more than adequately meets the present research purposes. In the study, the Leary instrument was utilized only at Levels II--Self Report (conscious communication) and Level V--Level of Values (ego ideal). Ss checked adjectives applicable to self, mother, father, and ideal self. Profiles were then scored for these categories and charted on the Leary wheels. Figure 5 is a copy of the scoring wheel. Specifics of correlation from Leary appear as Appendix F. Randomly selected examples of Leary profiles appear as Appendix G.

Leary (1957) describes eight personality types and speaks of these as having to do with a style or type of adjustment aimed at the reduction of anxiety and the maintenance of self esteem. He outlines the eight basic personality types and the adjustment mode characteristic of each as follows:

1. The autocratic personality--adjustment through power (AP)
2. The hypernormal personality--adjustment through responsibility (NO)
3. The overconventional personality--adjustment through cooperation (LM)
4. The dependent personality--adjustment through docility (JK)
5. The masochistic personality--adjustment through self-enforcement (HI)

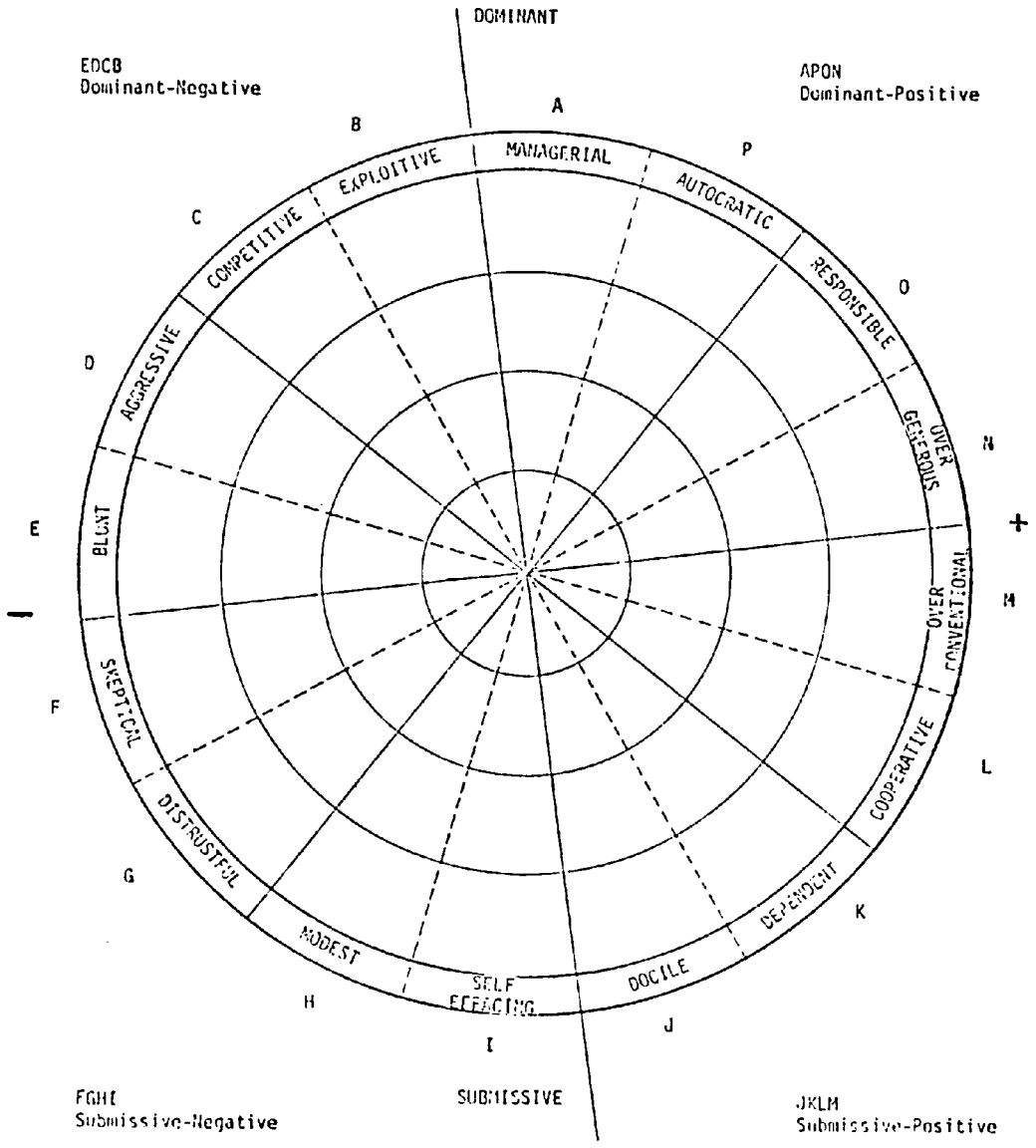


Fig. 5.--Leary Wheel

6. The distrustful personality--adjustment through rebellion (FG)

7. The sadistic personality--adjustment through aggression (DE)

8. The narcissistic personality--adjustment through competition (CB)

The Leary Wheel principally describes two aspects of personality--power and affect. The wheel can roughly be broken down first from top to bottom along a dominant-submissive continuum and from left to right on a negative affect to positive affect continuum. This results in four quadrants EDCB/dominant-negative; APON/dominant-positive; JKLM/submissive-positive; FGHI/submissive-negative (Figure 5). While there are 16 variables on the Leary Wheel, these are combined to result in eight personality types. Scores were analyzed both in terms of the eight personality types and the four quadrants.

The Group as a Whole

Table 17 reports the number of Ss in each of the 16 Leary categories. The probabilities at the bottom of Table 17 refer to the profile difference between quitters and non-quitters. For none of the four areas were there a difference between quitters and non-quitters. Table 18 summarizes the Leary results into each of the four quadrants. Results were broken down by quitters and non-quitters. For

TABLE 17

FREQUENCY OF QUITTERS ON LEARY VARIABLES

Leary Variable	Self		Ideal Self		Mother		Father	
	Q	NQ	Q	NQ	Q	NQ	Q	NQ
P	1	1	1	5	0	3	0	1
A	0	3	1	4	1	0	1	5
B	3	5	1	6	1	5	2	6
C	2	4	2	0	0	3	1	7
D	0	4	0	0	0	3	1	3
E	2	1	0	0	2	3	2	1
F	1	2	0	0	2	3	2	4
G	0	2	0	0	0	4	0	1
H	1	5	0	0	0	1	0	0
I	0	1	0	1	1	1	0	0
J	1	0	0	0	0	1	0	1
K	0	1	0	0	0	1	1	1
L	0	2	0	0	0	2	1	0
M	1	0	2	11	1	2	0	2
N	0	3	2	8	3	2	0	2
O	1	5	4	2	1	3	1	2
	13	39	13	37	12	37	12	31
Missing	2	3	2	5	3	5	3	11
Total	15	42	15	42	15	42	15	42
	$p = .36$ NS		$p = .07$ NS		$p = .47$ NS		$p = .80$ NS	

TABLE 18

FREQUENCY OF QUITTERS ON LEARY QUADRANTS

	Self		Ideal Self		Mother		Father	
	Q	NQ	Q	NQ	Q	NQ	Q	NQ
Quadrant 1-A,N,O,P	2	12	8	19	5	8	2	10
Quadrant 2-B,C,D,E	7	14	3	6	3	14	6	12
Quadrant 3-F,G,H,I	2	10	0	1	3	9	2	5
Quadrant 4-J,K,L,M	2	3	2	11	1	6	2	4
	13	39	13	37	12	37	12	31
Missing	2	3	2	5	3	5	3	11
Total	15	42	15	42	15	42	15	42
	$p = .44$ NS		$p = .67$ NS		$p = .53$ NS		$p = .77$ NS	

the time being, results that apply to the group as a whole will be considered.

Chi-square was utilized to determine significant high or low categories. A significantly high proportion of the group's self-ratings appeared in the Narcissistic Personality (CB) category (27%). Forty percent of the total group's self profile were in categories EDCB (negative affect, dominant). Again this is significantly dif-

ferent from the chance expectancy. Actual percentage for each category and chi-square results on the Leary appear as Figures 6 through 14 in Appendix F. Significant findings include the following:

1. Sixty-eight percent of the total group's self profile was in the dominant half of the wheel.

2. Sixty-four percent of the self profiles fell on the negative half of the wheel.

3. Ideal self scores for the group as a whole significantly emphasized dominance, however this time with a move to positive affect. Fifty-four percent of the total group's IS profile fell into the APON quadrant (positive-dominance).

4. A significantly high proportion of subjects placed their father in CB (competitive-explotive) category. The EDCB quadrant (negative-dominance) accounts for 41% of the fathers of total group. As with the self profiles, there was again a significant ratio of dominance over submissiveness.

5. The profiles of Ss' mothers, while yielding no significant categories, again reflected the same general trend--i.e., high EDCB scores--34% of total group, and a trend toward dominance over submissiveness, 60% dominance/40% submissiveness. These scores are appreciably large, particularly if the traditional roles and cultural norms usually associated to women and "mother" are taken into account.

What emerges from these findings is a relatively consistent picture of the self and the families of this group as emphasizing negative affect and dominance. One other aspect that was not fully analyzed here but is worthy of mention is what Leary terms the level of the unexpressed (Level III). Here Leary examines categories significantly omitted or avoided in the profile. There is a clear avoidance of categories JK (docility-dependency), and low emphasis on the LM (cooperation-conventionality) category. The LM omission is particularly striking since, as Leary points out, this mode of adjustment is usually the highest stated ideal of our Western civilization (Leary, 1957). This mode emphasizes loving, peaceableness, sympathy, trust and cooperation. The most typical ego ideal (IS), as measured by the Leary, emphasizes a combination of strength and affect (LM). Even the IS of this group did not acknowledge or place much emphasis on the LM category. The ego ideals of the group as a whole emphasized strength but with a combination of responsibility, not trust, love, or cooperation.

An even more clear omission involves the low utilization of the JK, HI categories. These categories which emphasized dependency, weakness, and helplessness themes are consistently avoided by the group in describing self, mother, father and ego ideal. This is even more clear in

a scanning of the profiles where it is evident that these categories are avoided systematically even at very low levels of intensities.

This avoidance is typical of characteristics Leary ascribes to narcissistic-competitive personality types. These findings and their implications for smoking modification programming will be discussed in the final chapter.

Quitters vs. Non-Quitters on the Leary

While there do not appear to be highly significant differences between quitters and non-quitters, there are some consistently and distinct trends that exist between the two groups. Quitters, even more than non-quitters, exhibited the narcissistic-competitive profile aforementioned (see Figures 6 through 14 in Appendix F). Thirty-eight percent of those who quit rated themselves in this category. This is more than three times what one would expect by chance and is, of course, significant. Twenty-three percent (NS) of the non-quitters rated themselves in this category. Fifty-four percent of the quitters fell in EDCB quadrant. This was significantly different from chance by four to one and contrasts with 35% of the non-quitters who rated themselves in this quadrant.

It appears that most typically non-quitters balanced their narcissism with power-responsibility (i.e., the

non-quitters' profiles would include more positive affect elements, while still emphasizing dominance). Quitters' profiles either tended to more clearly include negative affect--Q = 70% on negative to 30% positive (significant). Non-quitters--61%-39% (non-significant). Again, both quitters and non-quitters significantly emphasized dominance over submissiveness in both their self and ideal self profiles.

Ideal self profiles of quitters and non-quitters differed as follows: Quitters' ideal self clearly emphasized strength and responsibility. Forty-six percent of quitters' IS profile (almost four times what would be expected by chance) fell into the NO (hypernormal) category. While non-quitters' profiles also significantly emphasized this category, LM, or cooperativeness, was also emphasized in their ego ideal.

Differences between "mothers" of quitters and non-quitters again revealed non-significant but interesting findings. Quitters tended to rate their mothers as having more positive affect than non-quitters. Forty-nine percent quitters--positive as opposed to 36% non-quitters. The largest category utilized by quitters to describe their mothers was NO (hypernormal-responsible) as opposed to non-quitters category of highest use being CB (competitive-exploitive). As has been consistently pointed out, profiles

for mothers of both quitters and non-quitters emphasize dominance over submissiveness (66% quitters, 60% non-quitters). The general trend here points to the fact that the mothers of quitters are somewhat more positive and dominant than the mothers of non-quitters. The fact that E was a female must be considered as a factor that was possibly influential.

"Father" profiles again revealed interesting differences. The category that both quitters and non-quitters most frequently used in describing their fathers was again the CB--competitive-exploitive category--25% quitters (non-significant), 20% non-quitters (significant). In this instance, quitters rated their fathers even more negatively than did non-quitters. Fifty percent of the quitters rated their fathers in the EDCB quadrant (significant). Thirty-five percent of the non-quitters' fathers appeared in this quadrant. Fathers of non-quitters combined the CB category with autocratic-managerial as their second most utilized category. There were significantly low scores on dependent categories for non-quitters' ratings of their fathers.

As with profiles for the total group these findings will be discussed in the final chapter.

The Process of Quitting

This section reports on information gathered for each condition at three months post-treatment. Ss received by mail the Rotter, the CPI (self-control, self-acceptance scales), and a final smoking form (FSF). The FSF combined a series of open- and closed-ended questions relating to S's abstinance patterns and to utilization satisfaction with the program. All post-test instruments appear as part of Appendix B.

The Rotter and CPI scales were utilized for two purposes: (1) to see if there were significant shifts in scores over the three-month period; and (2) to see if these shifts or the post scores themselves were correlated with success.

In line with rationale previously presented, it was thought that particpants with high scores (Rotter), and with high self-control and self-acceptance scores (CPI) would be those with higher percent reduction. It was also conjectured that the scores of those who quit would shift in the direction of greater control and acceptance than those who did not quit.

Results presented in Table 19 revealed two findings: (1) that there were very small changes in any of the three measures from pre- to post-testing; and (2) that there were

TABLE 19

MEAN INCREASES FOR QUITTERS AND NON-QUITTERS

Variable	Quitters' Mean Increase	Non-Quitters' Mean Increase	p	Sig.
Rotter	1.5	1.7	.35	NS
CPI--self-control	.8	-.1	.30	NS
CPI--self-acceptance	.8	.5	.37	NS

no significant differences between quitters and non-quitters. Quitters' scores did change more so than non-quitters in the directions hypothesized, i.e., lower Rotter scores than non-quitters, higher CPI self-control and self-acceptance scores than non-quitters. Changes being relatively small, all of the post-tests correlated with percent reduction in the same direction as the pre-tests. Table 20 presents these results.

As was found with pre-scores for the total group, the self-control post-scores (Rotter and CPI) were in the direction opposite the one hypothesized. Scores for males did not fit this pattern. Their Rotter scores were correlated with success in the direction anticipated. Self-acceptance did correlate positively on both pre- and post-measures with percent reduction for both males and females.

TABLE 20

CORRELATION OF SELECTED POST VARIABLES WITH PERCENT REDUCTION

N	Variable	Expected Direction	r	p	Sig.
		All Ss			
56	Rotter Post	-	.16	.89	NS
55	California Self-Control Post	+	-.31	.99	NS
55	California Self-Acceptance Post	+	.21	.06	NS
		Males			
18	Rotter Post	-	-.31	.10	NS
18	California Self-Control Post	+	-.25	.85	NS
18	CPI Self-Acceptance Post	+	.26	.15	NS
		Females			
38	Rotter Post	-	.37	.98	NS
37	California Self-Control Post	+	-.33	.98	NS
37	California Self-Acceptance Post	+	.19	.13	NS

Utilization of Techniques

As outlined in the chapter on methodology, several major techniques were presented to all Ss during the program. The utilization of these techniques and their relationship to quitting and not quitting was analyzed. Differences in utilization of the various techniques by group were considered. These findings are summarized in Table 21.

The only technique that was utilized significantly more by quitters than non-quitters was the "stroking" or reward technique. During the initial presentation, Ss were encouraged to substitute alternate sources of nurturing for their "Child"* during the time following their withdrawal of cigarettes. Besides this, all other techniques were used essentially the same by quitters and non-quitters. Progressive relaxation and contracting techniques were actually used more by non-quitters than quitters. The major question regarding differences between groups addressed itself to whether groups with greater support utilized techniques differentially. Although most of the findings indicated no significant differences by group, there were several findings that warrent consideration:

*The concept of "Child" and suggestions made to participants in relation to improved nurturing will be discussed in the subjective findings.

TABLE 21

USE OF TECHNIQUES

	All Subjects				Quitters Only				All Subjects				Quitters Only				All Subjects			
	C	(A+B)	p	SIG	C	(A+B)	p	SIG	B	A	p	SIG	B	A	p	SIG	Q	NQ	p	SIG
*Diary	1.7	1.7	.58	NS	1.8	1.6	.76	NS	1.5	1.9	.01	SIG	1.4	2.0	.01	SIG	1.7	1.7	.30	NS
*Progressive Relaxation	1.6	1.4	.90	NS	2.0	1.5	.99	NS	1.4	1.7	.38	NS	1.6	1.3	.72	NS	1.7	1.5	.92	NS
*Contract	1.5	1.5	.36	NS	1.6	1.8	.22	NS	1.7	1.4	.97	NS	2.0	1.3	.96	NS	1.7	1.5	.93	NS
*Thought Stopping Techniques	1.6	1.4	.82	NS	1.8	1.3	.96	NS	1.4	1.5	.38	NS	1.4	1.0	.96	NS	1.5	1.5	.41	NS
*Stroking	1.6	1.5	.60	NS	1.2	1.4	.23	NS	1.6	1.5	.79	NS	1.5	1.0	.98	NS	1.3	1.6	.03	SIG

*Low mean is better since Yes = 1 and No = 2.

1. C Group tended to utilize techniques less than the other two groups.
2. Group B (PS) utilized the diary significantly more than Group A (quitters and non-quitters).

Quitters

At the three-month follow-up several questions regarding the process of quitting, i.e., difficulty, withdrawal symptoms, relapses, etc., were asked only of those who quit. A total of 15 Ss quit smoking during the program (26.3%). Summarily, results were as follows: 75% of those who quit quit immediately after the program (Table 22). Only 25% of those who quit, however, quit cold turkey. Most did some cutting down prior to stopping completely. Seventy-one percent of those who quit reported withdrawal symptoms. The most often reported symptoms being cigarette craving, headaches and sleeplessness. Quitters described the first few days of quitting as extremely tense and anxious. Ironically, they reported their first few days off of cigarettes as worse than did non-quitters (see Table 23). Quitters rated their difficulty of quitting, on a five-point scale with five being most difficult, as 3.8.

Most of the Ss who quit had some relapse after quitting, the mean number of relapses was 1.4 (Table 22). The situation most mentioned in which the relapse recurred was

TABLE 22

FINAL SMOKING FORM MEANS ON SELECTED VARIABLES FOR QUITTERS

Variable	N	Mean	Yes	No
Quit smoking immediately after program	16	1.25	75%	25%
Quit cold turkey	16	1.75	25%	75%
Experience of withdrawal symptoms	14	1.29	71%	29%
Number relapes since quit	16	1.44	44%	56%
How many cigarettes since quit	17	5.35		

in situations involving the use of alcohol or stimulants. The mean number of cigarettes smoked after quitting was 5.35.

Eighty-six percent of those who quit reported that they are still having urges to smoke. Forty-six percent of these report these urges as "strong." Most of the quitters reported these urges at a frequency between 2-20 per day. Eighty-six percent of those who quit answered "yes" to the question of whether they smoked to reduce tension and anxiety.

Seventy-six percent of those who quit gained weight after they quit. There was a differential in weight gained that varied with amount of support (not significant).

TABLE 23

FINAL SMOKING FORM--REPORT OF FEELINGS AFTER QUITTING

Variable	Q	NQ	p	Sig.
Describe how you felt the first few days				
1. Extremely anxious	5	16		
2. Tense, not too good	7	5		
3. Ambivalent, good and bad	0	5	.60	NS
4. O.K.--good	0	2		
5. Great	1	7		

Ss in Groups C and B gained approximately the same amount after quitting (6.9 lb.--B; 7.2 lb.--C). Subjects in Group A, the no support condition, gained on the average, 10 lb. (Table 24). It is of interest that the group with the highest number of quitters (Group B) reported the lowest average weight gain and the maximum amount of support. Sixty-seven percent of the quitters reported doing something to bring the weight under control. The most prevalently mentioned activities being exercise and return to normal eating habits.

In terms of support, the quitters reported finding other people as "very supportive." On a five-point scale, with five as extremely supportive, they ranked their support at 3.6. Although there were no significant differences among treatment groups, the ratings of support from

TABLE 24

MEANS ON SELECTED VARIABLES BY TREATMENT FOR QUITTERS

Variable	A	B	C	p	Sig.
Gain in weight	10.0	6.9	7.2	.79	NS
Ranking of others' support	3.0	4.0	3.8	.19	NS

Groups C and B were higher than Group A. Group B rated themselves as having most support. As mentioned, this was also the group that had the highest proportion of quitters. Sixty percent of the Ss indicated that a particular person supported them during the process of quitting. This person usually was not a partner. The most prevalent form of support was "encouragement." It made no apparent difference whether the person providing the support was a smoker, ex-smoker or a non-smoker.

A few comparisons were run by group for quitters. The question of whether increased support impacted on the process of quitting was raised, i.e., did Ss with greater support experience fewer withdrawal symptoms, gain less weight or quit with greater ease than Ss in lower-support conditions. Table 25 presents data relating group comparisons and associated probabilities of significance. As can be seen, there are no significant differences by group.

TABLE 25

TREATMENT COMPARISONS ON FINAL SMOKING FORM OF GROUP DIFFERENCES AMONG THOSE WHO QUIT

Variables	Groups		p	Sig.
Difficulty of Quitting	C = 4.8	A&B = 3.3	.99	NS
Difficulty of Quitting	B = 3.1	A = 3.6	.25	NS
Experience Withdrawal Symptoms	C = 1.0	A&B = 1.4	.30	NS
Weight Gain	C = 9.0	A&B = 11.1	.30	NS
Degree of Support	C = 3.8	A&B = 3.7	.41	NS
Sum of Techniques Used	C = 8.4	A&B = 7.6	.12	NS

In fact, those who quit in Groups A and B reported quitting as less difficult than Ss in Group C.

Non-Quitters

Non-quitters, like the quitters, were asked a series of questions regarding their reaction to the program and their pattern of recidivism. Most Ss either quit or cut down at some point during the three-month follow-up period. Differences between groups were analyzed. Results showing number of quits and cut-downs for each of the three groups over the three-month follow-up appear as Table 26.

TABLE 26

FINAL SMOKING FORM--NON-QUITTERS

Variable	C	B	p	Sig.	C	A	p	Sig.	B	A	p	Sig.
Time quit altogether?	1.0	1.2	.10	NS	1.0	1.2	.20	NS	1.2	1.2	.31	NS
How many times?	2.1	2.1	.44	NS	2.1	2.2	.56	NS	2.1	2.2	.55	NS
Duration of each quit?	9.4	2.6	.08	NS	9.4	2.4	.05	SIG	2.6	2.4	.45	NS
During three months, did you cut down?	1.2	1.2	.61	NS	1.2	1.3	.28	NS	1.2	1.3	.20	NS

*Low mean is better.

Analysis of variance revealed only one significant group difference as follows: Ss in Group C were abstinent for significantly longer periods of time than Ss in Group A ($p = .05$). This finding approached significant also when C was compared to B ($p = .08$).

In addition to quits and cut-downs, non-quitters were asked a series of questions which included their reaction to the program, whether they still wanted to quit, their withdrawal symptoms when abstinent, etc. The non-quitters' responses to those questions appear in Appendix H. To summarize, results were as follows: When non-quitters were asked what factors were associated with their reinstigation of smoking the most frequent factor mentioned was "tension, anger, frustration." This was similar in all three treatment conditions.

As mentioned, non-quitters reported their first few days after quitting as less stressful than did quitters. Several reported feeling either "very good" or "great." Non-quitters, when they did either cut down or quit, experienced withdrawal symptoms at about the same rate as quitters (76%, NQ; 71%, Q). The most frequent symptoms mentioned by this group was "tense, fluttering nervousness." This pattern was similar for all three treatment groups.

Ninety-seven percent of the non-quitters when asked if they still wanted to quit smoking, answered in the affirmative. When asked what they felt they needed to do this, the most prevalent response was "make decision; set mind to it." There was once again no differences between the three treatments. It is of interest that when asked how they would like to see the program changed, 60% of Ss indicated a desire for more group sessions. This response was even more prevalent from Ss who had not been in the group support condition (A = 62%; B = 83%; C = 36%). Also of note was what of the program Ss reported as being of use to them. "Support from others" was mentioned significantly more than any of the other variables ($p = .03$). Descriptive displays of selected responses to the Final Smoking Form appear in Appendix H. This finding was true for quitters and non-quitters. Table 27 illustrates items mentioned by both quitters and non-quitters. These findings are consonant with findings from evaluation of the small group meetings which indicated that it was not particular techniques, but the fact of having some place to go and a common group interested in a common problem that seemed useful to people in their effort to change a certain behavior (see subjective findings).

TABLE 27

FINAL SMOKING FORM--QUITTERS/NON-QUITTERS

Variables	Q	NQ	p	Sig.
What of the program was helpful to you?				
1. Diary	0	3		
2. Progressive relaxation	0	3		
3. Thought stopping	0	2		
5. Stroking	0	1	.18	NS
6. Support from others	8	13		
7. Other	6	7		
9. All of it/or several things	0	6		

Group C's Evaluation--
Small Group Meetings

A series of questions was asked of Group C concerning their reaction and suggestions with regards to small group meetings. A descriptive display of their responses appears in Appendix H. In brief, their reactions to the meetings was positive. Seventy-four percent indicated that they would have attended more group sessions if they had been available.

One hundred percent of Ss in this group quit smoking at some time during the program. As reported earlier, 84% were abstinent completely one week following the initial training sessions. Sixty-eight percent were abstinent upon completion of the six weeks of small group meetings. Twenty-six percent were abstinent at three-month follow-up.

When asked what they liked about the meetings, 84% indicated "sharing, opening up to people." When asked what they felt they needed at the time they returned to smoking, most indicated something that would have helped with tension reduction. Most Ss indicated "nothing" when asked what they would have liked to have been done differently at the meeting. E's suggestions and comments on the small group meetings are reported in the following section.

Subjective Findings

As previously described, these findings were generated from E's process notes and from general impressions collected over the six months of contact with the 75 Ss who participated in the research project. All group meetings were taped. Due to limited time and money resources, a formal content analysis of this material was not conducted. Some actual transactions from the small group meeting will be reported.

Comments within this section will be broken down to provide the reader with familiarity regarding three areas: (1) the recruitment or entry phase; (2) the overall pattern or style typical of participants throughout the project; and (3) the small group meetings and the particulars related to participants' interactions within this context.

In this section E will take the liberty to make interpretations and set forth wider range speculations. In the final chapter material will be related to specific suggestions for further research in line with the "hypothesis generating" aspect of the study.

Initial Contact

S's entry into the program is being described in some greater detail on the assumption that several important aspects of the project will be illuminated by an understanding of the initial contact. This is not a particularly innovative or novel notion. The small group, as well as the clinical literature, has traditionally paid particular attention to the original premises upon which interactions are established (Rogers, 1951; Berne, 1964; Steiner, 1971).

The fact of very limited recruiting has been mentioned. Mimeographed notices were placed on bulletin boards around campus and a notice of a "quit smoking program" was placed in the local Ann Arbor newspaper. These notices were placed on a Thursday afternoon. By Sunday, the E had received approximately 104 phone calls from persons expressing potential interest in the program. This information is being underscored to highlight the fact that for three days the E spent a fairly concentrated period of

time talking to persons expressing interest in quitting smoking. A very clear and regular pattern emerged from these initial phone contacts.

First of all, approximately 75-80 percent of the callers had somewhat of an ongoing laugh that permeated their conversation. This was not an actual laugh but more of an underneath chuckle or guffaw that punctuated the interaction. This was particularly regularized and striking in response to certain questions, i.e., How much do you smoke--(laugh); Have you attempted to quit before--(laugh). A response like "Have I tried to quit before? Are you kidding?" was likely to follow the "attempt" question.

Obviously, some of this type of response can be written off to general nervousness or tension release. The consistency of the pattern, however, and the particular type of laughter struck E, even in early phases, as a kind of double message, i.e., I want to stop smoking--(ha-ha). The other pattern that was emerging in the E's mind was related to "trying to quit" rather than quitting. There was particular hesitation around the question: "Have you tried to quit before?" and many times this question elicited a fairly lengthy recounting of all of the various methods the Ss had unsuccessfully tried. As was mentioned in the first half of the results, the average number of times Ss in the project had attempted to quit was 4.6.

This is an extremely important point since much of the criticism of behavioral approaches to smoking cessation stress the fact of "motivated volunteering" (Marston, Hunt, etc.). The reviews indicate an attitude as follows: "If you programs aren't even successful with motivated volunteers--what good could they possibly be?" The point herewithin, and one that will be explicated in subsequent sections, is that many of the Ss volunteering might be less motivated than the average expectable somker. It is at least possible that what is being dealt with in smoking programs is persons "trying to quit"--"attempters" rather than motivated potential quitters. This postulation deserves recognition as a possibility. Suggestions for testing this speculation will be presented in the final chapter.

Another disposition related to the "trying" syndrome has to do with a more general type of passivity that E observed in the early stages. This attitude involves what has been referred to as a "Do Me Something" posture (Berne, 1964). In the initial calls, potential Ss were very anxious to hear what the program consisted of and what unique approaches the program had to offer. Again, much of this attitude is what one would expect prior to a person committing themselves to a new undertaking. Many of the questions and much of the interaction, however,

went beyond a healthy curiosity and got more into the "Do Me Something" attitude mentioned above. Specifically, this attitude was communicated and can be characterized by two things: (1) a defiant position "I bet there's nothing you have to offer that can help me!--But try me anyway?" (2) an attitude that communicated "Look, I know I'm someone who, short of a miracle, can't stop smoking so you better have some special new treatment that I've never tried before or else I'll remain a hopeless case."

These characterization are obviously exaggerations of the positions taken by participants. The general attitude, however, was something very real and not expected by the E. The assumption "I am a person who cannot quit smoking" was extremely prevalent. Many people did not even believe they could stop for a day. There was a rather childlike, magical kind of hoping for something external that could transform participants from "hopeless cases" to nonsmokers.

One final style or manner worthy of mention relates to the general friendliness or extroversion of the callers. Most of the callers were very outgoing. Several wanted to talk extensively. Even in the initial stages, impressions of other reseachers on personality dimensions seem to be confirmed, i.e., extroversion, spontaneity, openness (Coan, 1973, Smith, 1970 and others).

Another important aspect of the initial calls relates not to the style of the callers, but rather to the number of calls themselves. The fact that 104 persons from a relatively small community (100,000) called within a two-day period, in response to limited advertising, was striking. This piece of information tends to confirm the fact that a very large number of persons in the population are now desirous of terminating their smoking behavior. The point was made earlier that the extensive educational and media input regarding cigarettes has effected not a reduction in the number of smokers but rather has effected a large increase in the number of persons expressing interest in eliminating smoking or in thinking they should eliminate it. Our data, in the initial phases, and throughout, tend to support this suggestion.

One final fact regarding the initial phase is that more women than men called expressing interest in the program (approximately three to one). A higher percent of males than females who indicated initial interest followed up and took part in the research project.

Global Impressions

This section will focus only on the most general impressions of the group. The overall sociableness and extroversion of the group has been briefly mentioned with

regards to the initial contact. A distinct cluster of traits that include sociable, outgoing and assertive, characterized the group members who eventually volunteered. There were very few withdrawn people among the participants. This "sociable-outgoing" style should not be confused with warmth or an especially personal orientation. Many of the Ss kept a very distinct distance. This was an overall impression from the larger group meetings (19 per group) and one that became more firmly established in the E's mind as participants continued into the small group sessions.

While Ss were very willing to share their thoughts, beliefs and opinions about topics, they were much less willing to share personal information about themselves, their families or their lives. They were particularly reticent to express feelings. Counterpointing this observation, the small group participants rated their experience in the group as one of the most intimate and personal contacts in which they had ever participated. Participants' evaluations will be elaborated in subsequent sections.

The "distancing" pattern mentioned above once again seems like a fairly predictable and "normal reaction" of persons entering a new setting. As a matter of fact, the group members were more outgoing than one would expect at initial contact. As time progressed, however, the group manifested more defensive and closed behavior than E would

have anticipated either from their initial extroversion or from experience with other groups.

Kurt Lewin (1948) in his work the American character describes Americans as very easy to get to know initially and fairly difficult to get to know intimately. His general description is that Americans have a low permeable boundry on the outside layer of their personality and very hard core permeability around the inner self. Lewin's depiction very well captures what would be E's portrayal of the behavior of smokers in the present study.

One final characteristic worthy of mention has to do with the group's responsibility throughout. As a group, Ss were very responsive to carrying through with the research project. They cooperated with most of the suggestions made, were prompt in attending meetings, and were highly cooperative with regard to returning data. Clearly, the $15.00 deposit that was returnable contingent on S's cooperation was some impetus in this regard but even without this incentive, the group could be characterized as "responsible."

Small Group Meetings

This section will detail impressions gathered from the small group meeting. As the reader will recall, following the initial two training sessions participants in

the group support conditions, were divided into two groups, one of nine members and one of ten. These small groups met for six additional weekly meetings. Dynamics were essentially the same for both small groups. The section will consist of general comments about the process of the meetings and will later provide examples of specific transactions and "games"* typically engaged in by group members.

In the final small group meetings participants shared their evaluation of the program generally and the group meetings specifically. These evaluations will be highlighted. Conclusions and an overall interpretation of the findings will be presented. Since a large part of E's group training and experience was within a Transactional Analysis framework, TA will be utilized to some extent in detailing E's observations and interpretations. Whenever there are particular or idiosyncriatic terms they will, of course, be defined.

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*"Games" here is being utilized and taken from a transactional analysis framework. Transactional analysis (abbreviated TA) is a theory of personality as well as a treatment methodology devised and explicated by Eric Berne. Berne defines a game as "an ongoing series of exterior transactions leading to a well defined and predictable bad feeling pay off" (Games People Play, 1964, p. 48).

Background Information

Some history of the small group meetings is necessary to a full comprehension of the proceedings. First of all, the E, while having had fairly extensive group experience, had never run smoking groups *per se*. In addition to this, there is little or nothing in the literature as to the specifics of what others have done *vis-a-vis* ongoing smoking groups. This is part of the reason the small groups process is being outlined in some greater detail.

The average attendance at weekly meetings was six to seven. The pattern that emerged after the first few sessions was that almost everyone attending meetings was at "0" cigarettes. For the most part, the group meetings were of a non-directive nature. What participants wanted to get out of the meetings and how they wanted them structured was discussed at the initial sessions. Generally, people wanted to see how others were doing with their smoking and to have the opportunity for asking and obtaining further necessary information. They were interested in a forum for sharing difficulties and experiences related to their no-smoking decisions. Participants were also obviously interested in the social aspects of the meetings. They discussed and expressed an interest in having tea, coffee, soft drinks and other refreshments. As the meetings progressed, this aspect took on greater emphasis.

A lack of experience with smoking groups was mentioned and is relevant because not having had much direct experience with smokers, E permitted or indirectly sanctioned the move to a more social use of the time. With almost all participants at zero cigarettes by the third or fourth meeting, there did not seem much need to keep working directly on participants' smoking problems. In retrospect, or in light of the recidivism rate, either a better utilization of the time or improved and extended support regimes seems to be indicated. Particular suggestions for improved programming will be dealt with in the final chapter.

Overall Style of Participants

Most of the information that follows grew out of a relistening of the available tapes of the small group meetings. As previously mentioned, no formal content analysis was performed. Unfortunately, not all of the group meetings were taped or were on audible tapes. There does exist, however, approximately ten hours of taped interactions. An examination of these materials leaves a clear and distinct impression in the listener's mind as to characteristic style and process of the group meetings. It is these impressions and reactions that are reported. They are, of course, supplemented by E's overall impressions and process

notes which were usually written immediately following the small group sessions.

The most obvious and universal characteristic of group members was the felt difficulty they all experienced in relation to the quit-smoking decision. Participants told extensive stories of how integral and thoroughly ingrained the smoking habit was for them. One woman described a night in the Upper Penninsula of Michigan where at midnight she finally located a junk yard and started rifling through the ash trays of abandoned cars in order to obtain a cigarette. This story was a group favorite, so to speak, since it seemed to so well capture the desperateness that most members had experienced in terms of cigarette craving. Several participants stated overtly that they thought they would die without cigarettes. It was clear that many others, while not expressing this thought, associated quitting with some sort of dire consequence. It has already been mentioned that most participants viewed the act of stopping as something almost completely beyond their capability.

The first characteristic, then, that typified the group was a kind of desperateness that resulted in a grandiosity about what they were doing and very limited optimism about their potential success. The feeling that quitting was so difficult and felt so far out of the S's control was

especially troublesome since it did not fit participants' other images and ideas of themselves. For the most part, group members tended to see and to present themselves as highly competent, self-assured assertive people. It was obvious from the beginning, that most Ss saw their "weakness" around smoking as particularly dissonant with their other accomplishments and, therefore, as a source of disturbance.

These above impressions describe the overall concerns of the group and some of their usual modes of behavior. As far as style of transaction, the following two factors are principally salient: (1) transactions tended to be very competitive. E's impression in listening to the tapes is that of everyone talking and nobody listening. This was characteristic of the group in spite of fairly structured "gatekeeping" on the part of the group leader. Participants seemed much more invested in telling their stories than in listening to, or responding to, others. Much of the time, the natural communication of the group involved successive monologues rather than dialogues; (2) transaction could be characterized as involving incomplete or aborted patterns of conversation. In the groups, Ss' interactions did not often carry to completion or to a very complete point of closure. E saw this pattern related to three elements: (1) the nonlistening mentioned above;

(2) participants' externalization and lack of insight into their own dilemmas; and (3) the avoidence of feelings. All of these elements will be referred to again when the specific transactions and the "games" typically engaged in by participants are considered.

Typical "Games" and
Specific Transactions

By far, the "game" most typically played by group members was "Why Don't You--Yes, But" (abbreviated YDYB). This game will be described in some detail since it is E's conviction that it expresses much of the inner dynamics of this particular group. YDYB deserves consideration as the game most prevalently engaged in by participants in the small group meeting. It also deserves consideration as a "game" participants were possibly playing in a larger sense, i.e., in relation to the program as a whole. This interpretation goes back to the "attempting syndrome" mentioned earlier and suggests the possibility of Ss being interested in seeking solutions for the purpose of rejecting them rather than seeking assistance in good faith. This interpretation will become clearer as the dynamics of the "Yes, But" game are considered.

"Why Don't You, Yes But" occupies a special place in game analysis. It was the original stimulus for the concept of games. Berne (1964) describes the basic game as follows:

> YDYB can be played by any number. The agent presents a problem, the others start to present solutions, each beginning with Why Don't You . . . ? To each of these White (the player) objects with a Yes, but . . . . A good player can stand off others indefinitely until they all give up, whereupon White wins.
>
> Since solutions are with rare exception rejected, it is apparent that this game serves some ulterior purpose. YDYB is not played for the ostensible purpose (an Adult quest for information or solutions) but rather to reassure and gratify the Child (Berne, 1964, pp. 115-116).

"Why Don't You, Yes But" was played repeatedly by the group. The best example that comes to mind involved a woman who was describing her living situation. She said she was at home with two children while her husband was at school with the only family car. According to the woman, this was the major reason standing in the way of her terminating smoking and her presentation communicated frustration and a request for help. The group response came in the form of solutions for her situation: "Have you tried co-oping? . . . putting the kids in nursery school? calling dial-a-ride, getting your husband to do more? . . . etc." All suggestions would then be met with some objections as to why a particular suggestion would not work. Obviously this is only one example of the "game." It was repeated many, many times in the course of the group.

Berne points out several interesting things about people who typically favor YDYB. To begin with, he remarks that persons favoring this game belong to a class of people that eventually request hypnosis or some kind of hypnotic suggestion as a way of solving their problems (Berne, 1964). This fits in very well with data from the smoking groups. A very large percentage (approximately 50%) of the group had considered hypnotism as a potential solution to their smoking problem. One woman who had been hypnotized was left with the suggestion to vomit on being presented with a cigarette. This woman reported that her urge to smoke was so strong that she persisted with smoking until the vomiting eventually desisted.

Berne secondly pinpoints this game as particularly common among people who have a "fear of blushing" (Berne, 1964, p. 118). He goes on to explain that many YDYB players fear unstructured time. The game's end result involves a demonstration that others are inadequate. In the process the game masks the initiator's inadequacies. This underlying dynamic fits in very well with personality characteristics of the group that were implied in the objective results, especially those highlightened in the Leary data.

Other games favored by the groups included "Ain't It Awful," and "If It Weren't for You." These games will not be outlined here. Readers who are interested in pur-

suing these further are referred to Games People Play (Berne, 1964). Neither of these were as prevalent as the "Yes, But" game aforedescribed.

The following series of transactions was selected from the March 3, 1975 meeting. This meeting was the third of the Monday evening group. Eight persons were present. The notes are verbatim or very close to it. In some instances a few background comments or irrelevant transitional comments have been deleted. The meanings have in no way been distorted. Transactions selected illustrate some of the communication pattern and styles that have been described to this point. In particular, the "Yes, But" game and examples of externalization and grandiosity are illustrated.

The sequence starts with a 34-year-old male journalist describing his wife and his difficulty with her. He explains how difficulties at home exasperate his desire for cigarettes. At the time of this transaction he has been off of cigarettes for almost a month but is reporting a good deal of difficulty with abstinence especially in times of stress. He is describing his predicament to the group and asking for suggestions of what he might do. He will be anonomously referred to as Dan.

Dan: Well, my job is extremely hard. I go home, I take care of my kids. My wife is up-tight. My wife being up-tight makes me up-tight. One way I have of getting my wife less up-tight is to get her to escape a little bit from the situation of six kids. I've said why don't you get a part-time job?

Group Member: Maybe she doesn't want to escape from the kids.

Dan: Well, she does and she doesn't. Part of her wants to escape and part of her doesn't. Whatever her problems are, she takes them out on me so I feel bad.

Several Group Members: Don't let her do it!

Dan: Well, how do you not? You know?

Group Member: You say--Hey look. I realize you're upset and confused about what you want to do, but you know it's your problem. I've offered you these solutions and there's nothing else I can do.

Dan: All right, but I'm unable to put it out of my mind!

Group Leader: Able isn't right there--you are <u>able</u> to put it out of your mind.

Dan: Well I haven't--I have not in the past successfully put it out of my mind and I've tried a number of things and I don't know what to do.

Another group member asks another question and several further suggestions are made. These are met with similar rejections or defenses from Dan. At some point the conversations or one thread of it is merely picked up by another group member who moves into an anecdote condemning non-smokers that starts with the following statement: "Non-smokers have absolutely no compassion. Non-smokers just

don't know!"* (There is much group agreement and laughing at this point.) The speaker goes on:

Group Member: The other day I got really frustrated. This fellow came up to me and said, "Oh, you're still off smoking. That's nice! I mean, Jesus Christ, he says, 'That's nice!' This is the most important and biggest thing I've done in my life and he lays this shit on me. God damn it, I've been going through hell. It's really tough!" (Much group agreement and consensus around the fact that "it is awful" and nobody does understand how hard it is.)

Following these transactions, another woman speaks. This particular transaction illustrates a typical emphasis in the group on production and achievement. The speaker here is discussing her desire to stop smoking and the difficulty she is having doing this especially at work. Again, this woman is in the process of supposedly seeking solutions from the group.

Woman: What's going to happen to me if I go through a whole morning at the office and I don't have a cigarette?

Group Leader: Would you allow yourself to do that so you'd find out?

Other Group Member: The point is, can you afford to screw up for a week? Can you afford to have one week where you don't accomplish one damn thing?

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*It should be underscored here that, not as part of this discussion, but previously the E not being a smoker or ex-smoker, was a major bone of contention, i.e., You could never understand--How could somebody who's never smoked help us quit," etc. This problem was openly discussed and fairly well resolved in the group.

Woman: No, not right now. Right now, I've got $90,000 hanging over my head. If I screw up between now and May 1st, I'm not $90,000. That's a lot of money.

The group automatically accepts this as a good reason to not stop smoking. It should also be noted it was unequivocally accepted by the group that stopping smoking would necessarily and irrevocably result in "screwing up."

Hopefully, these few verbatim comments provide at least some feeling for the group's types and styles of communication. In listening to the tapes the flow of comments and the non-listening is much more obvious than is illustrated in this very partial accounting.

The Evaluation Meeting

The final small group meeting was dedicated to evaluating or commenting on the program as a whole and on participants' reactions to the small groups' meetings. Within this context, participants made recommendations and suggestions for modifying the program. Some of the more striking conclusions from the meetings are:

(1) Participants viewed most of the techniques and suggestions made in the early training as relatively useless. They said that what was important to them was that somebody was interested in their stopping. They expressed the thought that somebody providing a place and time for them to get together and share their difficulties about quitting was what had helped them. There was, according

to participants' accounts, minimal utilization of particular suggestions.

(2) Participants definitely said they evaluated the small group meetings very positively.* Many Ss had relatively strong feelings about the group's termination. Several indicated that the group was one of their few opportunities to "let their hair down," "let it all hang out." As previously mentioned, this attitude surprised E who has considered the meetings to be very low key and much of the behavior and interactions of the participants as relatively defended.

Suggestions that participants made were as follows: (1) schedule more meetings as part of the program; (2) have weekly meetings at first, then go to bi-weekly or monthly meetings for follow-up; (3) experiment with an ex-smoker as compared to a non-smoker running the program; (4) provide some opportunity for phone contact or some type of buddy system in case of an emergency (strong urge to smoke); (5) provide a big reunion party or picnic in summer for purpose of seeing whole group and of seeing each other again.

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*It should be noted that these were participants attending the meetings. It is obvious or likely the non-attenders were not valuing the meeting as positively although in some cases scheduling problems prohibited otherwise well motivated participants from attending.

It is clear from the participants' suggestions that they did value the small group meetings.

Thirteen of the 19 people who attended the small group meetings were abstinent at the end of the sixth meeting. Most of these had been abstinent for two months. Several persons never quit to begin with and never attended meetings. If these persons were eliminated from consideration, approximately 78% of those attending small group meetings were abstinent at the last contact. Even considering the total group, 68% were abstinent. This is a very high success rate. As was mentioned, the number at absolute zero decreased after another three months of follow up to 28%.

Summarization and Interpretation

This final summarization and interpretation will again utilize concepts from Transactional Analysis. In particular, the concept of ego states will be referred to. For this reason, "ego states" will be outlined here prior to making further comments. The unfamiliar reader is also referred to Appendix A for some additional descriptions of TA theory and terminology.

An ego state is defined by Berne (1964) as "a system of feelings accompanied by a related set of behavior patterns." The importance of this concept revolves around

the recognition that each person has three functional parts. The three major groupings of sets of feelings and behaviors isolated by Berne are: Parent, Adult and Child.

The Parent ego state consists of attitudes, perceptual styles, and behaviors taken in from outside sources, primarily parents. The Adult ego state objectively apprises reality. It is best described as a digital computer. The Child ego state consists of all the urges and feelings that come naturally to the individual (Woollams, et al., 1974).

In very cursory form, the above provides the reader with at least some definition of what Berne defines as the essential parts of the personality. The varying parts are being mentioned here to acquaint the unfamiliar reader with at least some definition of terms prior to describing certain observations that were made by E. Principally, three observations were made regarding smokers' ego states: (1) that the Child ego state was fairly well excluded in the majority of participants; (2) that there was a definite lack of Child investment in the quit-smoking decision; and (3) that there was an overall absence of Nurturing Parent, in relation to others but particularly with relation to self.

Exclusion of the Child

The concept of exclusion or of an excluded ego state is a fairly particularized concept on the TA framework. It is being utilized here merely to indicate the tendency of people in the study to want to avoid feelings in general and their feelings of inadequacy or dependency in particular.

This observation was collaborated by group personality profiles (Leary), which emphasized dominance over submissiveness as well as negative over positive affect. According to the Leary results, individuals in the study had a tendency toward independence and away from the expression of weakness, inadequacy or dependency. This type of posture would fit in with a general description of excluding the Child. It should be noted that the group did not particularly exclude the Child part of their personality with regards to fun or sociability. What is being suggested here is a particularized exclusion in terms of feeling, especially sad or scared feelings and/or the expression of inadequacy or dependency.

It is E's interpretation that cigarettes are utilized in many cases to avoid feelings or are the smoker's way of pacifying the Child when things are getting too close for comfort. This interpretation fits in well with the original motives most people report for initiating smoking, i.e.,

"feeling cool," "being grown up." What is speculated here is that much of the ongoing motivation for smoking is primarily of the same nature--"feeling cool," "keeping things together," "appearing consolidated," and not letting weakness show. This interpretation, while speculative, could easily be tested, and if substantiated would indicate definite tacts and modes of interventions for working with smokers.

One of the most significant errors of anti-smoking campaigners and programmers have made involves not answering the basic question of why people want to smoke in the first place. What is being presented here is at least one possible theory of smoking behavior. Effective programming cannot really be developed until some theorizing and hypothesizing about the basic question of why people smoke is formulated.

One of the other most lucid presentations of smoking behavior comes from Desmond Morris in Intimate Behavior (1973). In Morris's view people smoke because cigarettes satisfy a basic need for intimacy. Cigarettes, in Morris's terms, are "objects with a hidden intimacy factor." For persons with personality profiles like those described earlier, having objects rather than people for intimacy is clearly preferable. Morris's interpretation has a slightly different emphasis but is basic in agreement with the in-

terpretation of smoking presented here. It should be kept in mind that no interpretation fits all smoking behavior. What seems to be emerging, however, is a relatively large group of hard-core smokers. For this population smoking is obviously satisfying some basic needs. Establishing what these needs are is a prerequisite to the development of successful intervention strategies.

Lack of Child Investment in Quit-Smoking Decision

One other very important concept has to do with the various parts of the self being invested in decision. Again within the TA framework, it is somewhat of an understood rule that one should never take a "parent contract." By this is meant that if someone approaches a help-giver and says, for example, "they think they should stop drinking," lose weight, etc., the help-giver is advised to see if this is merely something they think should do (i.e., externally motivated) or something they have an investment from that Child in doing--something they want to do. The assumption is that if the Child is not invested that eventually the contract or decision will be defeated.

Most Ss entering the program were deciding to quit smoking from a Parent position, i.e., "My doctor told me I've got to quit smoking," "My kids are bugging me all the time so I think I should quit. I know I'm being a bad

model to them." Most of the participants still very much liked smoking and saw it as a major source of gratification for them. In almost no cases, then, was there "Child" investment in the decision. People did not want to quit smoking. This lack of "Child" investment coupled with the generally poor means smokers have for gratifying their "Child" makes their resistance to quitting more explicable. Both of these relate to the final point of discussion which is the general lack of nurturing among participants.

General Lack of Nurturing

As has been documented especially with regards to the Leary, Ss tended to not only rank themselves low in trust, positive affect and cooperation, but they tended to rate their family of origin low in these same areas. The interpretation mentioned before was that smokers use cigarettes as a major means of nurturing themselves. This interpretation seems to be particularly well born out on the group. This was exemplified to E in one discussion with a 34-year-old male subject. Alternate ways of caring for the Child or involving the Child in the quit-smoking decision were being discussed. When asked what kinds of things this participant did to take care of himself, he replied, "Oh, I take good care of myself. I've bought myself a new car. I have nice clothes, contact lenses, and I play sports."

He also mentioned personal hygiene and concern for his physical health. This list typified to E ways in which participants did take care of themselves and possibly ways in which they were cared for as children. There was a large emphasis on material care and appearance and almost no emphasis on interpersonal or emotional care.

The mention here of physical health and particularly of an orientation to sports is one particular thing that has not been mentioned up to this point. Clearly, one aspect of the competitive-narcissistic complex is looking very good, maintaining oneself at a high level; in brief, gaining power over others as well as admiration from them. Smoking goes against this aspect of the overall mode of adjustment since it many times creates a weakened body and is presently becoming more socially unacceptable. The above point is an important one in consolidating the interpretation being presented here. The overall interpretation is as follows:

Smokers tend to come from low-nurturing families with high emphasis on accomplishment and achievement. Smoking tends to accomplish two things simultaneously for these people: (1) it helps them with their drivedness both by helping them to cathect adult and by being a powerful muscle relaxation which facilitates them being able to overextend themselves; (2) simultaneously with helping their

"driven" part it is a way of pacifying or nurturing their "Child." Not only is a way of nurturing the "Child," but it is a way of nurturing that is particularly attractive since it can be done quickly (without significant interruption of activity) and it can be done by the self (without having to relinquish any of the control that comes with delegating or entrusting another with the nurturing role).

Obviously this "interpretation" is just that--an interpretation. It, of course, does not apply to all smokers or even to all participants in the present smoking program. It is, however, the most accurate description of the way in which E observed the smokers in the present study utilizing and talking about their smoking behavior. It also at least begins to present or to generate a theory as to why people smoke. It also begins to shed light on why smokers have such tremendous resistance to giving up their smoking habit. It is clear that most smokers are giving up in their mind, quite a bit when they stop. What this "quite a bit" is about is actually the central question at the bottom of this study and the one that needs an answer before good systematic intervention at the individual and the community level can be devised. Particular suggestions both for further research and for improved programming will be discussed in the final chapter.

CHAPTER IV

CONCLUSIONS AND IMPLICATIONS

This final chapter will address itself to three tasks: (1) a summary and review of major findings; (2) a presentation of suggestions for further research; and (3) a general discussion of the relationship of the findings to community issues and improved programming. Discussion will focus on and integrate the three aspects of the study: (1) effect of support, (2) background and personality variables, and (3) the process of quitting. At this point interrelationship of the findings will be highlighted.

The Effect of Support

As predicted, support significantly affected smoking modification. While it continued, group support was particularly effective in influencing abstinence and also proved the condition most influential in attenuating overall smoking rates. The ongoing continuity provided by postal support was most effective in terms of overall abstinence. The fact that 37% of the postal support group

was abstinent at three-month follow-up replicates the Nisonoff-Papsdorf study (1975) and lends increased credibility to mail contact as a low-cost and effective means of support in the maintenance phase of quit-smoking programming.

One obvious suggestion for further research is that the group support method be combined with mail support contact to assess whether Group C's very high abstinence rates (68%) at two months could be maintained if group support was followed with ongoing mail support. Within the confines of the present study, members of Group C received what could be considered the largest dose of support. Upon termination, however, they actually returned to a support regime equivalent to Group A's (no support). In terms of abstinence, the continuity of support received by Group B seems to have been a crucial variable. With this in mind, either postal support, some gradual decrease in meetings or the initiation of a "buddy system," which group members could continue on their own, should all be considered as possible follow-ups to group support. Any of these alternatives would be worthy of future investigation.

Separate from a consideration of the problems with group support within the present study, there are certain findings that suggest mail support as the preferred mode of support with smokers. For persons whose primary mode of

adjustment emphases competition, narcissism and an avoidance of weakness, mail contact might provide the optimum combination of distance and concern necessary for acceptance. Group support for independent and competitive persons could be seen as potentially too intrusive or as a type of support in which competition is maximized. It is E's observation that competition was indeed a major factor in the small group meetings. It is possible that persons in the group remained abstinent primarily to save face. Within this interpretation, it would make sense that persons, upon termination of the group, would return to smoking. This was in fact the pattern typical of participants in the present study.

The low cost of mail support is highly advantageous in addition to the almost limitless research possibilities suggested by this form of follow-up. Theoretically, one could devise any number of personality theories applicable to smokers and interpretations of the role smoking plays for the potential client, and then tailor mail support messages geared to attaining optimum results with the participants. One could also experiment with varying lengths of comments and varying time lapses between mail contacts.

Research on the personality of smokers has not been tied in specific ways to quit-smoking programming. The use of postcard comments in line with a particular theory

is merely one example of a way in which a specific hypothesis regarding smokers and their dynamics could be tested while simultaneously being used as part of an intervention strategy.

Mail support definitely warrants further consideration as a form of support in its own right as well as a potential follow-up to group support. Its effectiveness could be contrasted to the efficacy of other forms of low-cost support, i.e., telephone contact. Again, the research possibilities are almost limitless. One could experiment with different persons providing the support, i.e., buddy systems as opposed to a leader or "expert" who maintains contact. With phone contact, varying lengths and types of contact could be tested. Clearly, what is needed is a much more precise application of various support regimes to differing personality styles and to varying types of smokers. This point will be elaborated in the following discussion of smokers' motives and personality types.

Background and Personality Variables

Findings under this heading will address three major areas: motivation, locus of control and intra- and interpersonal modes of adjustment. Suggestion for further research and improved programming will be incorporated with ongoing comments.

Motivation

The results revealed significant differences as regards smoker's motivation. Smokers whose primary motivation for smoking was stimulation, handling or pleasure relaxation were much more successful in terms of cessation than persons indicating tension reduction, craving or habit as motivating factors. Within the three later categories, persons who checked tension reduction were the ones most amenable and influenced by support. These findings are consonant with past research efforts (Schwartz and Dubitzky, 1968), and also with theory presented in the initial chapter of this thesis.

Within the present study the distinctions regarding smoker's motives were classified under the headings extrinsic motivation (habit, tension reduction, craving) and intrinsic motivation (tension reduction, craving, addiction). Intrinsic and extrinsic motivation are not the best words here to capture the desired connotation. In practical terms what emerged was a distinction between hard-core, firmly addicted smokers and those for whom the cigarette habit was less deeply ingrained. In the author's mind this distinction is a critical one in both diagnosing smoker's problems and designing appropriate intervention strategies.

Within the present study, and in talking to smokers, there are persons for whom cigarettes and smoking represents

merely a pastime or serves needs such as handling (something to do with the hands), pleasurable relaxation (something enjoyable after dinner), or stimulation (a mild pick-up). For others, who are more heavily habituated, cigarettes are serving some deeper psychological need or a series of needs. This latter group uses cigarettes as a substitute for feelings (anger, depression, and they report an automatic and dependent quality to their smoking. It is this group that is being referred to as "hard-core" smokers. This differentiation is extremely important. As has been reiterated, the determination of why people smoke is the basic question at the core of intervention at either the individual or the community level.

For people whose motivation is less central to their personality or for whom cigarettes are not serving a pivotal need, programs such as the present one, seem entirely appropriate. With smokers for whom cigarettes are both a symptom and a tool of a basic psychological position, longer term intervention is warranted before it becomes realistic to expect the abandonment of the smoking habit. Intervention strategies, for this latter group, at both the individual and community level, are implied in the author's interpretation of smoking behavior (end of Chapter III). Some suggestions for improving strategies with the "addicted" smoker will appear later in these concluding remarks.

For the present time it is at least recommended that the Why Do You Smoke Questionnaire (1964) or interviews that would differentiate the extent to which the person is an "addicted" smoker be used to differentiate participants in the initial phases of smoking programming and that differential programs be planned based on varying motivation. This method could eliminate unnecessary expenditure of time and money with relatively low-risk clients. More intensive effort could then be spent on differential program planning with persons who are more addicted to smoking citarettes. Alternatively, if program fundings are limited, the program might only take Ss highly likely to reduce their smoking and eliminate efforts with hard-core smokers who are unlikely to maintain abstinence. Further research obviously could, and need to, be done on groups differentiated on this basis.

Locus of Control

The issue of internal vs. external control was partially discussed in Chapter III. Contrary to expectations, internal control and field independence was not related to success. As a matter of fact, the opposite finding was true; the more externally oriented and field dependent persons were, the more likely they were to reduce smoking rates. This finding within the present study was especially true of females.

Original hypothesizing in this area was based on the presumption that smokers who quit would be similar to non-smokers. From the data included in this study, as well as from the observations of other researchers (Flaxman, 1974; Papsdorf, 1975), the comparison between quitters and non-smokers seems tenuous and unproductive. It appears much more likely that smokers are a group unto themselves and that the more field dependent they are, the more likely they are to benefit from a program that involves input from outside agents. Persons who are more field-independent are less likely to seek outside help. It is also reasonable to assume that persons high in internal control or very field independent are more likely to remain impervious to input from an external source even in the event that they do seek help. This, in retrospect, seems the most plausible explanation of what occurred in the present study. This interpretation appears particularly credible since the present study involved external support as a key variable.

One obvious problem with the field dependent person being supported in a program such as the present one is that when the support is withdrawn and the person returns to the same social network from which he/she came, they are likely to reinitiate smoking unless the social network is altered or their relationship to it is shifted. This appeared to be a problem in the present study. A closer link to the participant's social network during the sup-

port process or the development of more continuous support regimes are possible programmatic innovations that might address this inherent dilemma.

One other suggestion for improved programming involves pre-testing along the locus of control dimension and use of differential planning with high internals versus high externals. Programming for Ss with a high internal focus would include emphasis and appeal in terms of their internal orientation, i.e., more factual information and more emphasis on the participants examining and sorting out their own reasons and methods for smoking termination.

Personality Variables

As has been indicated throughout, personality assessment within this study and observations of group behavior were in agreement with what other researchers have described as personality characteristics typical of smokers. The major characteristics enumerated by other researchers are: anti-social, convivial, extroverted, distress prone, liberal, spontaneous, aggressive, dominant (Eysneck, 1960; Straits, 1963; Coan, 1973; Smith, 1970). In the author's mind, the Leary Interpersonal Checklist differentiated an important aspect of this same constellation of traits in isolating competitive-narcissism as the

mode of adjustment most typical of smokers within this study. This finding corroborates early studies that specifically addressed variables related to competition and aggressiveness, i.e., Freedman and Rosenman (1969), Koponen (1960).

The Leary Checklist was also utilized in an initial effort to examine the family systems of smokers as well as smokers' ego ideals. Data in the present study tended to support the findings of others who have investigated the families of smokers (Jacobs and Knapp, 1965--smokers' mothers' "controlling, cold and harsh"). Ideal-self materials revealed significant differences with the ego ideals of this group emphasizing dominance and responsibility. Values that are typically indicated as ideal by many persons in the culture, i.e., trust, friendliness, cooperation, were notably absent among participants in this study. Both family data and ego-ideal material can be used in developing an understanding of the smoker's frame of reference. Again this information can be used in understanding what appeals to smokers.

The most relevant elements from the Life-Script Questionnaire involve self and family descriptions. This materials, while not formally analyzed, was in agreement with findings from the Leary Interpersonal Checklist. One aspect of interest from the Script Questionnaire involved

the "death question," i.e., How and at what age do you think you might die?" In this study, an unusual number of early and violent deaths were mentioned in response to this question. This finding corroborate Jacob's and Knapp's finding that smokers tend to be more "danger seeking" than non-smokers (Jacobs and Knapp, 1965).

The connection between smoking and a possible "wish to die" is obviously of the utmost importance. The decision to smoke has been suggested by others as part of a suicide decision (Goulding, 1975). Clearly, interpretations relating the wish to die to smoking habits are unavoidable as the connection between health hazards and cigarette smoking become ever more clearly explicated. A longitudinal study could be done taking Ss' projected death ages, with and without smoking, and comparing these to actual death ages in light of successful or non-successful smoking termination.

Clarifying the potential lethality of smoking is of prime importance. Assessment of the nature and extent of a problem is the first step toward adequate intervention. It is definitely the present researcher's opinion that the seriousness of the decision to smoke has been underestimated by many practitioners working in the area of smoking modification. For these reasons a study that examines more carefully the "death wish" aspect of smoking is suggested.

The "Attempting" Syndrome

Prior to making suggestions for improved programming, the possibility that Ss are in a cycle of attempting will be discussed as a separate issue. If this interpretation is correct, Ss' hidden agendas would be failure rather than success. If this is the case, this would obviously be of prime importance and would need and deserve to be analyzed further. This interpretation is indirectly supported by the large percentage of group time that was spent in the "Yes, But" game previously described. According to this interpretation, Ss' overall participation in the program could be seen as a larger "Yes, But" game, i.e., "I want to stop smoking, but I'm sure you won't be able to help me. Go ahead anyway and present solutions, and I will find fault with them."

If this is in fact what is going on, Berne (1963) makes very specific suggestions for intervention. Berne defines the antithical game to Why Don't You, Yes But as I'm Only Trying to Help You (ITHY). He goes on to say that the clinical antithesis to YDYB involves not playing ITHY. If the opening move was therefore in the form described in the present study, i.e., "What do I do if I want to stop smoking," the suggested response is, "That is a difficult problem. What are you going to do about it?"

Obviously, the leader or organizer of smoking intervention programs is not merely going to take the position "That is a difficult problem, you figure it out." The point does not favor persons in helping roles withdrawing completely; rather it suggests helping persons keeping a perspective on their roles and on people's basic competency to solve their own problems. The practical advice Berne gives in relation to "Yes, But" players is to give two or three suggestions, no more, and then either to reflect the game or to move to the position mentioned earlier; "That is a difficult problem. What do you suggest or what would help you with it?"

One specific strategy smoking intervention programmers could use to avoid "Yes, But" types of interactions, would be to avoid either the planning or the offering of elaborate smoking programs. In the author's mind, smoking modification people collaborate with smoker's original premise (distortion) that smoking is almost impossible to give up. They have constructed elaborate and frequently costly procedures and gimmicks in their efforts to help smokers. As a result, they attract people either at their wits' end, people very unlikely to stop smoking or people who have no intention of stopping but who, like the researchers, are caught up in the effort of "trying." Bernstein (1969) captures some of this dilemma in the following statement:

> The most interesting and at the same time disturbing conclusion to be drawn from a survey of recent smoking literature is that the "health scares" have done more to influence the research behavior of psychologists and sociologists than to change the smoking behavior of the general public (Bernstein, in Hunt, p. 4).

Even if the speculation that there is an "attempting syndrome" is fairly broad-based, the magnitude of its importance warrants further consideration. Programs could easily test for this possibility by selecting persons who have no record of attempting, by recruiting smokers who have not explicitly expressed an interest in stopping or by isolating and selecting differential groups based on the initial contract. In this way, the above-mentioned "attempting" syndrome could be controlled for and at least the smoking programs and techniques that do exist could be evaluated more fairly.

Apart from sorting out "attempters" from Ss who are genuinely interested in quitting, "attempting" needs to be understood in its own right. If one accepts the interpretation that smokers, and especially hard-core smokers, tend toward competitive-narcisism, and are typically independent and disdainful of admitting weakness, two things currently taking place with cigarette smoking are problematic; (1) the fact that smoking is becoming less of a status event; and (2) that not being able to stop is interpreted as a sign

of weakness. Attempting to give up cigarettes or at least saying that one has "tried everything" is one possible means of dealing with the cognitive dissonance that results from the continuation of smoking. The "attempter" is at least doing something to work on the problem. This dynamic needs to be understood in both planning successful programs and in comprehending failure experiences.

Improved Programming

Several specific suggestions for improved programming have already been made. This section will briefly consolidate these recommendations.

First, it is suggested that specific support regimes be examined and used in conjunction with differential personality profiles and/or differential motivational patterns of smokers. Using the Why Do You Smoke Questionnaire or instruments like the Leary Interpersonal Checklist, smokers could be divided into separate groups and specific programs, suited to particular needs, designed. In the long run, this would prove a significantly more cost-effective measure than merely planning for and presuming a homogeneous population. This type of planning would also provide the planner with a much more specific means of evaluating the effectiveness of specific interventions.

In the case of the particular program that was conducted here, there are several programmatic elements that warrant revision. First, it makes sense that Ss in all groups be seen the week after they have quit smoking. In the present effort, Ss were given information and suggestions following a week of baselining. They were not seen after their decision to terminate. This seemed clearly an error.

Second, if one is going to provide follow-up groups, the results and impressions reported here suggest that these groups be conducted in a less non-directive and a more confrontative way. This speculative suggestion flows from E's experience with the groups. The suggestion is based on observations throughout that group members' characteristically were highly active, independent and competitive. They distrusted any show of weakness and in the researcher's opinion they frequently equated friendliness or warmth with weakness. In brief, it is speculated that this group would be more likely to discount non-directive support than active confrontation. Assertion and directness is within their frame of reference and is more likely to be accounted. Obviously, one would have to find a fine line between being overtly assertive which would result in a power struggle and underly assertive which would most likely result in the leader being discredited.

The real question is what would be the most successful intervention strategy with a group of narcissistic-competitive people? One obvious recommendation would be to not hold a group in the first place since most persons who are narcissistic will tend to use such a forum for their own self-aggrandizement and/or for relating to others in a superior-inferior fashion. If one does hold groups, the suggestion being proffered here is that the leader should take an active role, and early on confront the competition, interpret the behavior and move to the establishment of an alternate system of relating. This obviously would be met with a great deal of resistance and would most likely result in a much higher drop-out rate. It is E's opinion, however, that a more direct approach of this type would result in higher and longer term abstinence rates. Obviously, a great deal of research needs to be done regarding varying group techniques with various leaders and leadership styles.

One other suggestion for improved programming has to do with the gradual reduction of support or with the use of differential kinds of support at different phases of the post-treatment contact. It made little sense in the present study to build group support to the point it was established and then return to a no-support regime. Even fewer group meetings could have been held and then the support systems and natural bonds that were growing could have

been used to move to a "buddy system" or to some other support regime that then could have been gradually eliminated. In other words, within the present program, the relatively high cost group support was not used to its best potential advantage. In combination with some other type of follow-up, this could have been easily altered.

One final method that will be mentioned has to do with anticipating the client's behavior. Often it is helpful in working on a change problem, to predict a person's behavior for him/her. This seems to provide a certain sense of control for the person when the event does ensue. From information gathered here and from other smoking studies, it seems likely that a great deal more anticipating could be done vis-a-vis smoking groups. Examples of this would involve predicting the high likelihood of recidivism following the termination of group support. Specific situations in which cigarette craving and indulgence are most likely to occur could be anticipated. If elements such as these were discussed on an a priori basis, possible solutions and means of coping could be more readily provided. Role-playing or similar techniques could be used in a mutual effort to provide the smoker with the means of dealing with high-risk times and situations.

Community Applications

Since E's area of expertise and investigation is community psychology, this final section will relate the study to community issues and suggest specific ways in which this type of research might be applied in community settings.

Two of community psychology's central areas of focus are change and support. The study looks specifically at support regimes vis-a-vis one particular target population. Much of the information and some of the theoretical issues raised apply equally well to change work with group generally. In particular, the information applies and generalizes to work with other addictive behaviors, i.e., alcoholism, drug addiction, obesity (Blake, 1965; Yablonsky, et al., 1965; Stuart, 1967, 1971).

Smoking, which is linked to many potential physical disorders and to early death rates, becomes a serious area of concern in relation to preventive health programming in the community. The concern with smoking and the potential effect smoking is having on the environment makes the elimination of this habit a concern for non-smokers as well as smokers. Whatever measures can be taken to facilitate

termination have primary* as well as tertiary preventive potential.

Another way in which the elimination of smoking overlaps with general concerns of community psychology regards the differentiation between working with "diseased" and "normal" populations. Many practitioners who have assumed a community perspective stress the need for psychology to develop a greater concern for "healthy" segments of the population (Jones and Levine, 1963; Gelford and Kelly, 1960; Sanford, 1958; Reiff, 1968). Sanford as early as 1958 urged the field of psychology to renounce its exclusive focus on clinical approaches in favor of new approaches to deal not only with the sick or the troubled, but also with those manifesting less obvious problems (Sanford, in Zax and Spector, 1974). Clearly, the present study fits into the above perspective in that it addresses itself to an issue that concerns large numbers of the so-called "normal" population. Smoking and its elimination

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*Tertiary prevention is prevention aimed at the elimination of a disease or process that is already well established. If one views smoking as maladative, eliminating it is a tertiary intervention. Primary prevention is prevention which is aimed at eliminating things in their causes. Here the elimination of smoking behavior could be seen as having preventive health potential with regards to assuring a purer environment and thereby effecting health rates. Since there presently exists substantial evidence that smoking is damaging to the unborn fetus, the elimination of smoking could also be seen as having preventive potential in terms of persons delivering healthier children.

has to do with the increased optimum functioning of large masses of individuals. In this regard it is a community issue.

The present study did not investigate smoking at the community level nor does it make suggestions for specific intervention strategies in this sphere. The type of data collected here can best be used to gain insight into both the intra- and the interpersonal dynamics of smokers. Given improved understanding of both the psychology and the social psychology of smokers, community strategies and programming can be more effectively planned and executed. While this study did not deal directly with community intervention, several of the findings could be used to inform broad-based efforts to eliminate smoking. The two most likely areas of such community intervention are prevention and anti-smoking campaigning. Prevention, as it is presently being discussed, usually includes working with youths and others to not initiate the smoking habit, or working toward the legal banning of cigarettes. Anti-smoking campaigning obviously includes some preventive aspects.

Emerson Foote, former chairman of the National Interagency Council on Smoking and Health has called for (1) the total elimination of all advertising for cigarettes and (2) the establishment of a strong national campaign

against cigarettes (Foote, 1970). Foote is recommending that this national anti-smoking campaign be financed by the federal government at the cost of approximately 100 million dollars per year (Foote, 1970). Foote's suggestion, as outlandish as it might originally sound, has received some surprisingly encouraging responses. Foote's suggestion does not address the problem of content. He does not indicate what the thrust of the anti-smoking campaign should be. He merely expresses the need for and the desirability of such an effort.

Stemming from several considerations thus far presented, the present author has some serious concerns about both preventive programming and anti-smoking campaigning. Until a clear position on what smoking accomplishes for people has been made explicit, merely attacking smoking or asking for its abandonment appears unwise. Mass media campaigning can only be used to effectively assist with the smoking problem if the problem itself is understood. If the problem is not correctly assesses, anti-smoking campaigning can be useless or worse, it can not possibly serve to exacerbate the problem. In the present author's mind, this is what is presently occurring. Smokers have been assisted to feel more guilty and uncomfortable about their smoking and a good deal of public disdain for smoking has been generated. At the same time smokers have not been

presented or helped with their basic problems. Neither have the community and culture dilemmas which lie behind the wide prevalence of the symptom of smoking been addressed.

Prior to concluding here, a partial analysis of anti-smoking materials will be made. This and some suggestions for improvement in this area seem in order since anti-smoking campaigning will most likely remain one of the predominant large-scale instruction strategies in smoking elimination. In this discussion it is important that readers keep in mind that the present study made no systematic attempts to study either mass media appeals to cigarette smokers (cigarette advertising) or anti-smoking campaign materials. What will be presented here is merely beginning notions of ways in which an empirically oriented study such as the present one might be linked to broader-based anti-smoking strategies.

After reviewing what other researchers have said concerning personality traits of smokers, and utilizing data ascertained in the present study, E was struck with the advertising industry's obvious insight and understanding of the smoking population. Even a superficial consideration of cigarette advertising reveals a consistent emphasis on strength, independence and status. This fits very well with and would appeal very well to the "narcissistic-competitive" personality type isolated as the one

most characteristic of participants in the present study. On the other hand, the anti-smoking advertising does not seem to reflect a good understanding of smokers' personality types.

Even a cursory look reveals that most anti-smoking materials appeal to and attempt to associate weakness with smoking. In some ways, this makes sense. Yet, in the interpretation that will be presented here, appealing to and associating weakness and smoking does not make good psychological sense. It will be shown that this approach violates several important general principles of social psychology.

In much of the anti-smoking material, smoking is equated with weakness. People who smoke are presented as stupid, weak or degenerative. In the mind of the author, this creates an image with which the smoker will disidentify. This type of appeal results in the smoker having a desire to stop smoking. It does not, however, provide the potential quitter with any positive sense of identification, nor does it appeal to the smoker within his/her frame of reference. The other problem with this typs of appeal is that typically it portrays smoking as something horrible and unappealing. This is not at all consonant with the smoker's perception.

Several of the above observations are directly antithetical to what would be suggested by mass media commuciation theory. Even briefly looking at anti-smoking materials, it is obvious that the following three principles of propagandizing are violated: (1) that messages that use positive rather than negative appeals are more effective (Feshbach, Janis, 1953; Nunnally, Bobren, 1959); (2) that effective contentions are those that remain within the limits of the audience's latitude of acceptance (Cherrington, 1934; Harvey, et al., 1957; Fisher, Lubin, 1958); (3) that messages that identify the communicator with the audience are more effective (Ewing, 1942). These three tenets will be briefly reviewed and applied to anti-smoking campaigning.

The fact that positive associations rather than negative appeals are more effective seems fairly obvious. Anti-smoking materials have too heavily focused on the negative aspects of cigarettes rather than the positive aspects of quitting. One typical illustration of an anti-smoking appeal shows a very victimized ugly woman with a cigarette and reads "Isn't smoking glamorous?" There is much negative association and "shaming" of this type that seems to characterize anti-smoking materials.

The second tenet has to do with latitude of acceptance. Latitude of acceptance involves staying somewhere within a person's values and experiences when requesting

or proposing change. If a speaker goes too far beyond what is the listener's own set of internal attitudes and opinions, he/she will be rejected and the ideas being presented will receive no serious consideration. Again it is E's opinion that much anti-smoking material goes too far beyond the smoker's latitude of acceptance. In presenting cigarettes as horrible or awful, anti-smoking people present an idea too divergent from the smoker's previous attitude. An alternate approach would be to accept and acknowledge cigarettes as positive and then start the gradual introduction of materials that present the opposite point of view.

The gradual broadening of latitude of acceptance is important in any attitude change. It is imperative under conditions of high involvement where the latitude of acceptance for deviant viewpoints is narrow. In situations of high involvement, messages too far outside of the latitude of acceptance are likely to produce no change at all or even a negative change (Hovland, 1957; Freedman, 1964). Cigarette smoking is obviously a situation of particularly high involvement and staunch belief. In light of this a gradual step-by-step approach is a necessity.

The third principle mentioned states that effective appeal is that in which the communicator is identified with the audience. In appeals, listeners or readers want first

to know whether the speaker is with them or against them (Watson, 1966). In general, appeals that first indicate agreement or acceptance tend to be most successful (Ewing, 1942). In anti-smoking the communicator from the outset seems to be in disagreement with the audience. Some agreement or solidifying statements for smokers would most likely serve to mitigate the discrepancy.

As was speculated earlier, cigarettes, at least for some persons, constitute their major source of self nurturing. To attack this as malevolent, stupid or degenerative seems a clear violation of basic regard for the person and simultaneously ineffective as far as altering or helping the person to alter his behavior. An alternate tact would suggest a positive approach. To begin with, anti-smoking programming would need to acknowledge the clear, positive valence cigarettes have for the consumer and recognize the felt-difficulty people are experiencing as they consider giving up cigarettes.

Following upon this, it seems that two things might be done: (1) alternate forms of nurturing the self could be presented; and (2) rather than making smoking a low-status event, non-smoking could be given a high-status association. Obviously a much more detailed analysis of both cigarette advertising and of non-smoking materials would need to be performed prior to suggesting alternate approaches

As was mentioned comments regarding mass media information dissemination were made here principally to exemplify ways in which findings from a study like the present one could be used for broad-based planning and larger community interventions. Far beyond the flaws of particular anti-smoking materials lies the basic issue of what smoking accomplishes for people. In the interpretation presented herewith, at least for hard-core smokers, smoking is an important symbol of self-nurturing among people who are highly driven and competitive. Changing this type of pattern on the individual level would require fairly long-term work. If one talks about changing this pattern at the community level one is about changing the competitive, impersonal, stressful aspects of the culture. Anti-smoking campaigning could be used to address the basic problems that percepitate smoking behavior. As it presently stands, a large part of both preventive efforts and anti-smoking campaigning attacks people's solution to the problem--smoking--rather than the underneath problems themselves.

One way the present author construes solving the problem is to think of what kind of permissions hard-core smokers would need prior to being able to abandon smoking. The major messages or position that would need to be internalized by this group are: that it's all right to take care of the self in personal ways, that it's all right to

admit weakness, that it's all right to slow down, that accomplishments and things aren't everything, that "winning" is not a necessity. Messages like these could be communicated to smokers on either an individual or mass-media level. Obviously more thought of what one would actually like to convey and the best means of presenting messages of this ilk would have to be considered.

One final issue related to a community mental health perspective and has to do with reaching notably difficult or inaccessible persons in the community. Utilizing results from the Leary Interpersonal Checklist, the competitive-narcissistic personality type most typical of smokers in the present study, is the one least likely to be seen in mental health clinics (Leary, 1958). This makes sense in terms of the avoidance of weakness that is very characteristic of this group. If other smoking populations tend to share similar characteristics, running smoking programs could possibly grant the mental health worker access to an otherwise inaccessible part of the population. This is an important point since many of the persons seen in this study, and it would seem a large percentage of smokers generally, appear to be in need of help even though their personality style would tend to prevent them from seeking it.

Concluding Remarks

The present study raises and suggests several important conclusions with regards to support regimes and to personality variables of smokers. A great deal of further investigation is warranted. The present investigator would particularly suggest broad-based hypotheses generating studies since success with smoking modification has been minimal.

Major accomplishments of the present study are:

(1) The information it generated with regards to support.

(2) The suggestion that personality information be more closely tied to and utilized in programming.

(3) The isolation of the competitive-narcissistic personality mode of adjustment as the one most typical of smokers in this group and possibly of hard-core smokers generally.

(4) The suggestion of an "attempting" syndrome that operates with hard-core smokers.

In brief, this study accomplished its goal of assessing the differential effect of various types of support. It also generated some suggestions and interpreta-

tions as to why people want to smoke in the first place. Although it seems an obvious first step, many times the basic question of why people smoke has been ignored by anti-smoking campaigners.

As far as future directions, observations and increased analysis of those who have quit without external aid are particularly recommended since this study suggests at least several ways in which smoking programs can involve "game" playing. Clearly, an analysis of the dynamics of smokers and experimentation with varying interpretations of smoking behavior is vital and a prerequisite to improved programming. In general, good diagnosis of what smoking accomplishes and represents for people does not exist. In addition, research concerning the life-settings in which smoking occurs has not been performed. Without improved assessment of both person and setting variables, the possibility of effective intervention at either the individual or community level remains a remote and unlikely possibility.

APPENDICES

APPENDIX A

DESCRIPTION OF TRANSACTIONAL ANALYSIS CONCEPTS UTILIZED IN INITIAL TRAINING SESSIONS

Summary of Transactional Analysis Concepts Covered in the Initial Two Training Sessions and Their Application to a Smoking Cessation:

Ego States

An ego state is defined as "a system of feelings accompanied by a related set of behavior patterns." The three major groupings of these sets of feelings and behaviors are: Parent (P), Adult (A) and Child (C). These were explained to participants. The fact that different parts of themselves might be intested in a no-smoking decision was explicated. Special emphasis was paid to the "Child" part of the personality and to the importance of the "Child" being invested in the decision. The difference between thinking one "should" stop smoking (Parent), thinking that it "made sense" to stop smoking (Adult) and actual "wanting" to stop smoking (Child) were discussed. Various techniques for getting the "Child" more actively engaged in the decision were discussed. Participants were also alerted to the fact that alternate satisfaction needed to be provided since the Child would perceive the loss of cigarettes as the removal of one form of gratification. Some work with ego-states and dialoguing various aspects of self was utilized with the larger groups and also with Group C in follow-up sessions.

Discounting

A discount was described as any distortion of reality. The major distortions that were discussed with the group were as follows:

(1) That they couldn't stop smoking, i.e., that somehow this was out of their control. Ss were encouraged to substitute the word "wouldn't" not merely for the sematic reasons but to reinforce the reality that the decision and the action was in fact under their control.

(2) Several Ss in line with the above had grandiose ideas of what would happen to them if they did stop smoking, i.e., they would die, not be able to think, not be tolerable to live with, and myriad other distortions particular to their individual circumstances. These discounts were similarly dealt with both in direct interaction with the E and with inter-participant interaction.

(3) Discounts were also prevalent around the subject of substituting for cigarettes or around locating and utilizing substitute forms of relaxation, i.e., nothing could be as good as cigarettes. Discounts were addressed and dealt with in the group.

Stroking

Another major concept that was covered was "stroking." A stroke was defined as a unit of recognition. The necessity of stroking for a feeling of well-being was explicated. Smoking was under scored as an important source of self stroking. The need for both alternate sources of

stroking and the advisability of increased amounts of stroking especially during the termination phase was emphasized. Possible alternatives were discussed. The discussion of stroking related to the several other topics that were under consideration, i.e., varying forms of reinforcement, reward contingencies, etc.

All of the above material generated a goodly amount of discussion and contributed a free flowing exchange of thoughts and feelings among participants.

APPENDIX B

TESTS AND QUESTIONNAIRES UTILIZED IN THE STUDY

Two particulars should be noted vis-a-vis the tests: (1) two tests were given on pre and post basis, the Rotter (IE Scale) and the California Personality Inventory; (2) the Final Smoking Form here included was sent to Groups As and Bs without the final section attached. One additional question regarding the helpfulness of mail support was included on the Group B form.

CONSENT FORM

I agree to be a participant in this clinical research program, and receive a treatment for smoking cessation. I am fully aware of my responsibilities as a client in this treatment program, and promise to follow all instructions to the best of my ability. I thoroughly understand the purpose of the $15.00 deposit, and realize that if I drop out of the treatment program I will forfeit the money to the Psychology Department of The University of Michigan.

Signed_____

Date_____

SMOKING HISTORY

Name:_____ Age:_____

Sex:_____ Occupation:_____

Living situation (who do you live with?):_____

_____

Do they smoke?_____ How many of your friends/co-workers smoke?_____

Amount smoked at present:_____

Amount smoked in the past:_____

When and why did you start smoking?_____

_____

Attempt to quit:

How many?_____

When was last one?_____

For how long were you successful?_____

Why did you start smoking again?_____

_____

Attempts to cut down:

How many?_____

When:_____

What did you cut down to?

_____

For how long?

What factors were associated with changes in your level of smoking?_____

How did you feel when you quit?_____

_____

_____

Why do you want to quit now?_____

_____

_____

What brand of cigarettes do you smoke now?_____

How long have you smoked this particular brand?_____

What, if any, brand did you smoke prior to this?_____

What percentage of this time do you inhale when you smoke? (Mark an X on the line.)

100%	50%	0%
Always	Sometimes	Never

WHY DO YOU SMOKE?

Here are some statements made by people to describe what they get out of smoking cigarettes. How often do you feel this way when smoking them? Circle the number for each statement.

IMPORTANT: Answer every question.

1 = always
2 = frequently
3 = occasionally
4 = seldom
5 = never

A.	I smoke cigarettes in order to keep myself from slowing down.	5	4	3	2	1
B.	Handling a cigarette is part of the enjoyment of smoking it.	5	4	3	2	1
C.	Smoking cigarettes is pleasant and relaxing.	5	4	3	2	1
D.	I light up a cigarette when I feel angry about something.	5	4	3	2	1
E.	When I have run out of cigarettes I find it almost unbearable until I can get them.	5	4	3	2	1
F.	I smoke cigarettes automatically without even being aware of it.	5	4	3	2	1
G.	I smoke cigarettes to stimulate me, to perk myself up.	5	4	3	2	1
H.	Part of the enjoyment of smoking a cigarette comes from the steps I take to light up.	5	4	3	2	1
I.	I find cigarettes pleasurable.	5	4	3	2	1
J.	When I feel uncomfortable or upset about something, I light up a cigarette.	5	4	3	2	1

K.	I am very much aware of the fact when I am not smoking a cigarette.	5	4	3	2	1
L.	I light up a cigarette without realizing I still have one burning in the ashtray.	5	4	3	2	1
M.	I smoke cigarettes to give me a "lift."	5	4	3	2	1
N.	When I smoke a cigarette, part of the enjoyment is watching the smoke as I exhale it.	5	4	3	2	1
O.	I want a cigarette most when I am comfortable and relaxed.	5	4	3	2	1
P.	When I feel "blue" or want to take my mind off cares and worries, I smoke cigarettes.	5	4	3	2	1
Q.	I get a real gnawing hunger for a cigarette when I haven't smoked for a while.	5	4	3	2	1
R.	I've found a cigarette in my mouth and didn't remember putting it there.	5	4	3	2	1

Scoring

Stimulation = A + G + M
Handling = B + H + N
Pleasurable Relaxation = C + I + O
Crutch: Tension Reduction = D + J + P
Craving: Psychological Addiction = E + K + Q
Habit = F + L + R

Pre and Post

California Personality Inventory Self-Acceptance and Self-Control Scales

DIRECTIONS:

This booklet contains a series of statements. Read each one, decide how you feel about it, and then mark your answer on the special answer sheet. MAKE NO MARKS ON THE TEST BOOKLET. If you agree with a statement, or feel that it is true about you, answer TRUE. If you disagree with a statement, or feel that it is not true about you, answer FALSE.

In marking your answers on the answer sheet, make sure that the number of the statement is the same as the number on the answer sheet. Be sure to answer either TRUE or FALSE for every statement, even if you have to guess at some.

1. I looked up to my father as an ideal man.
2. A person needs to "show off" a little now and then.
3. When in a group of people I usually do what the others want rather than make suggestions.
4. I have had very peculiar and strange experiences.
5. My daily life is full of things that keep me interested.
6. I am often said to be hotheaded.
7. I doubt whether I would make a good leader.
8. It is hard for me to start a conversation with strangers.
9. I sometimes pretend to know more than I really do.
10. Sometimes I feel like smashing things.
11. Women should not be allowed to drink in cocktail bars.
12. Most people would tell a lie if they could gain by it.
13. I think I would enjoy having authority over other people.
14. I find it hard to keep my mind on a task or job.
15. I have sometimes stayed away from another person because I feared doing or saying something that I might regret afterwards.
16. Sometimes I feel like swearing.
17. I would disapprove of anyone's drinking to the point of intoxication at a party.
18. I like to boast about my achievements every now and then.
19. I must admit I often try to get my own way regardless of what others may want.
20. Most of the arguments or quarrels I get into are over matters of principle.
21. Sometimes I think of things too bad to talk about.

22. I would do almost anything on a dare.

23. I must admit that I often do as little work as I can get by with.

24. I like to be the center of attention.

25. I would like to see a bullfight in Spain.

26. When in a group of people I have trouble thinking of the right things to talk about.

27. I set a high standard for myself and I feel others should do the same.

28. At times I feel like picking a fist fight with someone.

29. Sometimes I have the same dream over and over.

30. I do not always tell the truth.

31. I was a slow learner in school.

32. I fall in and out of love rather easily.

33. I seldom or never have dizzy spells.

34. I would like to wear expensive clothes.

35. I consider a matter from every standpoint before I make a decision.

36. I have strange and peculiar thoughts.

37. My home life was always happy.

38. I often act on the spur of the moment without stopping to think.

39. My way of doing things is apt to be misunderstood by others.

40. I never make judgments about people until I am sure of the facts.

41. I am certainly lacking in self-confidence.

42. Most people are secretly pleased when someone else gets into trouble.

43. When I work on a committee I like to take charge of things.

44. I would rather go without something than ask for a favor.

45. Sometimes I feel as if I must injure either myself or someone else.

46. I often do whatever makes me feel cheerful here and now, even at the cost of some distant goal.

47. I can remember "playing sick" to get out of something.

48. I think I would like to fight in a boxing match sometime.

49. Once in a while I laugh at a dirty joke.

50. Before I do something I try to consider how my friends will react to it.

51. I like to go to parties and other affairs where there is lots of loud fun.

52. I have frequently found myself, when alone, pondering such abstract problems as freewill, evil, etc.

53. At times I have worn myself out by undertaking too much.

54. I keep out of trouble at all costs.

55. It is hard for me to find anything to talk about when I meet a new person.

56. I am apt to show off in some way if I get the chance.

57. A person does not need to worry about other people if only he looks after himself.

58. I am often bothered by useless thoughts which keep running through my mind.

59. When a man is with a woman he is usually thinking about things related to her sex.

60. I must admit that I have a bad temper, once I get angry.

61. I like large, noisy parties.

62. I often feel as though I have done something wrong or wicked.

63. In school I found it very hard to talk before the class.

64. I am a better talker than a listener.

65. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to.

66. I have very few quarrels with members of my family.

67. It is hard for me to act natural when I am with new people.

68. I have never done anything dangerous for the thrill of it.

69. I think I would like to belong to a motorcycle club.

70. I used to like it very much when one of my papers was read to the class in school.

71. I feel that I have often been punished without cause.

72. I would like to be an actor on the stage or in the movies.

73. At times I have a strong urge to do something harmful or shocking.

74. I often get feelings like crawling, burning, tingling, or "going to sleep" in different parts of my body.

75. Police cars should be especially marked so that you can always see them coming.

ROTTER IE SCALE Pre and Post

INSTRUCTIONS: This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Please answer these items carefully but do not spent too much time on any one item. Be sure to find an answer for every choice. In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choice.

ITEMS:

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run, people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

9. a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
    b. By taking an active part in political and social affairs, the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.

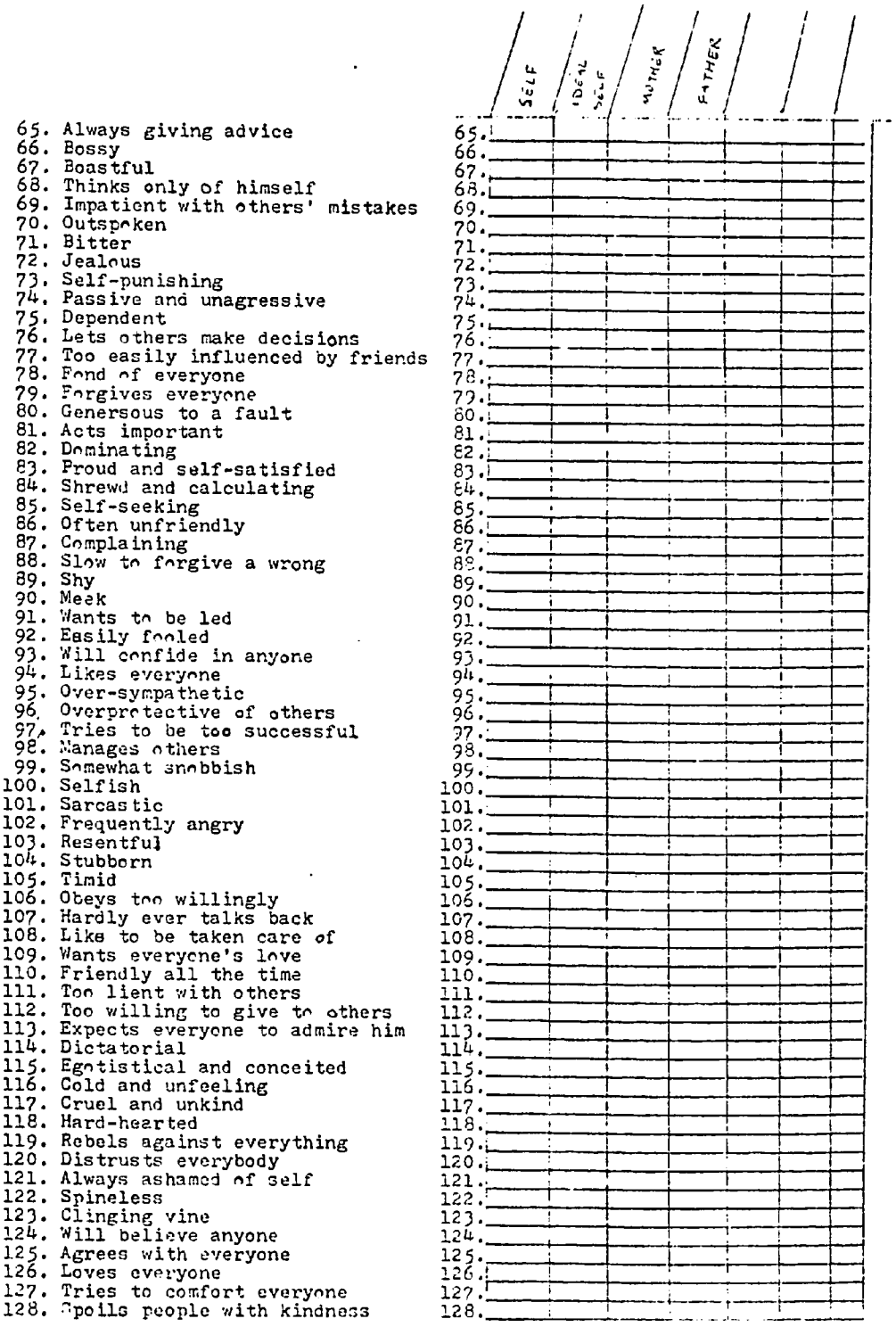
28. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as on a local level.

Leary Interpersonal Checklist

1. Well thought of	1.							
2. Able to give orders	2.							
3. Self respecting	3.							
4. Able to take care of self	4.							
5. Can be strict if necessary	5.							
6. Can be frank and honest	6.							
7. Can complain if necessary	7.							
8. Able to doubt others	8.							
9. Able to criticize others	9.							
10. Can be obedient	10.							
11. Grateful	11.							
12. Appreciative	12.							
13. Cooperative	13.							
14. Friendly	14.							
15. Considerate	15.							
16. Helpful	16.							
17. Makes a good impression	17.							
18. Forceful	18.							
19. Independent	19.							
20. Can be indifferent to others	20.							
21. Firm but just	21.							
22. Critical of others	22.							
23. Often gloomy	23.							
24. Frequently dissappointed	24.							
25. Apologetic	25.							
26. Usually gives in	26.							
27. Admires and imitates others	27.							
28. Very anxious to be approved	28.							
29. Eager to get along with others	29.							
30. Affectionate and understanding	30.							
31. Encouraging and unselfish	31.							
32. Big-hearted and unselfsih	32.							
33. Often admired	33.							
34. Good leader	34.							
35. Self-confident	35.							
36. Businesslike	36.							
37. Hardboiled when necessary	37.							
38. Irritable	38.							
39. Resents being bossed	39.							
40. Hard to impress	40.							
41. Easily embarrassed	41.							
42. Easily led	42							
43. Often helped by others	43.							
44. Accepts advice readily	44.							
45. Always pleasant and agreeable	45.							
46. Sociable and neighborly	46.							
47. Kind and reassuring	47.							
48, Enjoys taking care of others	48.							
49. Respected by others	49.							
50. Likes responsibility	50.							
51. Self-reliant and assertive	51.							
52. Likes to compete with others	52.							
53. Stern but fair	53.							
54. Straightforward and direct	54.							
55. Skeptical	55.							
56. Touchy and easily hurt	56.							
57. Lacks self-confidence	57.							
58. Modest	58.							
59. Very respectful to authority	59.							
60. Trusting and eager to please	60.							
61. Wants everyone to like him	61.							
62. Warm	62.							
63. Tender and soft-hearted	63.							
64. Gives freely of self	64.							

IDEAL SELF
MOTHER
FATHER


SELF
IDEAL SELF
MOTHER
FATHER
65. Always giving advice
66. Bossy
67. Boastful
68. Thinks only of himself
69. Impatient with others' mistakes
70. Outspoken
71. Bitter
72. Jealous
73. Self-punishing
74. Passive and unagressive
75. Dependent
76. Lets others make decisions
77. Too easily influenced by friends
78. Fond of everyone
79. Forgives everyone
80. Generous to a fault
81. Acts important
82. Dominating
83. Proud and self-satisfied
84. Shrewd and calculating
85. Self-seeking
86. Often unfriendly
87. Complaining
88. Slow to forgive a wrong
89. Shy
90. Meek
91. Wants to be led
92. Easily fooled
93. Will confide in anyone
94. Likes everyone
95. Over-sympathetic
96. Overprotective of others
97. Tries to be too successful
98. Manages others
99. Somewhat snobbish
100. Selfish
101. Sarcastic
102. Frequently angry
103. Resentful
104. Stubborn
105. Timid
106. Obeys too willingly
107. Hardly ever talks back
108. Like to be taken care of
109. Wants everyone's love
110. Friendly all the time
111. Too lient with others
112. Too willing to give to others
113. Expects everyone to admire him
114. Dictatorial
115. Egotistical and conceited
116. Cold and unfeeling
117. Cruel and unkind
118. Hard-hearted
119. Rebels against everything
120. Distrusts everybody
121. Always ashamed of self
122. Spineless
123. Clinging vine
124. Will believe anyone
125. Agrees with everyone
126. Loves everyone
127. Tries to comfort everyone
128. Spoils people with kindness

LIFE-SCRIPT QUESTIONNAIRE DATE_____

NAME_____ BIRTHDATE_____

1. Briefly describe your mother._____
2. Briefly describe your father._____
3. Describe yourself._____
4. What is the nicest thing mother said to you?_____

   _____
5. What is the meanest thing she said to you?_____

   _____
6. What was her main advice to you?_____
7. What is the nicest thing father said to you?_____

   _____
8. What is the meanest thing he said to you?_____

   _____
9. What was his main advice to you?_____
10. What nicknames did people call you and what do they mean?_____
11. When you were little what did you want to be as a grownup?_____
12. What did your mother want you to be?_____
13. What did your father want you to be?_____
14. What did you like most about yourself?_____
15. What did you like least about yourself?_____
16. Did you ever feel that something might be wrong with you? If Yes, what?_____

30. What is your biggest problem?_____

_____

31. What famous person would you most want to be like?___

_____

32. What is the best thing that has happened in your life so far?_____

33. What is the worst thing that has happened in your life so far?_____

34. How many years do you think you will live?_____

35. Are your mother and father presently living?_____

36. Their ages: Mother_____ Father_____

37. If dead, their ages when they died: Mother_____

Father_____

38. Did your mother smoke?_____

39. Did your father smoke?_____

17. What is your earliest childhood memory?_____

_____

18. Describe the bad feeling that you have had most often in your life._____

19. What was your favorite child story, fairy tale, book, hero, or TV program?_____

20. How did the story go?_____

_____

21. If everything goes badly, what will your life be like five years from now?_____

22. If everything goes well, what will your life be like five years from now?_____

23. How do you think you might die and at what age?_____

_____

24. What will it say on your tombstone?_____

_____

25. What would "heaven on earth" be for you?_____

_____

26. What do you wish your mother had done differently?___

_____

27. What do you wish your father had done differently?___

_____

28. If by magic you could change anything about yourself just by wishing, what would you wish for?_____

29. What do you want most out of life?_____

30. What is your biggest problem?_____

_____

31. What famous person would you most want to be like?___

_____

32. What is the best thing that has happened in your life so far?_____

33. What is the worst thing that has happened in your life so far?_____

34. How many years do you think you will live?_____

35. Are your mother and father presently living?_____

36. Their ages: Mother_____ Father_____

37. If dead, their ages when they died: Mother_____

Father_____

38. Did your mother smoke?_____

39. Did your father smoke?_____

PLEASE NOTE:

Pages 204-220, "Group Embedded Figures Test", copyright by Consulting Psychologists Press not microfilmed at request of author. Available for consultation at The University of Michigan Library.

UNIVERSITY MICROFILMS.

FINAL SMOKING FORM

This form is of particular importance. Please take time to answer each question carefully, and please be specific as possible in your responses.

Name_____ Code Number_____

Address_____

Amount Presently Smoked Per Day_____

There are three sections below, labeled Sections A, B, and C, respectively. If you are presently at 0 cigarettes per day, please answer all the questions in Sections A and C only. If you are smoking at all, then please answer the questions in Sections B and C only.

SECTION A

(FOR THOSE AT '0' CIGARETTES PER DAY ONLY)

1. Did you quit smoking immediately after the initial program?

   Yes___ No___ (If No, how long after?)_____

2. Did you quit "cold turkey," or cut down gradually?___
   _____

3. Describe the first few days after you quit.

4. Did you experience any withdrawal symptoms? _____
   If so, what were they?

5. Rate how difficult it was for you to quit. (Please circle appropriate response.)

5	4	3	2	1
Very Difficult	Difficult	So-So	Easy	Very Easy

6. Have you had any cigarettes at all since you quit? _____ If yes, approximately how many did you have? _____

7. (If YES to #6) Describe the circumstances when you had these cigarettes.

8. Are you still having urges to smoke? _____

9. (If YES to #8) Are these urges very strong?_____ Approximately how often do you get them?

10. In the past, did you smoke cigarettes to reduce tension and anxiety?_____ If so, what are you presently substituting for the smoking?

11. Did you gain weight after you quit?_____ If yes, approximately how much did you gain? _____ Have you done things to bring the weight gain under control?_____ What?

12. In general, how supportive did you find other people while you were quitting? (Please circle appropriate response.)

5	4	3	2	1
Extremely Supportive	Very Supportive	Ambivalent	Not Supportive	Extremely Unsupportive

13. Did any <u>one</u> person support you while you were quitting? If yes, please describe:

a. His/her relationship to you (i.e., friend, partner, roommate, etc.)_____

b. Whether he/she is a smoker or non-smoker?_____

c. How she/he supported you?

14. What things did you find particularly helpful to you in successfully quitting smoking? (Please be specific.)

15. What, if anything, would have made quitting smoking easier for you?

16. Did you:

a.	ever go back and use the diary?	Yes No
b.	use the progressive relaxation?	Yes No
c.	make a contract with yourself?	Yes No
d.	use the thought-stopping techniques? (i.e., yelling "Stop," or doing the fantasy)	Yes No
e.	do any substitute or reward type things for yourself? (i.e., stroking)	Yes No

If yes to "e," what things did you do?

17. What of the program was helpful to you?

18. If you were going through the program again, how would you change it?

NOW SKIP SECTION B, AND PLEASE GO TO SECTION C

SECTION B

(ONLY FOR THOSE PRESENTLY SMOKING)

1. Were there any times when you quit altogether? _____ If so, how many times? _____ And what was the duration of each?

2. (If YES to "1") Please describe the first few days, or if you were successful for a shorter period, describe how you felt while not smoking.

3. What factors were associated with your starting to smoke again?

4. Did you experience any withdrawal symptoms? _____ If so, what were they?

5. During the three-month period, did you cut down?_____ If so, what, if anything, was associated with a subsequent rise in your smoking level?

6. Do you still want to quit smoking? _____ If so, what is your present idea of what you need to be successful in doing this?

7. Did you: (Circle appropriate response)

a.	ever go back and use the diary?	Yes No
b.	use the progressive relaxation?	Yes No
c.	make any contracts with yourself?	Yes No
d.	use the thought-stopping techniques? (i.e., yelling "Stop," or doing a fantasy?	Yes No
e.	do any substitute or reward type things for yourself? (i.e., stroking)	Yes No

If yes to "e," what things did you do?

8. Was there anything of use to you in the program?_____ If so, what was that? (Please be specific.)

9. If you were going through the program again, how would you change it? (Again, please be specific.)

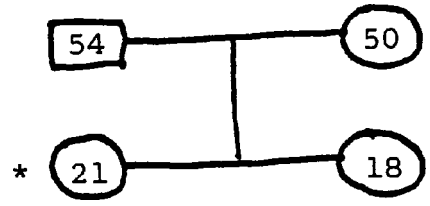
(NOW PLEASE GO TO SECTION C)

SECTION C1

(FOR ALL RESPONDENTS)

As final pieces of information, we would like to have a picture of your immediate family, or the family which was most influential upon your growth if your family situation was altered during your childhood. In the space below we would like you to diagram your family using boxes, ___ , for males, and circles, , for females. Please put people's ages within the boxes or circles, and place an asterisk, (*), next to the box or circle for yourself.

For example, if you are a female, 21 years old, and from a family of four with one sister, your diagram would look as follows:



If anyone is deceased, please put an X over their circle, or box. Please also indicate with a dotted line, (-----), if your parents were divorced or separated.

AND ALSO

SECTION C2

Questions about the Group:

1. How many group meetings did you attend?_____

2. If you did not attend regularly, what were your reasons FOR NOT doing so?

3. Did you generally have a negative, or positive, reaction to the meetings?

4. What did you like about the meetings?

5. What did you dislike?

6. Did you stop smoking while attending the group sessions? _____

7. Did you subsequently go back to smoking?_____

8. If YES to question #7, what do you feel you needed at that time to stay off of cigarettes?

9. Would you have attended more group meetings if they were available?_____

10. Knowing what you know now, please describe what you would have liked to see done differently at the meetings?

THANK YOU ALL so much for answering these questions, as well as your participation in the program. Your patience and cooperation will certainly make things better and easier in the future for people who want to quit smoking. I hope we were of some help to you in your endeavor.

Sincerely,

Mary P. Rodgers

APPENDIX C

EXAMPLES OF POSTCARD RESPONSE MAILED TO Ss IN MAIL SUPPORT GROUP

A. In response to first week report of "0's"--

> "A whole week of 0's. That's great! Hope you're celebrating and making the decision to stay with it!"

Same S--Fifth week in response to report of zeros but complaining of weight gain--

> "After having the smoking under such fine control for such a long time, 5 lbs. doesn't seem too bad. Try finding other ways of stroking your "child." It will help make things more pleasant for you. Regards."

B. In response to third week report of cut down but not abstinence--

> "Looks like you're having some difficulty. Are you still doing the diary? Or are you discouraged or have you changed your mind? I would like to hear so I might offer some suggestions. Keep in touch."

C. Response to third week. Report of cut down to 1/2 pack a day and expression of discouragement--

> "1/2 a pack is good. Don't be putting yourself down. Your postcards say you're <u>trying hard</u>. It's important to stop <u>trying</u> and <u>do</u> it. You can set a specific date to stop and go ahead with it. Let me know what's happening."

Other typical comments were as follows:

(1) Looks like you're up some. Sorry to hear that. Don't get discouraged. Set a date to quit and go ahead with it. Use whatever technique helped in the beginning. Let us hear.

(2) Beautiful! Still at zero. Stay with it. Regards!

(3) More good news this week! Great! Keep it up and let us know!

(4) You've cut down a long way from where you started. I know with just a little effort you'll be able to bring it all the way down. Good luck!

(5) Looks like it was a rough week for you. Some improvement towards the end. Use whatever techniques helped at the beginning and let us know if you have particular questions.

(6) Seems like you have a hard time on the weekends? What's going on at those times? See if you can switch your schedule around. Keep in touch.

(7) Kathy--You did fine for a long time (4 weeks of 0's). You needn't apologize for difficulty now. Keep a lid on now and when things are less stressful aim for 0's.

APPENDIX D

EQUIVALENCY OF GROUPS AT ONSET OF TREATMENT

It was hypothesized that there would be no significant difference in amount of smoking among the three treatment groups at the beginning of the experiment.

Table 7 (in body of RESULTS) specifies the probabilities for the various treatment comparisons. There was some difference between Treatments A and C. In testing the difference between the three treatments simultaneously, however, a probability value of .62 was obtained, indicating that the Ss were equivalent at the onset in terms of number of cigarettes smoked.

It was hypothesized that there would be no significant difference between the three treatment groups on the variables in Smoking History. On the Smoking History seven out of 25 variables (28%) had an associated probability less than .30. But since 30% of the comparisons would be expected to have an associated probability less than .30, we conclude that the three treatment groups were equivalent in their smoking history. Tables 28 and 29 detail the similarities of smoking history variables and report probabilities.

It was hypothesized that the three treatment groups would not be different at the beginning of treatment on the Rotter measure of internal-external control.

TABLE 28

SMOKING HISTORY SIMILARITY OF TREATMENT GROUPS ON CONTINUOUS VARIABLES

Variable	p	Sig
Age	.36	NS
Sex	.29	S
Amount smoked present	.72	NS
Amount smoked past	.85	NS
How long been smoking	.76	NS
How many times try to quit	.36	NS
When was last one	.47	NS
How long successful	.01	S
How many cutdowns	.22	S
What cut down to?	.89	NS
For how long?	.26	S

Since the probability value was not less than .30 the groups can be considered to be similar on internal-external control (see Table 30).

It was hypothesized that the three treatment groups would not be different at the beginning of treatment on the California Self Control.

Since the probability value was not less than .30, the three groups can be considered to be similar on this measure (see Table 5).

It was hypothesized that the three treatment groups will not be significantly different at the beginning of treatment on the California Self Acceptance measure.

TABLE 29

SMOKING HISTORY BROKEN DOWN BY TREATMENTS

Variable	A	B	C	p	Sig
Occupation					
1 Professional	8	4	9	.37	NS
2 Technical	1	2	0		
3 Clerical and Managerial	3	4	2		
4 Craftsman	1	0	1		
5 Operator	0	1	1		
6 Student	1	5	5		
7 Housewife	3	1	0		
8 None	1	0	0		
Living Situation					
1 Alone	3	1	2	.56	NS
2 Partner	3	4	3		
3 Partner and children	7	8	7		
6 Two or more roommates	1	3	3		
7 Parents (with or without siblings)	3	0	0		
Does Roommate Smoke?					
1 No	11	6	8	.38	NS
2 Yes	3	7	3		
3 Some	2	5	5		
8 Inappropriate	3	1	2		

Since the probability value was not less than .30, the three groups can be considered to be similar on this measure (see Table 5).

It was hypothesized there would be no significant differences between the three treatment groups on the pre-measure of Life Script.

Table 31 relates that only 5/20 life script variables had an associated probability less than the pre-set

TABLE 30

PRE-MEANS ON SELECTED PRE-MEASURES

Variable	A	N	B	N	C	N	p	Sig*
Rotter	9.44	18	10.5	18	9.6	14	.73	NS
California Self Control	26.2	19	25.2	18	23.4	13	.54	NS
California Self Acceptance	21.1	19	21.3	18	21.2	13	.98	NS

*Wanted groups to be equivalent.

alpha of .30. Since 3/10 (or 6/20) would be expected by chance alone, we conclude that the three treatment groups had the same basic life scripts.

It was hypothesized there would be no significant difference between the treatment groups on the pre-measure Leary.

26/64 of the Leary comparisons showed the treatment means different, as depicted in Table 32. This percent is larger than the 30% which would be "significant" by chance alone. Therefore, we must assume that the Ss were not randomly assigned to the treatments on the basis of the variables measured on the Leary. However, a search for differences on the Leary revealed no systematic differences in the data (i.e., no preponderance of differences

TABLE 31

LIFE SCRIPT DIFFERENCES IN TREATMENTS

Variable	p	Sig
Dominance of Mother	.31	NS
Pos-Neg View of Mother	.47	NS
Dominance of Father	.53	NS
Pos-Neg View of Father	.15	NS
Dominance of Self	.17	S
Pos-Neg View of Self	.53	NS
How Much Like Mother	.17	S
How Much Life Father	.46	NS
Earliest Memory	.42	NS
Earliest Memory--Injury	.53	NS
How Think Might Die	.65	NS
Death--Violent/Nonviolent	.91	
Age at Death	.09	S
Best Thing Happened So Far	.44	
Worst Thing Happened So Far	.42	NS
Mother Presently Living?	.21	S
Father Presently Living?	.61	NS
Mother Smoked?	.83	NS
Father Smoked?	.86	NS
If by Magic You Could Change Anything	.64	NS

in one quadrant over another).

Tables 33, 34, and 35 provide a breakdown of variables that were significant on the Smoking History (Table 6), Life Script (Table 7), and the Leary (Table 8) by each of the three treatment conditions.

TABLE 32

LEARY PROFILES--EQUIVALENCY OF TREATMENTS

Variable			p	SIG.
P		Self	.23	S
P	Ideal	Self	.85	NS
A		Self	.67	NS
A	Ideal	Self	.56	NS
B		Self	.46	NS
B	Ideal	Self	.59	NS
C		Self	.71	NS
C	Ideal	Self	.22	S
D		Self	.72	NS
D	Ideal	Self	.32	NS
E		Self	.40	NS
E	Ideal	Self	.25	S
F		Self	.86	NS
F	Ideal	Self	.64	NS
G		Self	.50	NS
G	Ideal	Self	.45	NS
H		Self	.60	NS
H	Ideal	Self	.58	NS
I		Self	.43	NS
I	Ideal	Self	.25	S
J		Self	.64	NS
J	Ideal	Self	.34	NS
K		Self	.61	NS
K	Ideal	Self	.90	NS
L		Self	.26	S
L	Ideal	Self	.26	S
M		Self	.76	NS
M	Ideal	Self	.29	S
N		Self	.18	S
N	Ideal	Self	.08	S
O		Self	.17	S
O	Ideal	Self	.73	NS
P	Mother		.31	NS
P	Father		.10	S
A	Mother		.36	NS
A	Father		.43	NS
B	Mother		.59	NS
B	Father		.57	NS
C	Mother		.54	NS
C	Father		.08	S
D	Mother		.04	S
D	Father		.12	S

TABLE 32 (Continued)

	Variable	p	SIG.
E	Mother	.08	S
E	Father	.09	S
F	Mother	.02	S
F	Father	.27	S
G	Mother	.26	S
G	Father	.53	NS
H	Mother	.05	S
H	Father	.74	NS
I	Mother	.61	NS
I	Father	.64	NS
J	Mother	.48	NS
J	Father	.59	NS
K	Mother	.15	S
K	Father	.08	S
L	Mother	.24	S
L	Father	.21	S
M	Mother	.52	NS
M	Father	.16	S
N	Mother	.66	NS
N	Father	.18	S
O	Mother	.69	NS
O	Father	.75	NS

TABLE 33

BREAKDOWN OF VARIABLES WHICH WERE SIGNIFICANT ON SMOKING HISTORY AND LIFE SCRIPT BY TREATMENT GROUP

Variable	A	B	C
Sex	1.7	1.7	1.5
How long successful	6.8	7.7	3.7
How many cutdowns	1.6	1.8	2.3
For how long	2.2	3.0	1.8

TABLE 32

LEARY PROFILES--EQUIVALENCY OF TREATMENTS

Variable			p	SIG.
P		Self	.23	S
P	Ideal	Self	.85	NS
A		Self	.67	NS
A	Ideal	Self	.56	NS
B		Self	.46	NS
B	Ideal	Self	.59	NS
C		Self	.71	NS
C	Ideal	Self	.22	S
D		Self	.72	NS
D	Ideal	Self	.32	NS
E		Self	.40	NS
E	Ideal	Self	.25	S
F		Self	.86	NS
F	Ideal	Self	.64	NS
G		Self	.50	NS
G	Ideal	Self	.45	NS
H		Self	.60	NS
H	Ideal	Self	.58	NS
I		Self	.43	NS
I	Ideal	Self	.25	S
J		Self	.64	NS
J	Ideal	Self	.34	NS
K		Self	.61	NS
K	Ideal	Self	.90	NS
L		Self	.26	S
L	Ideal	Self	.26	S
M		Self	.76	NS
M	Ideal	Self	.29	S
N		Self	.18	S
N	Ideal	Self	.08	S
O		Self	.17	S
O	Ideal	Self	.73	NS
P	Mother		.31	NS
P	Father		.10	S
A	Mother		.36	NS
A	Father		.43	NS
B	Mother		.59	NS
B	Father		.57	NS
C	Mother		.54	NS
C	Father		.08	S
D	Mother		.04	S
D	Father		.12	S

TABLE 34

BREAKDOWN OF VARIABLES WHICH WERE SIGNIFICANT ON LIFE SCRIPTS

Father	Positive	1	8	11	9
	Negative	2	9	3	4
	Ambivalent	3	1	3	0
Self	Dominate	1	13	6	5
	Passive	2	5	6	6
	Ambivalent	3	0	2	3
How much like mother					
	Much like	1	2	8	7
	Like	2	4	3	1
	Neutral	3	5	1	2
	Unlike	4	4	0	2
	Much unlike	5	3	2	2
		64.7	65.8	77.2	
Mother living					
	Yes	1	15	14	13
	No	2	3	4	0

TABLE 35

LEARY MEANS ON SIGNIFICANT VARIABLES

Variable		A	B	C
P	Self	5.9	5.8	7.8
C	Ideal Self	5.1	3.3	4.1
E	Ideal Self	5.4	3.9	4.6
I	Ideal Self	3.1	2.0	2.0
Z	Self	7.5	5.1	6.3
L	Ideal Self	4.1	3.7	2.8
M	Ideal Self	11.0	10.4	8.1
N	Self	8.3	5.7	8.6
N	Ideal Self	7.7	8.2	5.7
O	Self	7.7	4.5	7.0
P	Father	8.1	5.2	6.8
C	Father	6.2	3.3	3.9
D	Mother	7.3	3.8	6.4
D	Father	6.3	4.8	7.7
E	Mother	7.1	4.8	8.2
E	Father	7.5	5.9	3.6
G	Mother	9.6	4.7	8.2
G	Father	8.0	5.1	5.5
G	Mother	8.4	5.9	9.2
H	Mother	7.4	3.9	6.6
K	Mother	7.7	4.8	5.7
K	Father	4.8	2.4	5.8
L	Mother	5.7	5.0	7.4
L	Father	3.6	2.6	4.9
M	Father	6.2	3.3	5.2
N	Father	5.9	3.5	6.1

APPENDIX E

ADDITIONAL LEARY FIGURES

Interpretation for Figures 6 through 13:

Outside circle--percent of total group

Middle circle --percent non-quitters

Inner circle --percent of quitters

Average = not significant
Lo = significant
Hi = significant
> chi-square

Tables 10 through 13:

Number outside of circle in quadrants = % of quitters/non-quitters in that quadrant

Throughout Quitters is abbreviated as Q
Non-quitters is abbreviated as NQ

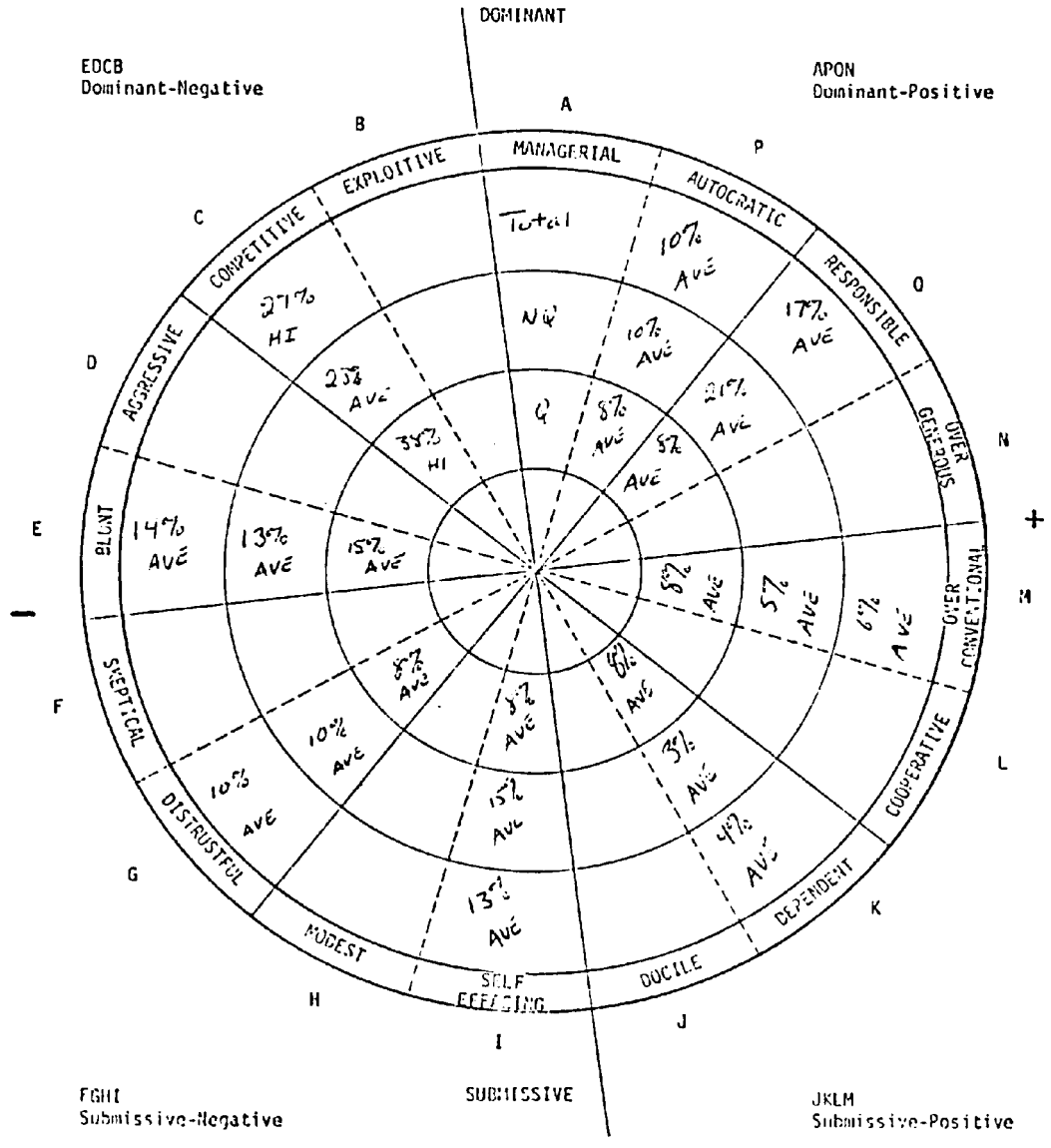


Fig. 6.--Chi-Square Results by Category for Self (Q-NQ and Total Group)

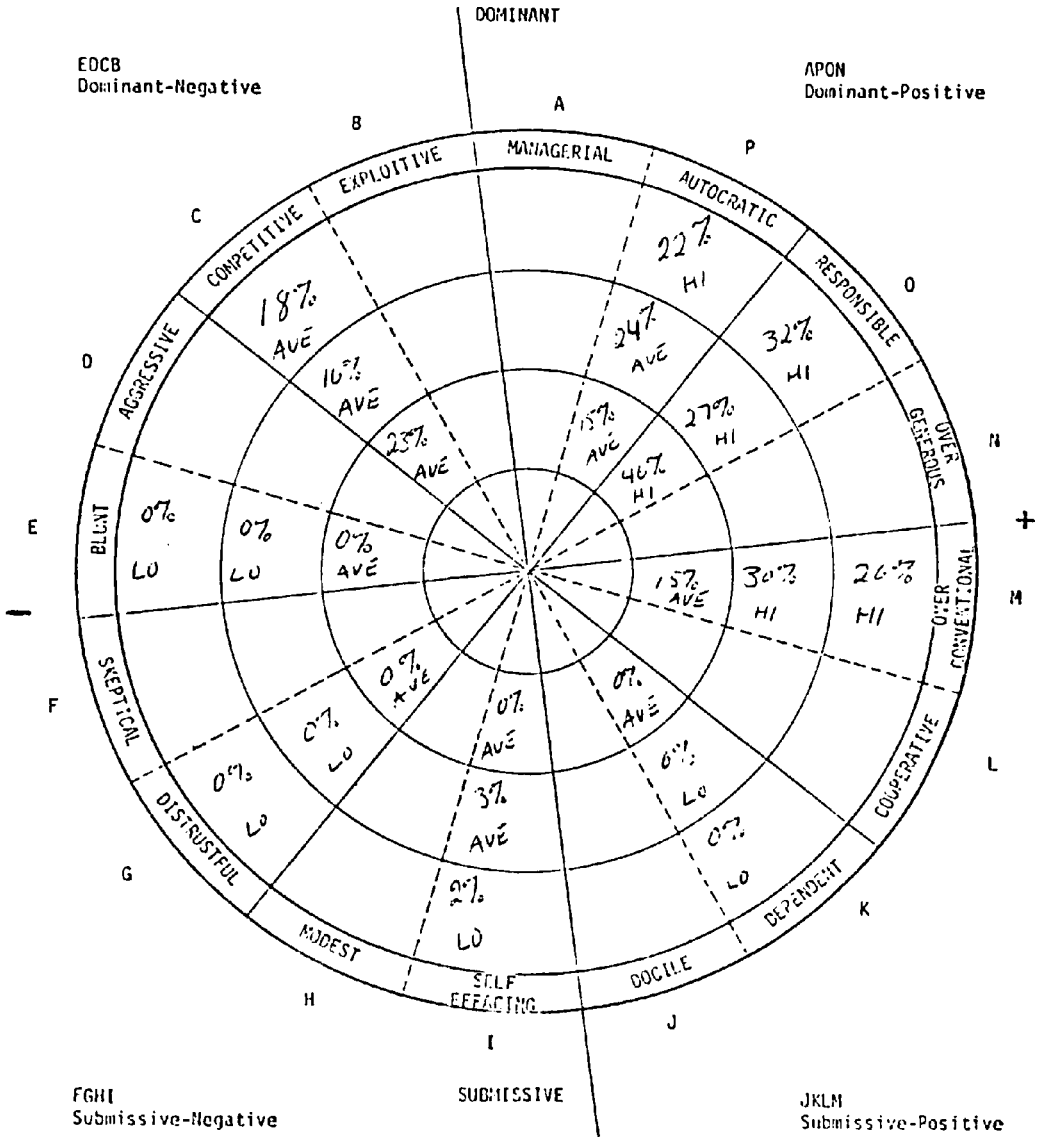


Fig. 7.--Chi-Square Results by Category for Ideal Self (Q-NQ and Total Group)

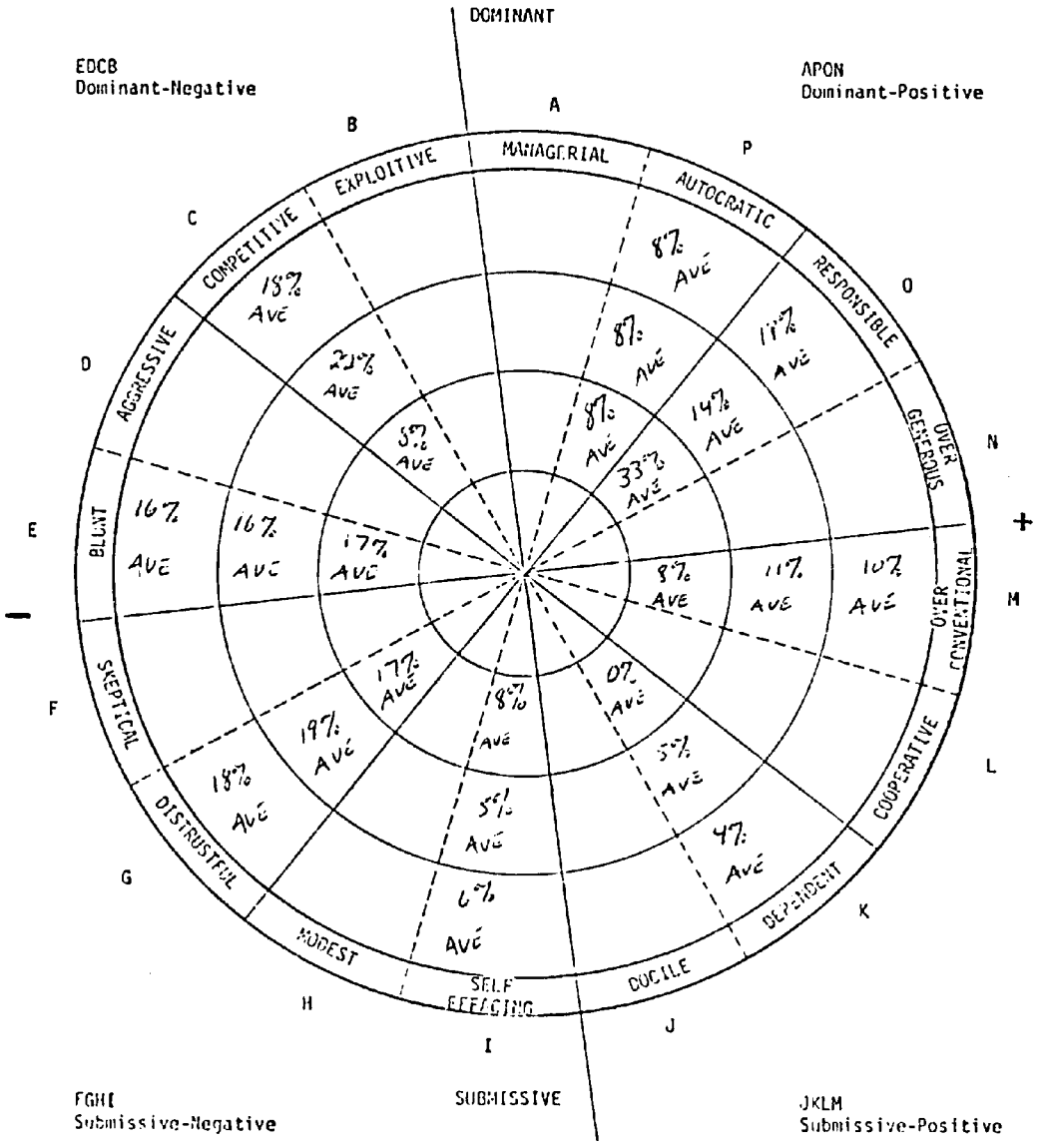


Fig. 8.--Chi-Square Results by Category for Mother (Q-NQ and Total Group)

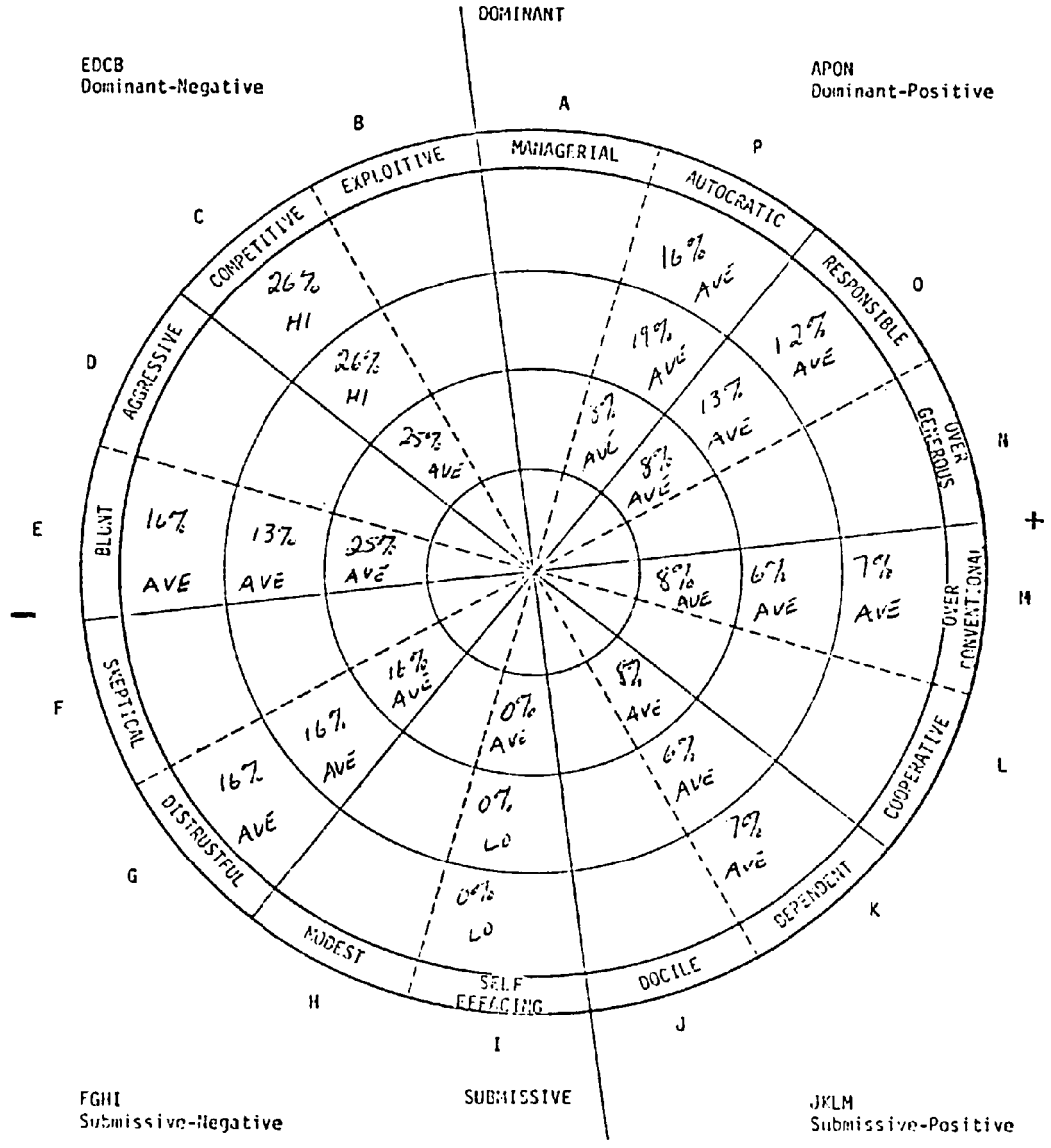


Fig. 9.--Chi-Square Results by Category for Father (Q-NQ and Total Group)

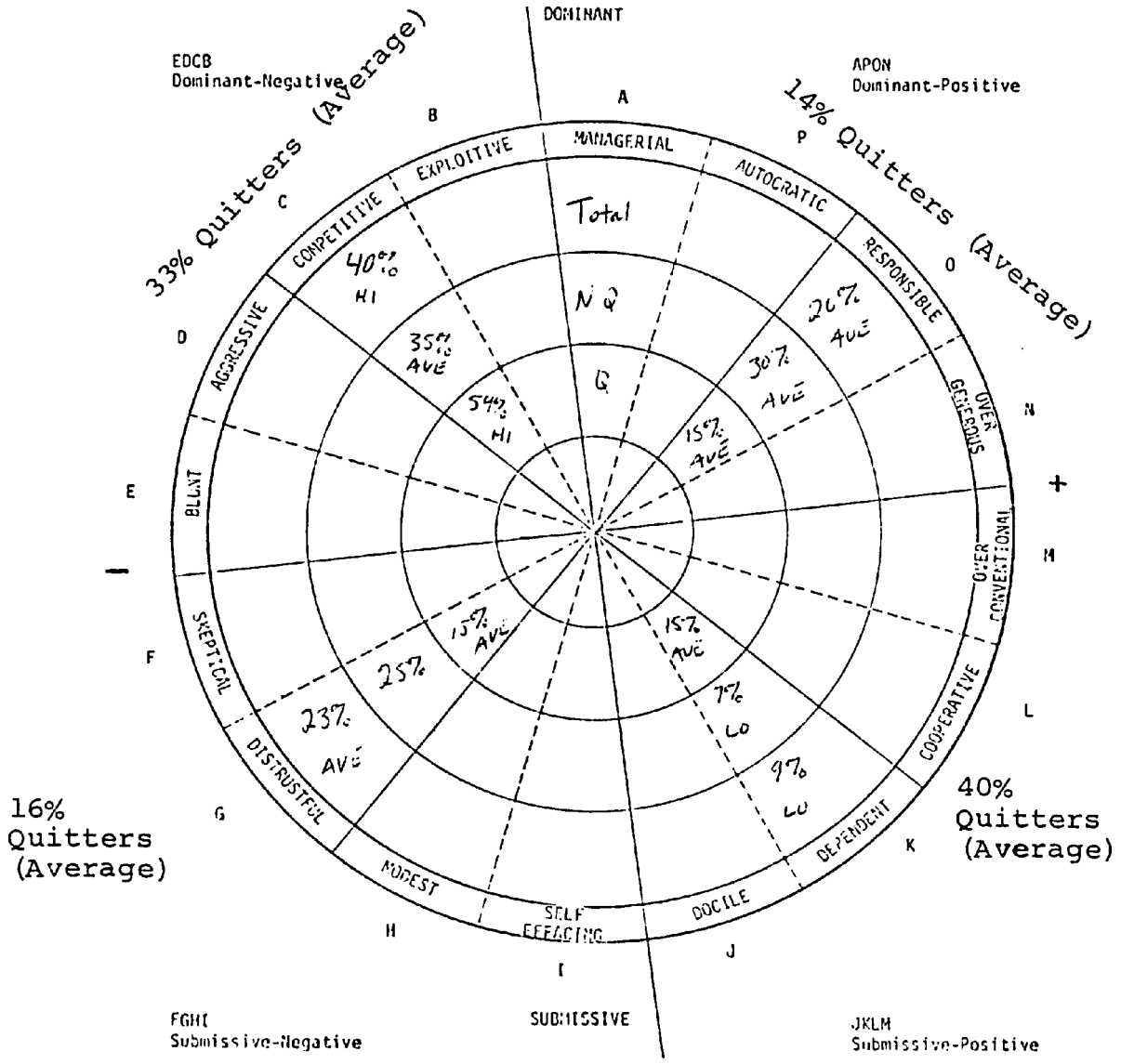


Fig. 10.--Chi-Square Results by Quadrant for Self (Q-NQ and Total Group)

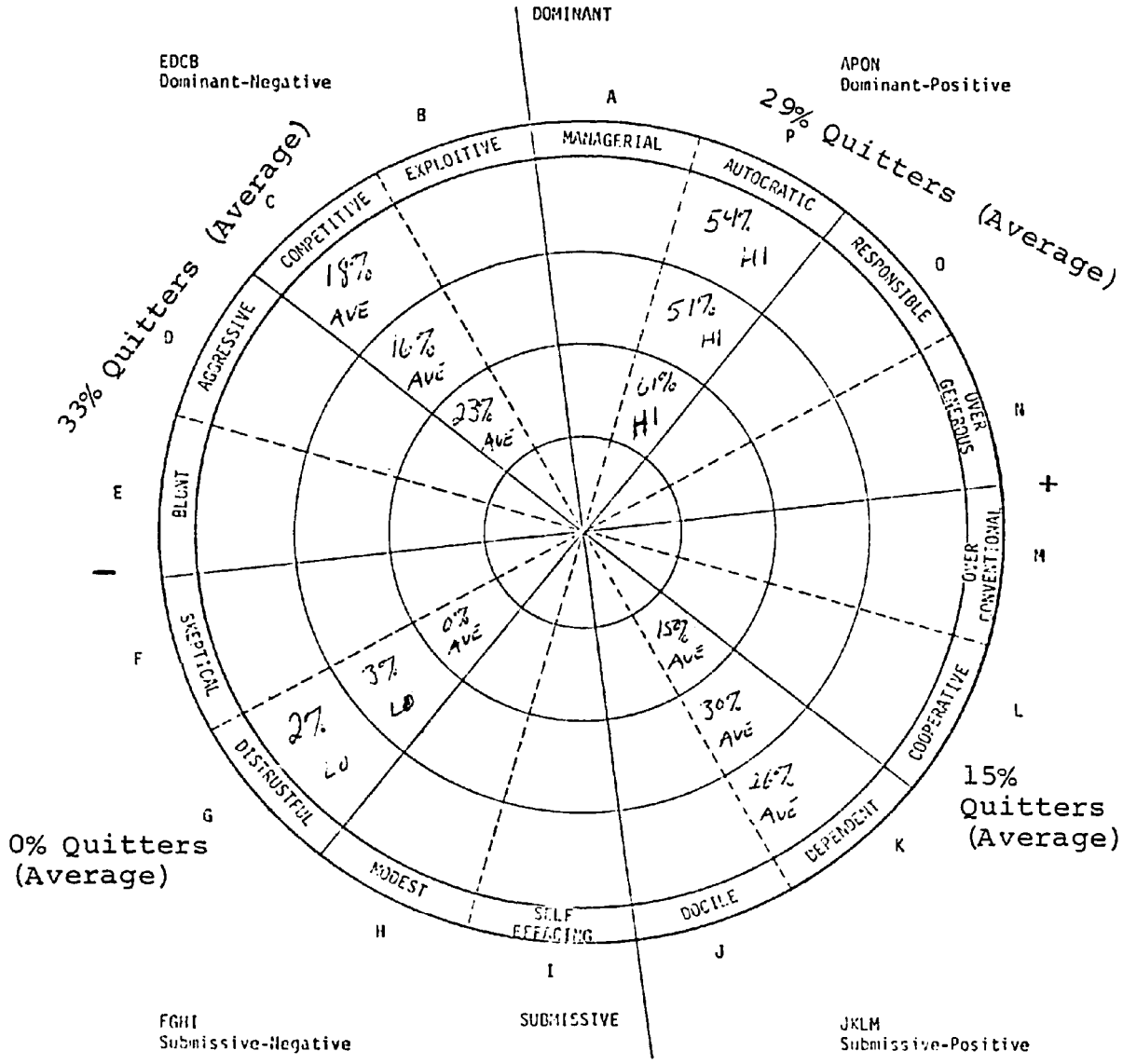


Fig. 11.--Chi-Square Results by Quadrant for Ideal Self (Q-NQ and Total Group)

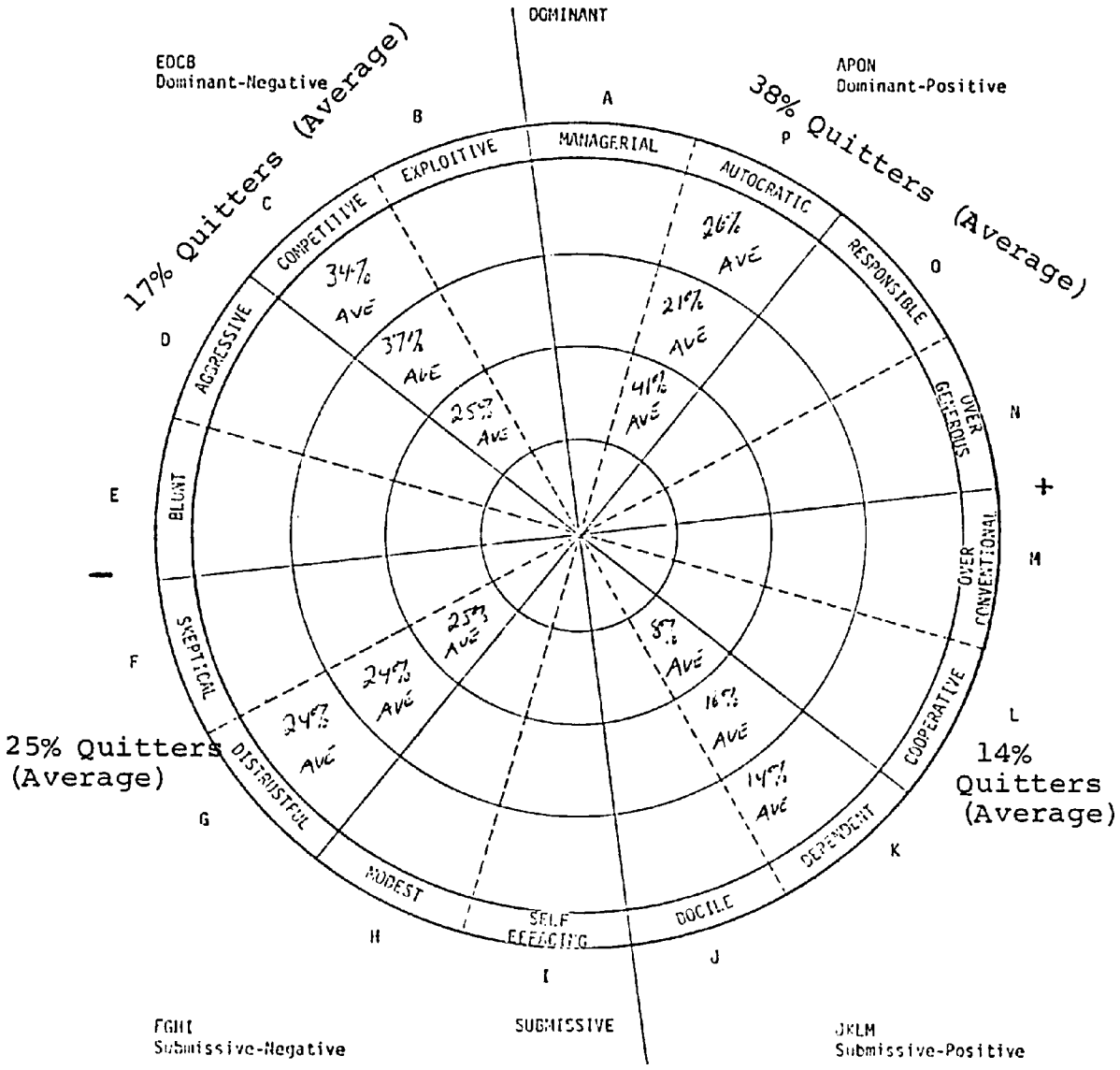


Fig. 12.--Chi-Square Results by Quadrant for Mother
(Q-NQ and Total Group + % of $\frac{Q}{NQ}$)

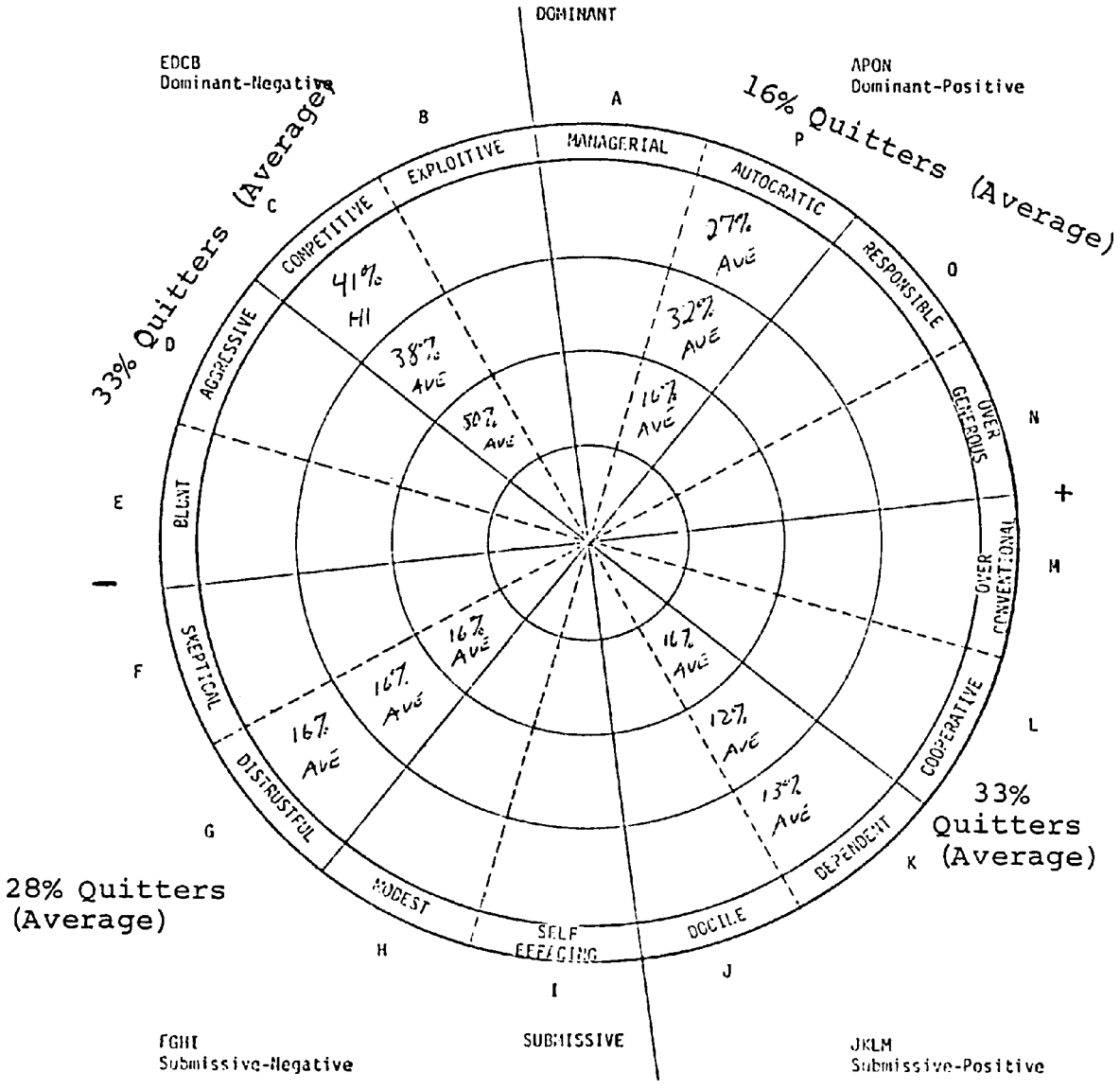


Fig. 13.--Chi-Square Results by Quadrant for Father (Q-NQ and Total Group + % of $\frac{Q}{NQ}$)

	Self	Ideal Self	Mother	Father
DS Total	S (Dom)	S (Dom)	S (Dom)	S (Dom)
P/N Total	S (Neg)	S (Pos)	NS	NS
$1 > \frac{2 + 3 + 4}{3}$ Total	NS	NS	NS	NS
DS Quitters	S (Dom)	S (Pos)	NS	NS
DS Non-quitters	S (Dom)	S (Pos)	NS	S (Dom)
PN Quitters	S (Dom)	S (Pos)	NS	NS
PN Non-quitters	NS	S (Pos)	NS	NS

Fig. 14.--Summary of Chi-Square Significance on the Leary

APPENDIX F

SELECTED EXAMPLES OF LEARY PROFILES

Key

Blue = Self

Red = Ideal Self

Orange = Mother

Green = Father

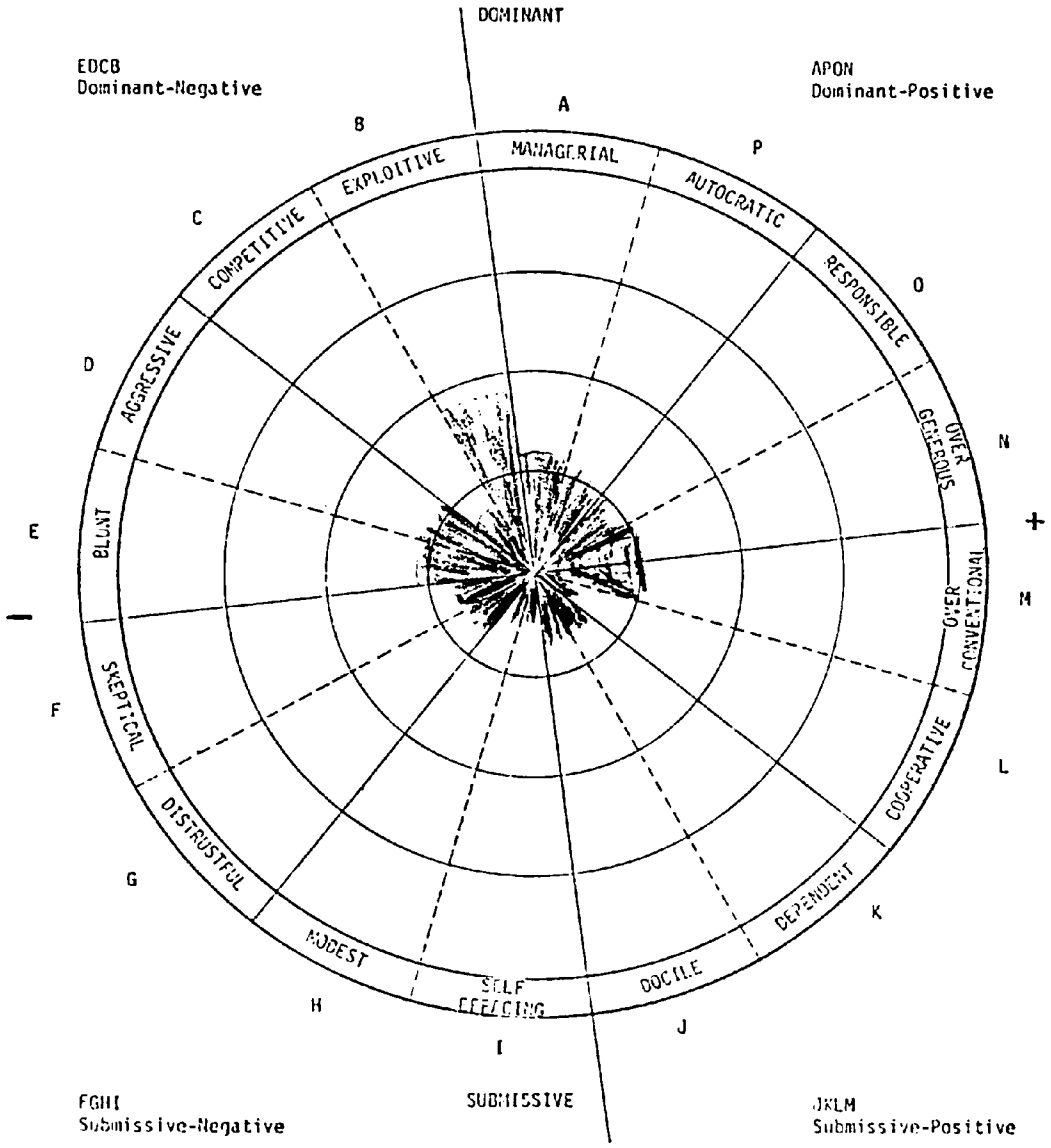


Fig. 15.--Leary Profile of Female Subjects--
Self and Ideal Self

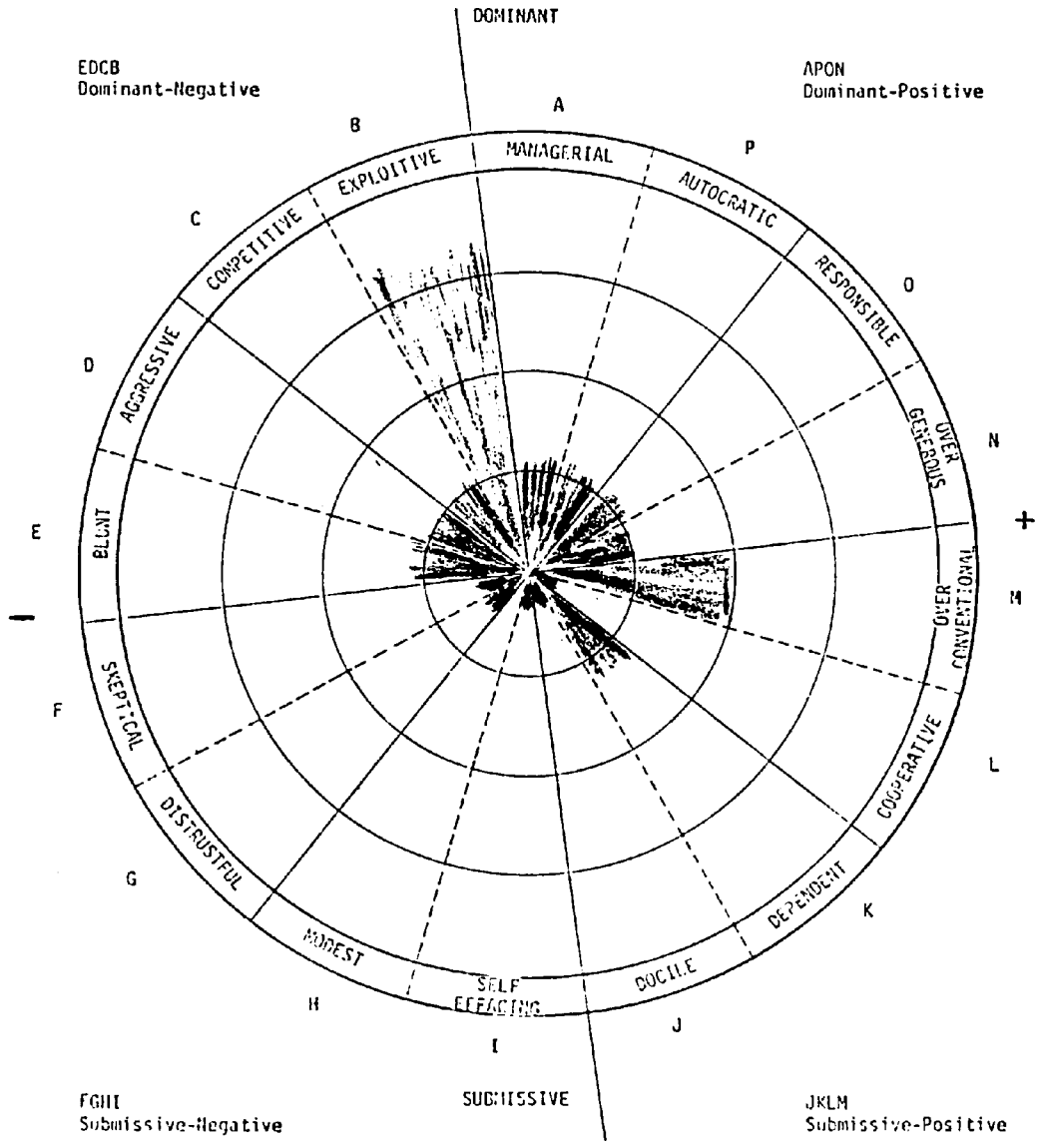


Fig. 16.--Leary Profile of Female Subjects' Mothers and Fathers

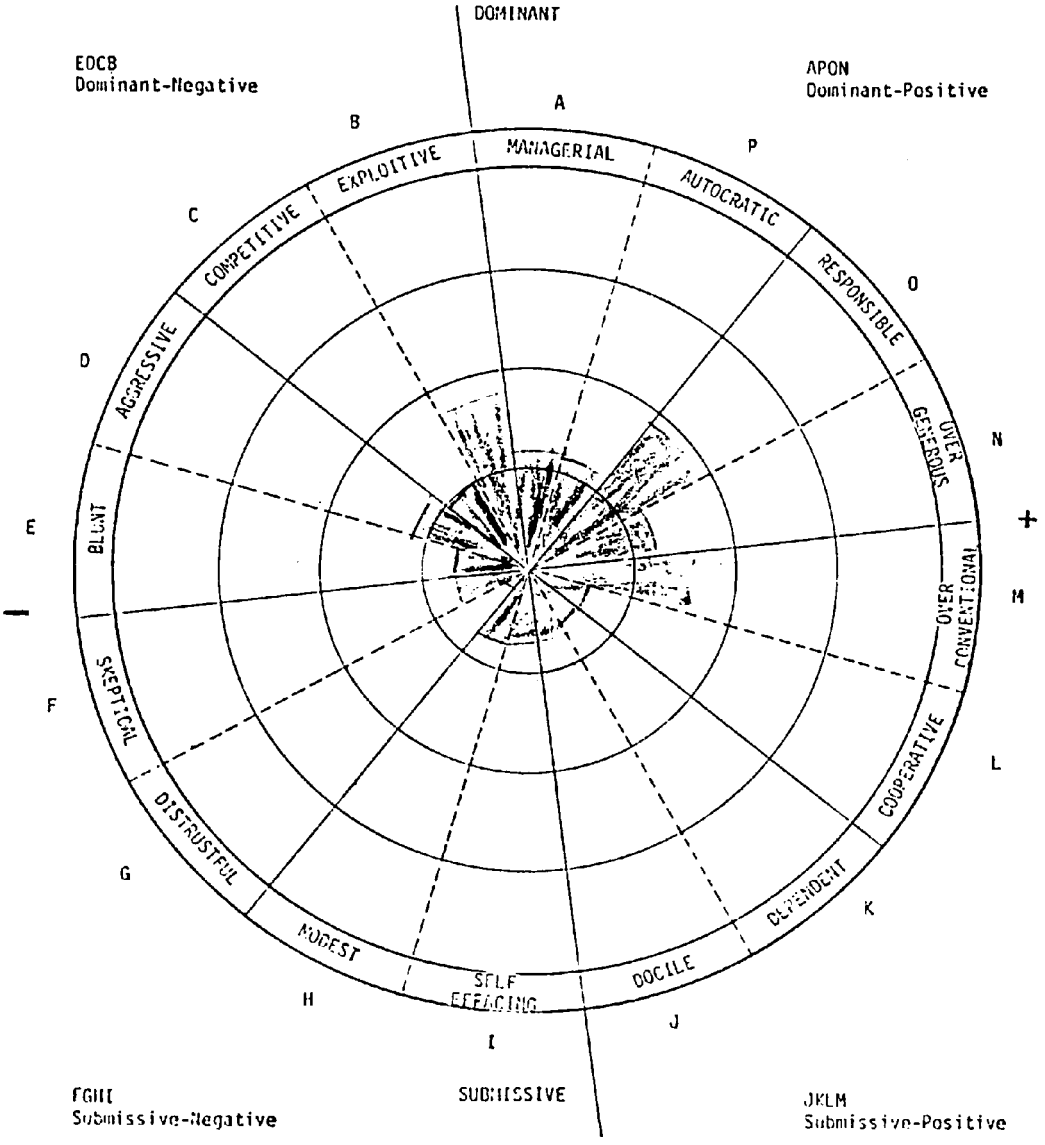


Fig. 17.--Leary Profile of Male Subjects--
Self and Ideal Self

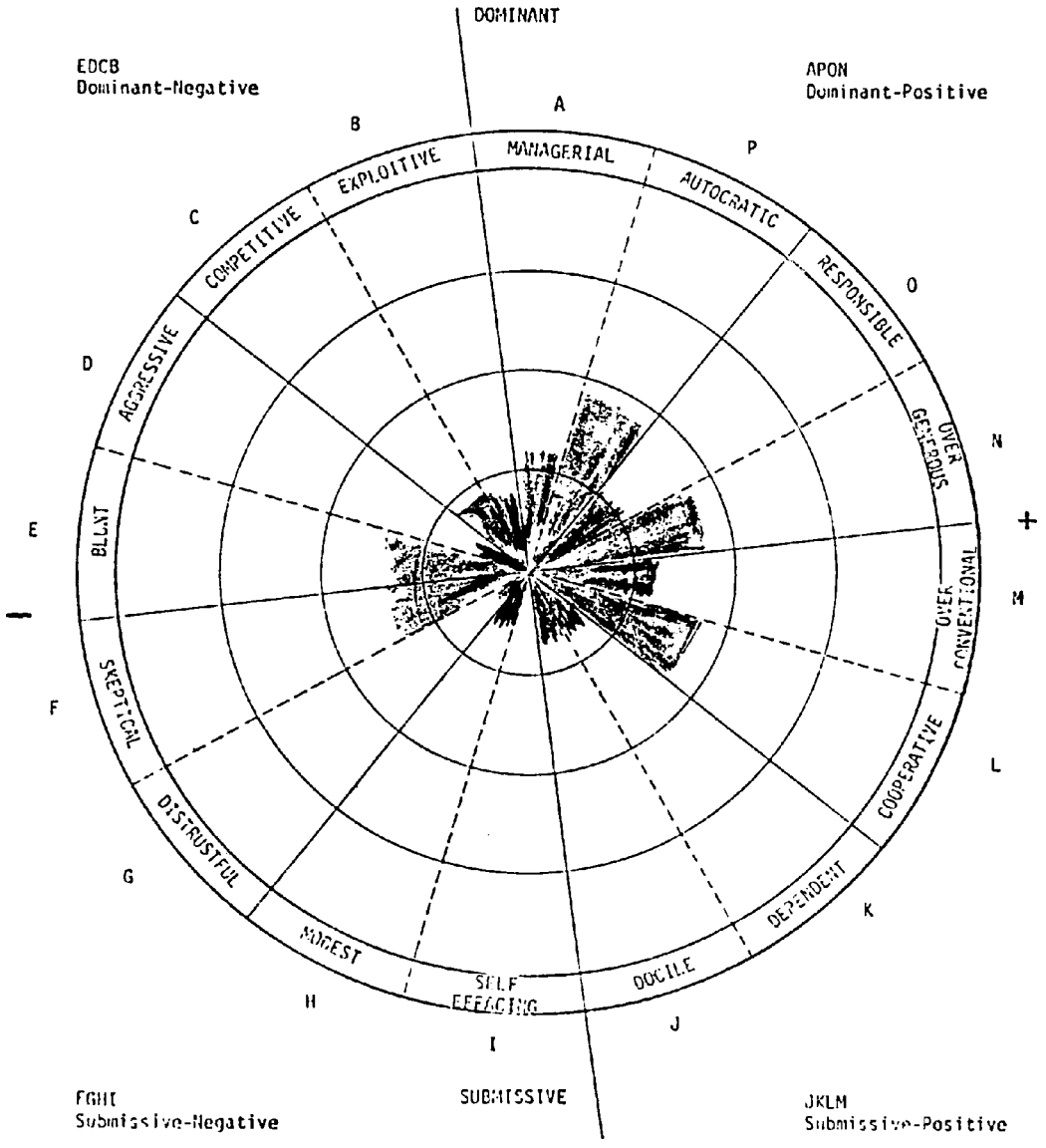


Fig. 18.--Leary Profile of Male Subjects' Mothers and Fathers

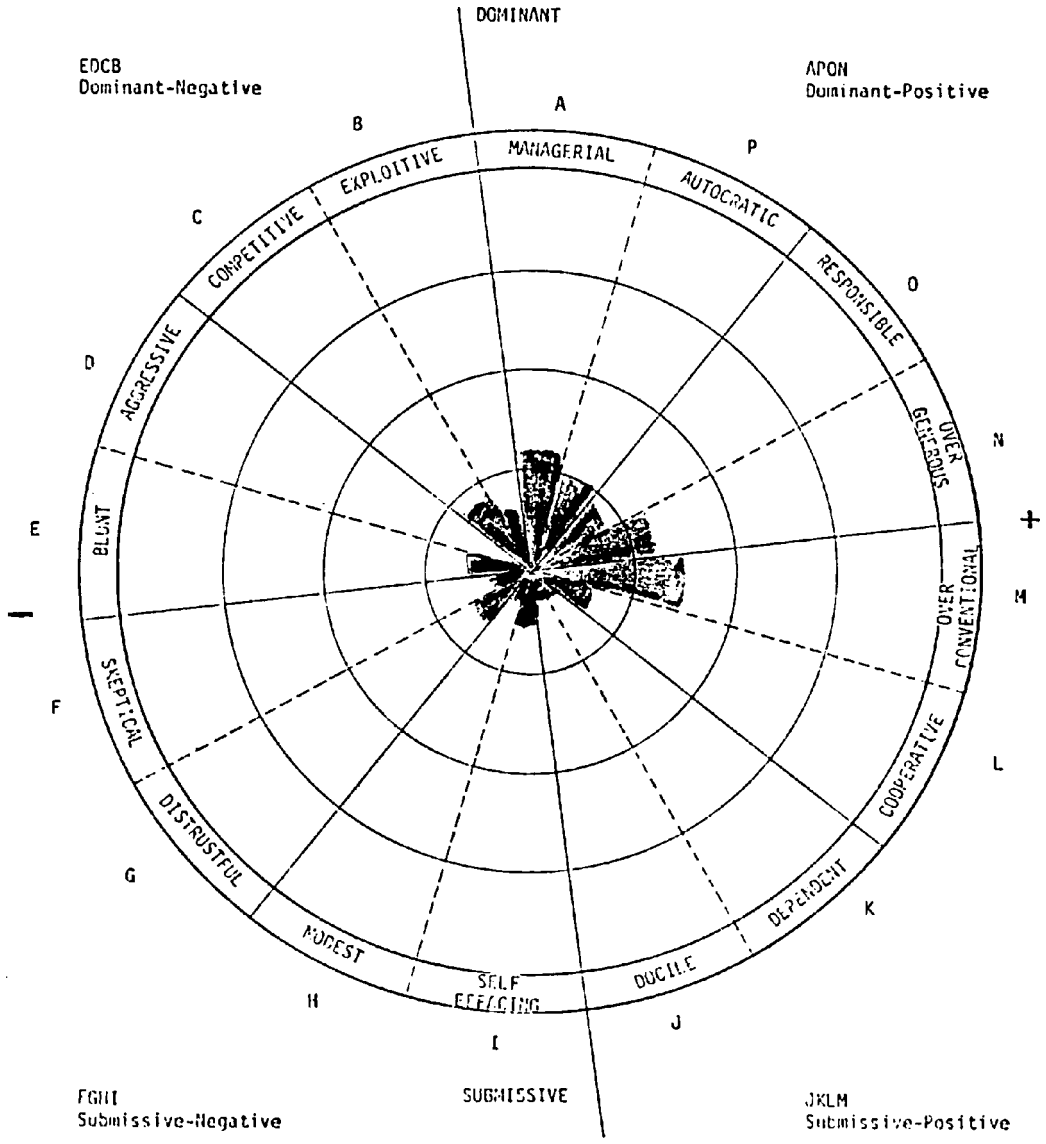


Fig. 19.--Leary Profile of Female Subjects--
Self and Ideal Self

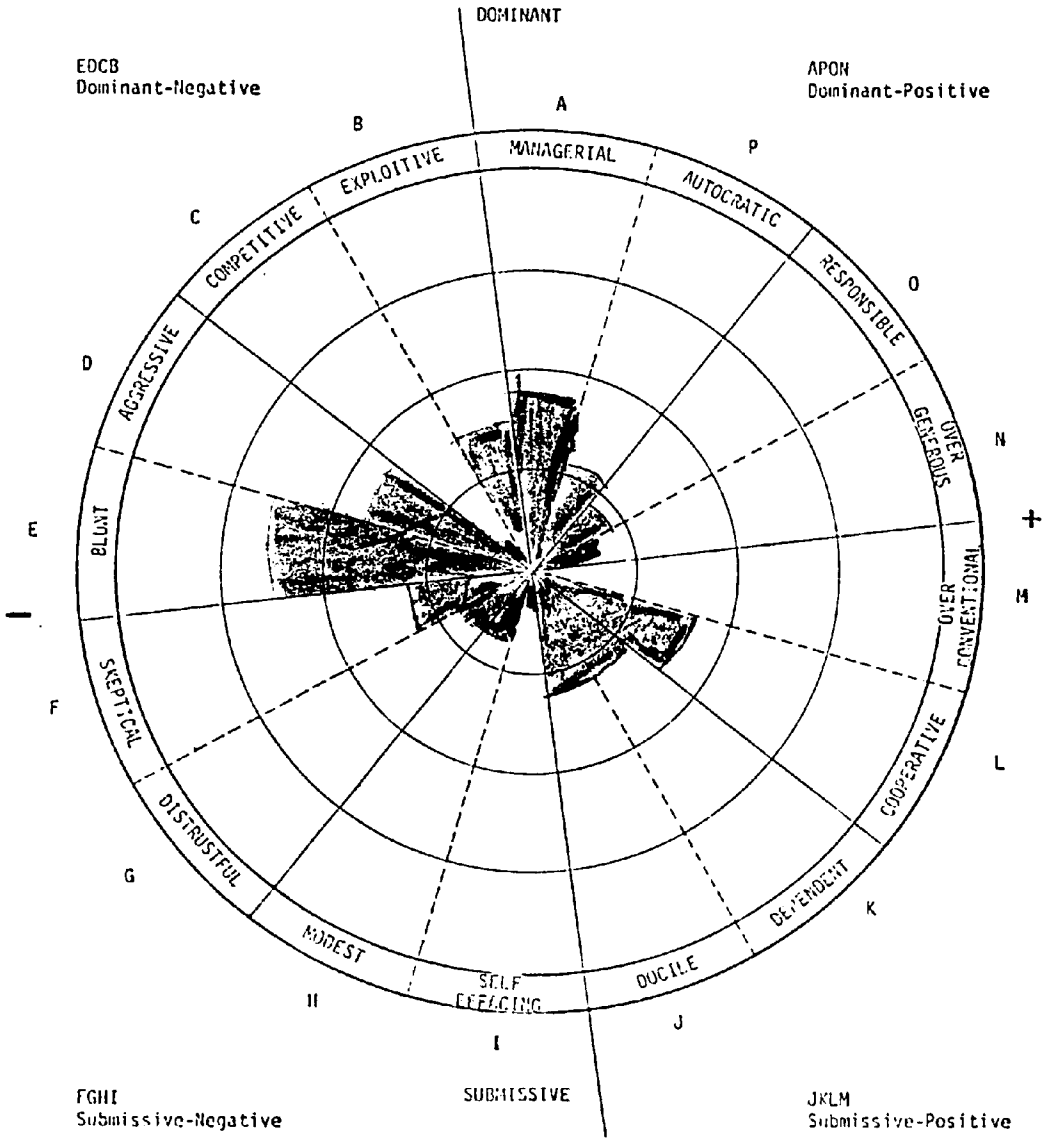


Fig. 20.--Leary Profile of Female Subjects' Mothers and Fathers

APPENDIX G

DESCRIPTIVE DISPLAYS OF RESPONSES TO SELECTED VARIABLES--FINAL SMOKING FORM

Descriptive Display 1

Quitters' Responses to Selected Variables--
Final Smoking Form

Variable	Frequency
If still having urges, are they strong?	
1. Yes	6
2. No	7
Approximately how often do you get them?	
1. Many times/day 1 per hour	1
2. 2-20 per day	4
4. Occasionally, few times a week	5
5. 1 per week	1
6. Depends on situation	2
In the past, did you smoke cigarettes to reduce tension and anxiety?	
1. Yes	13
2. No	2
If so, what are you substituting for smoking?	
1. Exercise	2
2. Eating	1
3. Chewing gum	1
5. Nothing	6
7. Other	2
Did you gain weight after you quit?	
1. Yes	9
2. No	4
Have you done things to bring the weight under control?	
1. Yes	9
2. No	3
What?	
1. Exercise	5
2. Return to normal eating habits	4
3. Diet	1
7. Other	1
Did any <u>one</u> person support you while you were quitting?	
1. Yes	9
2. No	6

Variable	Frequency
His/her relationship to you	
1. Partner	7
2. Roommate	1
4. Friend	1
5. Co-workers	1
Whether he/she is a smoker?	
1. Smoker	4
2. Non-smoker	2
3. Ex-smoker	3
How she/he supported you?	
1. Encouragement	7
2. Not smoking in presence of respondent	3
What things did you find particularly helpful?	
1. Doing something from program	3
2. Information from sessions	1
3. Avoiding stimulants and alcohol	1
4. Friends or others non-smoking	1
5. Chewing gum	2
6. Nothing	2
7. Other	6
What, if anything, would have made quitting easier for you?	
1. Friends not smoke	5
2. Didn't use stimulants	1
3. Not gain weight	2
4. Nothing	5
If you were going through the program again, how would you change it?	
1. Nothing	11
2. More group sessions	25
3. More individual attention	1
4. More definite, stricter	1
5. Person leading should be ex-smoker	2
7. Other	12

Descriptive Display 2

Quitters' Responses to Selected Variables by Treatment Group--Final Smoking Form

Variable	A	B	C	p	Sig.
Withdrawal symptoms					
1. Cigarette craving	1	2	1	.41	NS
2. Sleepy	1	0	2		
3. Tension	0	0	0		
4. Headache, physical symptoms	0	1	2		
6. Don't know	1	0	0		
Circumstances when had cigarettes					
1. Peer pressure	0	0	0	.54	NS
3. Drinking, stimulants	2	1	1		
4. Experimenting	1	0	0		
5. Stress	0	1	1		
7. Other	0	0	1		
Are you still having urges to smoke?					
1. Yes	3	5	5		
2. No	0	2	0		
Approximately how often get urges?					
1. Many times per day	1	0	0	.29	NS
2. 2-20 per day	1	1	2		
4. Occasionally, few times/week	1	1	3		
5. 1 per week	0	1	0		
6. Depends on situation	0	2	0		
What presently substituting for smoking?					
1. Exercise	1	0	0		
2. Eating	0	0	1		
3. Chewing gum	1	0	0		
5. Nothing	1	4	1		
7. Other	0	1	1		
What things did regarding reward type things?					
1. A vacation	1	0	0		
2. Buy something for self	3	4	2		
3. Indulge self in eating	0	1	0		
4.	0	1	0		
7. Other	1	0	0		

Descriptive Display 3

Non-Quitters' Responses to Selected Variables by Treatment Group--Final Smoking Form

Variable	A	B	C	p	Sig.
What of the program was helpful?					
1. Diary	1	0	2	.03	S
2. Progressive relaxation	0	2	1		
4. Thought stopping	2	0	0		
5. Stroking	0	1	0		
6. Support from others	3	5	13		
7. Other	6	6	1		
9. All of it or several	3	2	1		
If going through the program again, how would you change it?					
1. Nothing	1	3	5	.12	NS
2. More group sessions	10	10	5		
3. More individual attention	0	1	0		
4. More definite, stricter	1	0	0		
5. Person leading should be ex-smoker	0	1	0		
7. Other	4	1	7		
What factors were associated with your starting to smoke again?					
1. Tension, anger, frustration	5	7	10	.54	NS
2. Weight gain	1	1	0		
3. Choice--wrong time	3	0	3		
4. Alcohol, stimulants	0	1	1		
5. Don't know	1	1	0		
Did you experience any withdrawal symptoms?					
1. Yes	10	7	9	.70	NS
2. No	2	2	4		
What were they?					
1. Craving	1	1	1	.38	NS
2. Sleepy	0	0	1		
3. Tense, fluttering, nervous	8	3	3		
4. Physical symptoms, headache	1	3	4		

Variable	A	B	C	p	Sig.
Why started smoking?					
1. Peer pressure	7	3	3	.17	S
2. Around smokers	3	1	1		
3. Feel cool	0	1	2		
4. Feel adult	1	1	2		
5. Rebellion	1	2	1		
6. Experiment, fun, and liked it	1	1	4		
7. Stress, depression	2	2	0		
8. Other	1	0	2		
9. NA	0	5	1		
Why restarted after quit?					
1. Change in situation	1	2	4	.70	NS
2. Anxiety due to life crisis	4	2	2		
3. General anxiety, tension, nerves	3	3	5		
4. Craving	1	1	2		
5. Around smokers	1	2	0		
6. Enjoyment	1	4	1		
7. Other	1	2	1		
Decrease in smoking					
1. Health	5	3	4	.30	NS
2. Peer pressure	2	1	0		
5. Other	0	2	0		
7. No change in level	1	0	0		
Decrease--second mention					
2. Peer pressure	1	0	0	.50	NS
3. Around others who don't smoke	2	1	0		
4. Worry about effect on others	2	0	0		
5. Other	0	1	1		
7. No change in level	1	0	0		
Reason for increase or restart					
1. Change in situation	2	2	0	.56	NS
2. Anxiety due to life crisis	0	0	1		
3. General anxiety, nerves, tension	5	4	6		
4. Around others who smoke	1	0	1		
5. Influence of alcohol or other drugs	0	0	2		
6. Other	1	0	1		
7. NA	1	0	0		

Variable	A	B	C	p	Sig.
Reason for increase--second mention					
1. Change in situation	0	0	1	.30	S
3. General anxiety, nerves, tension	0	1	0		
5. Influence of alcohol or other drugs	1	0	1		
6. Other	0	0	1		
7. NA	1	0	0		
How felt when first quit?					
1. Extremely anxious	7	2	3	.13	S
2. Somewhat anxious	3	3	5		
3. Ambivalent	0	2	3		
4. OK, good	1	6	2		
5. Great, fantastic	4	3	5		
Why want to quit?					
1. Health	13	14	16	.27	S
2. Hygiene	1	1	0		
4. Don't like being an addict	2	0	0		
5. Worry about effect on others	1	1	0		
6. Expense	1	0	0		
7. Other	0	2	0		
Why want to quit--second mention					
1. Health	2	1	0	.39	NS
2. Hygiene	1	3	1		
3. Pressure from others	3	1	0		
4. Don't like being an addict	1	1	2		
5. Worry about effect on others	2	0	3		
6. Expense	4	2	2		
7. Other	0	1	0		
Why want to quit--third mention					
1. Health	1	0	0	.44	S
2. Hygiene	0	2	1		
4. Don't like being an addict	0	1	2		
5. Worry about effect on others	1	0	1		
6. Expense	0	0	1		
7. Other	1	0	1		
Percent time inhale					
1. 100%	15	11	14	.41	NS
2. 75-99%	3	4	1		
3. 50-74%	0	2	1		
4. 0-49%	1	0	0		

Variable	A	B	C	p	Sig.
If cut down, what was associated with a subsequent rise in your smoking level?					
1. Stress, tension, personal problem	3	7	6	.73	NS
2. Change in life job	2	1	1		
4. Medical reasons	1	1	0		
5. Habit, not conscious of it	1	1	0		
6. Smoking only or 1/2 cigarette	1	0	0		
7. Other	1	0	1		
Do you still want to quit smoking?					
1. Yes	15	12	14	.43	NS
2. No	1	0	0		
If so, what is your present idea of what you need to be successful in doing this?					
1. Weekly, regular, more meetings	2	1	2	.40	NS
2. Make decision, set mind to do it	7	2	3		
3. Change life situation to make more supportive	0	1	2		
4. Reduce tension	2	4	2		
5. Avoid smokers	0	2	0		
6. Hypnotism	1	0	1		
7. Other	1	1	0		

Descriptive Display 4

Group C's Response Regarding Small Group Meetings--
Final Smoking Form

Variable	Frequency
If you did not attend regularly, what were your reasons for not doing so?	
1. Didn't need them	1
2. Moved	2
What did you like about the meetings?	
1. Nothing	1
2. Sharing, opening up to people	16
3. Information given out	2
7. Other	2
What did you dislike?	
1. Nothing	10
2. Lack of structure, bullshit	4
3. Playing games	3
4. Other	3
Did you subsequently go back to smoking?	
1. Yes	14
2. No	5
If yes to above question, what do you feel you needed at that time to stay off cigarettes?	
1. More groups	2
2. Individual counseling	1
3. Get head together--more committment	3
4. Reduce tension	7
5. Don't know	2
7. Other	1
Would you have attended more group meetings if they were available?	
1. Yes	14
2. No	5
Knowing what you know now, please describe what you would have liked to see done differently at the meeting?	
1. Nothing	8
2. More structure	2
3. Less game playing	1
4. Don't know	3
7. Other	3

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