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Socialization Into the Therapeutic Community Culture

Lorand Szalay

INTRODUCTION

This chapter describes a new analytic approach to process evaluation in the treatment of drug addiction. This approach focuses on the assessment of changes in the client's self-image, relationship to the social environment, perceptions of harmful substances, and on other variables found to be significantly related to habitual drug use. The following topics are covered: (1) a description of the Associative Group Analysis (AGA) method; (2) findings obtained in a cross-sectional comparison of 200 pretreatment and 200 posttreatment clients at an urban therapeutic community (TC) showing changes in dominant trends of perceptions, attitudes, and cognitive organization; (3) differences in the perceptions and evaluations of harmful substances by other groups of users and nonusers; and (4) a discussion of a multidimensional strategy of process evaluation in TC settings as a means of obtaining useful feedback on the psychological effects of programs aimed at resocialization.

Approach

The investigations of pretreatment and posttreatment clients in a TC setting focus on changes in psychological variables related to program success. Analogous efforts to assess program effects have capitalized on such personality traits as locus of control or alienation. Since the classic efforts have remained surprisingly ineffective, the present approach goes in distinctly different directions. It centers on perceptual and attitudinal dispositions and on changes in cognitive organization in systems of mental representation.

Students of human behavior working on theories of cognitive representation assume that much of goal-oriented human behavior is guided by cognitive maps or "systems of mental representation." Triandis (1972) wrote of a system of cognitions that constitutes a map of the ways people conceive their environment. Tolman (1948) described the maps as guidance or control systems that exert continuous influences on choices and behavior. Mental representations include such diverse

notions as cognitive map (Tolman 1948), cognitive representation (Downs and Stea 1973), internal representation (Posner and Keele 1968; Shepard and Chipman 1970), subjective lexicon (Miller 1967), meaning system (Osgood et al. 1957), and thought world (Whorf 1957). These notions converge in the fundamental assumption that people's behavior is organized and guided by their subjective meanings and by the system of subjective views they develop in the representation of their subjective world.

Following psychological tradition, the main thrust of empirical research that is designed to reconstruct systems of subjective representations is centered on the assessment of subjective images and meanings. Compared to lexical meanings based on linguistic use or convention, psychological meanings are subjective reactions (Osgood et al. 1957) that frequently encompass affects, personal experiences, and perspectives. These constitute elementary units or mosaic pieces of the global system of mental representation or world view. The system of subjective representation is not merely an aggregate of subjective images and meanings but a highly organized, coherent system. These representational units are highly interdependent; each unit has to fit and be adapted by the system. The AGA was used to assess subjective images and meanings as representational units and to reconstruct the main parameters of systems of mental representation.

The research was organized to test three main assumptions based on a representational model of behavioral organization as follows.

1. By assessing subjective images and meanings, it is possible to reconstruct perceptual and attitudinal dispositions differentiating pretreatment drug addicts and rehabilitated clients.

2. The differences between active addicts and rehabilitated addicts are not limited to single isolated images or meanings but reflect trends across several themes (e.g., me, I am, friends) used in the representation of broader domains (e.g., self/friends).

3. The systems of subjective representation can be charted in three dimensions: perceptions, dominant priorities, and attitudes or evaluations. The systems of addicts and rehabilitated clients can serve as reference groups for determining the status of individual clients and how much they have progressed in thinking like successfully rehabilitated addicts.

METHOD

Subjects

The research was organized to test the potential of AGA to map the systems of mental representation of pretreatment and posttreatment samples and to measure changes in clients' perceptions and attitudes related to drug use. The research relied on a cross-sectional comparison of pretreatment and posttreatment clients at an urban-based TC. The TC is a long-term, residential treatment facility that emphasizes resocialization and promotes behavioral changes that will reintegrate the individual into society.

The pretreatment group consisted of 200 habitual drug users who were at the beginning of their treatment at the TC. All members of this group were hardcore users, predominantly of cocaine and crack. All suffered from serious behavioral difficulties such as the inability to hold jobs or earn a living, to function in normal family roles, or to meet personal obligations. Most of the addicts entered treatment after reaching a level of dependency that forced them to seek treatment. This group was 77 percent male and 23 percent female; the ethnic makeup of the sample was 53 percent white, 36 percent black, and 10 percent Hispanic. Fifty-four percent of the clients had been in drug treatment before.

The posttreatment group included 200 residents at the same TC who had successfully reached a drug-free status and were in the final stages of their rehabilitation program. These clients had spent an average of 1 year and 8 months under strict regulation and control at this TC. They were judged to be successful in their treatment by the following criteria: maintaining a drug-free status over many months; assuming increasingly demanding jobs and responsibilities within the TC and later in normal job settings; and developing plans, holding to schedules, and developing personal ties. This group was 74 percent male and 26 percent female; the ethnic makeup of the sample was 48 percent white, 42 percent black, 9 percent Hispanic, and 1 percent Native American. In the posttreatment group, 47 percent of the clients had previously been in drug treatment.

Drug users and nonusers in groups of similar size (n = 200) outside treatment organizations also were included in some of the following comparisons. These groups came from college populations tested across the United States in the context of Department of Education interest in the evaluation of prevention programs. Since these groups differed from the

client populations in average age and education, they were not used to reach generalizations on treatment versus nontreatment. They served mainly to illustrate differences in the psychological dispositions associated with drug use and to test the effects of drug treatment on the relationship of these groups.

The AGA method was administered to the above samples by using stimulus themes covering several domains of life such as self-concept, drug abuse, interpersonal and social relations, work, and future. The standard AGA data collection procedures were used to elicit multiple response, free associations to the selected themes.

The AGA

The use of word associations in the empirical study of word meanings has its roots in the work of Noble (1952) and Deese (1965). As described in *Subjective Meaning and Culture* (Szalay and Deese 1978), the AGA method uses continued free association tasks to reconstruct the subjective images and meanings of selected samples of respondents. The AGA is a highly unstructured and open-ended analytical method which offers access to behavioral dispositions beyond the reach of more direct and more structured methods of assessment. It does not call for an overt expression of personal position or opinions as no specific questions are asked. The respondents perceive word associations as a language task rather than an attempt to probe their personal beliefs or attitudes.

Data Collection, Test Administration. In its most common form, the AGA uses association tasks administered in written form to selected samples in group sessions. They receive the word themes (e.g., *ME)* printed several times on slips of paper and are asked to write as many ideas as possible related to each theme presented in 1 minute. On the average, participants give six to eight different associations to each of the words presented on each slip. As experiments have shown, the first response to each theme is slightly more informative on the subjective meaning than the next. These differences have been measured experimentally by retesting the stability of responses at various rank places and used to assign weight to the responses. The weights obtained are as follows: 6, 5, 4, 3, 3, 3, 3, 2, 2, 1, 1, 1. The weighted responses of the members of a particular sample group (e.g., pretreatment addicts) were tallied into response distributions as shown in table 1.

TABLE 1. *Highest scoring associations to ME*

Pretreatment		Posttreatment	
Response	Score	Response	Score
Love	93	Love	69
Lonely,ness	55	Care,ing, for	66
Goodness	46	Happy,ness	62
Bad	43	Good,ness	49
Confuse,d,ing,ion	43	Myself	46
Hat,red	41	I	44
Myself	37	Kind,ness	36
Drug,s	35	You	31
Care, ing, for	31	Friend,s	29
Addict,s	28	Loving	23
Help,ing,ed	25	Like	21
Hurt,ing	25	Afraid	20
Therapeutic comm.	22	Lonely,ness	18
Alone	21	Person	18
Selfishness	21	Scare,d,y	18
Understand,ing,able	19	Self	16
Nice	19	Father,hood,ly	16
Junkie	16	Responsible,ty	15
You	16	Alone	14
Future,istic	16	Straight	14

Mosaic Pieces of Perceptions and Evaluations. Table 1 presents some of the most frequent responses elicited by the stimulus word *ME* from two samples. Based on the distribution of hundreds of spontaneous responses, such response lists offer many mosaic pieces of the respondents' subjective perceptions and evaluations. Each response has a score value. These values reveal how salient a particular idea or attribute is *(loneliness, happiness)* as a mosaic of the group's self-image. A perfunctory comparison of the responses suggests some characteristic differences in the way pretreatment and posttreatment clients and nonusers view themselves. For instance, the pretreatment clients show a stronger sense of loneliness, and the posttreatment clients convey a relatively happier view of the self.

Related responses form natural clusters and reveal mosaic pieces of the group's subjective meaning. Since the response distributions are extensive, several analytic procedures have been developed to arrive at more global and systematic conclusions. A simple method involves content analysis; analysts trained in this process group the responses into

relevant main clusters or categories. For instance, responses conveying insecurity and negative affects are placed in one cluster and labeled by the most salient reactions: *lonely, confused.* All the references to positive affects are placed in another cluster, and labeled again by the highest scoring reactions: *love, friendship.*

As past studies (Szalay and Deese 1978) have shown, such categorizations of content analysis can be performed with a reasonable degree of reliability. The mean correlation between analysts working independently was 0.7. An application of this procedure to the two samples' responses to *ME* resulted in the main response clusters shown in table 2. The pretreatment group shows generally low self-esteem and strong negative self-evaluations: *loneliness, confused, hatred,* and *hurting.* As the references to drugs show, drug use is part of this group's self-image; they also identify themselves spontaneously as *addicts* and *junkies.* Both treatment groups show a strong preoccupation with *love* and *caring,* which corresponds to their affect-laden focus in other domains such as family. Expressions of positive moods or evaluations from the pretreatment group are few; the posttreatment clients are considerably more positive with reactions such *as happiness, friends, loving,* and *responsible.* Both the treatment samples, however, show strong signs of internal anxieties and distress such as *hurt, afraid, scared,* and *lonely.* These results offer many insights that are inaccessible through direct questions, such as the intensity of ambivalent feelings and the internal identification with a problem (e.g., drug use).

To convey the results of this analysis in a simple visual form, "semantographs" are used (see figure 1). The semantograph is a graphic presentation showing the differential salience of the main perceptual and evaluative components of the groups' subjective image. The bars of the graph represent the main components of the groups' self-image. On this graph, the outlined bars show the relative salience of the perceptions and attitudes of the pretreatment drug abuser group; the shaded bars show the salience of these same perceptual and attitudinal components for the posttreatment drug-free group. This technique of visual presentation is used as a quick comparison of the identification of main similarities and differences. On select clusters where the differences appear sizable, the actual reactions of the groups are listed in detail. Several analytic measures have been applied to gauge cognitive organization along such main dimensions as perceptions, priorities, and evaluations.

Subjective Perceptions, Representations. The similarity of subjective views and perceptions of a particular theme for different groups is measured by comparing the distributions of their free associations using Pearson's measure of product-moment correlation. For groups, the reliability of this measure based on split-half comparison over 40 themes was 0.82 (Szalay and Bryson 1973). Perceptual

TABLE 2. *Main components of perception and evaluation of ME by pretreatment and posttreatment samples*

	Percentage of Total Score	
Main Components	PRE	POST
Lonely, confused, hate	35	12
Love, friendship	16	20
Good, kind, loving	14	14
Drugs	10	3
Happy, healthy, strong	2	15
I, myself	5	13
Family, others	4	9
Studious, intelligent	4	3
Appearance, sex	3	1
Individual, person	2	3
Future, working	3	5
Miscellaneous	2	3
Total Scores	969	970

similarity scores also can be computed for each individual with reference to the distributions of free associations characteristic of the groups being compared. For each stimulus word, responses that differentiated the groups (e.g., drug users and nonusers) are identified. Each such response is scored +1 if it is more characteristic of one group (e.g., nonusers) or -1 if it is more characteristic of the other group (e.g., drug users). In this manner, individual perceptual similarity scores are calculated for all respondents. Discriminant function analysis of this variable correctly identified 88 percent of the respondents (n = 400) in one study as frequent drug users or nonusers (canonical correlation (can. corr.) =.78, chi-square = 376.7, $p < .000$).

Subjective Priorities, Importance. In a person's subjective representation of the world, some subjects, issues, and ideas play more important roles than others. Drugs may be dominant in the lives of drug users but not of nonusers. The importance or dominance of a particular stimulus theme to a particular person or group is inferred from the number of responses offered in the association task. The dominance scores calculated both on an individual and group basis are analogous to Noble's (1952) widely tested measure of "meaningfulness." These scores have been used to measure differences between groups in their subjective priorities, as well as to trace changes in priorities over time. The reliability of the group dominance score (r = 0.93) was measured by test-

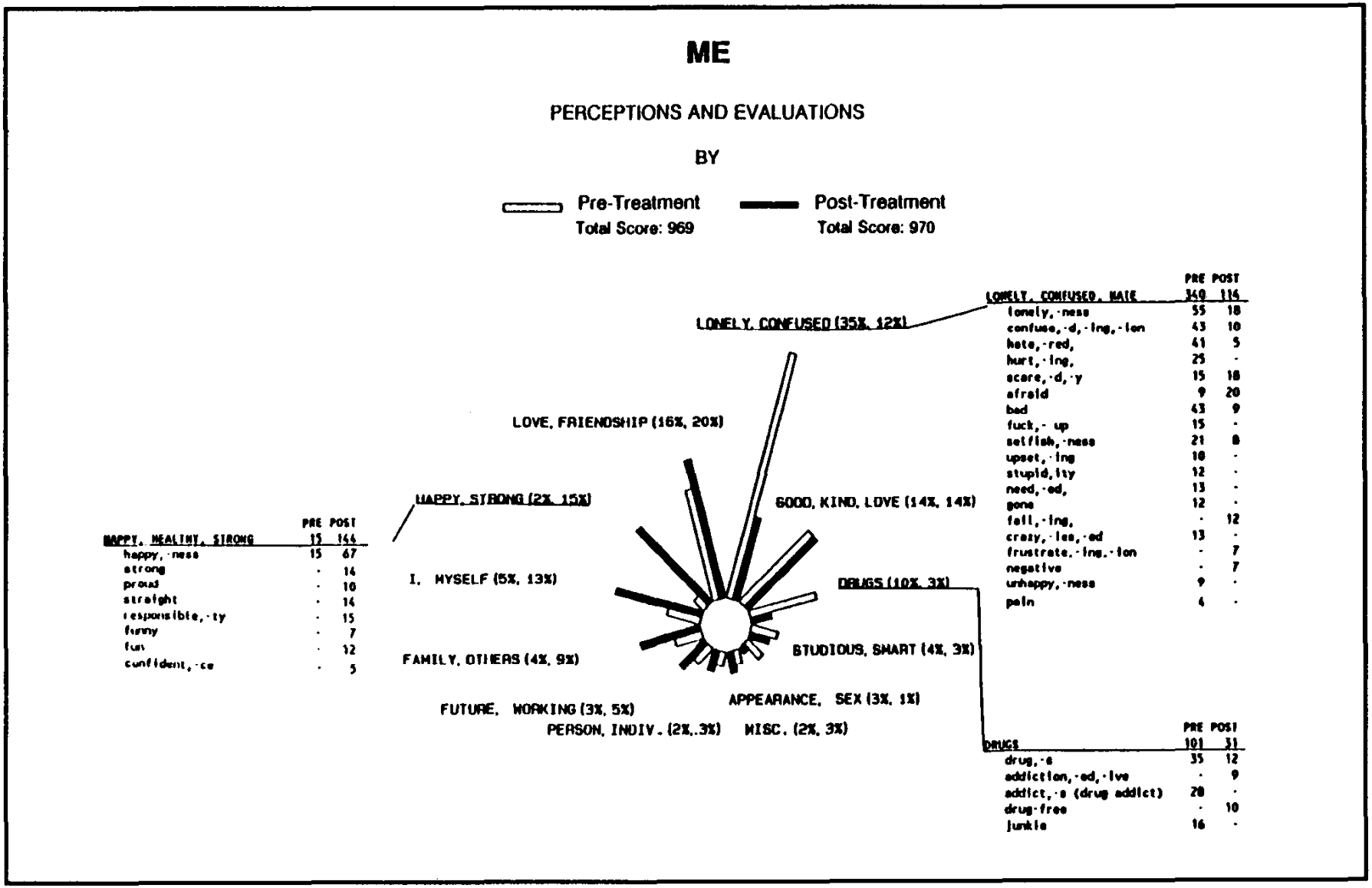


FIGURE 1. *Perceptions and evaluations of ME*

retest comparison (Szalay and Bryson 1973). Individual dominance scores are computed as the number of responses given to each stimulus theme. Discriminant function analysis of this measure correctly identified 64 percent of the respondents in one study as frequent users or nonusers (can. corr. = .33, chi-square = 45.7, $p < .005$). A dominance similarity score, calculated on the basis of discriminant function coefficients for the individual dominance scores, shows whether a person belongs more to one group or another (e.g., a user or nonuser group or a pretreatment or posttreatment group).

Subjective Affects, Evaluations. Perception of the environment is loaded with positive and negative evaluations and affects. Certain elements are seen as desirable and attractive and others as aversive and harmful. Evaluations and affect-loading are terms that are closely synonymous with attitudes, the most widely researched subject area of psychology. As extensive research has demonstrated, affects—positive versus negative evaluations—are important psychological variables. One of the ways to reconstruct how a person or group evaluates a particular stimulus theme is to calculate the predominance of positive versus negative responses to it. The Evaluative Dominance Indices, calculated on the basis of positive versus negative reactions, produce very high positive correlations of 0.88 to 0.91 with independent attitude measures (e.g., semantic differential) (Szalay et al. 1970).

Evaluative scores also can be calculated on an individual basis. The list of responses to all the stimulus words are reviewed by two judges. The two judges rate each response word in terms of its positive or negative affect (interjudge correlation coefficient = 0.95, $p < .001$). The ratings of the two judges are averaged and subsequently used to infer the evaluation of each stimulus theme by each subject. For each subject, the evaluation of each stimulus theme is computed by averaging the judges' evaluation of the response words. Discriminant function analysis of this measure has correctly identified 69 percent of the respondents in one study as frequent drug users or nonusers (can. corr. = .46, chi-square = 90.9, $p < .000$). An evaluative similarity score, calculated on the basis of discriminant function coefficients for the individual evaluative scores, shows whether a person belongs more to one group or another (e.g., to a user or nonuser group or to a pretreatment or posttreatment group).

RESULTS: PROGRAM EFFECTS, IDENTIFICATION OF THE REHABILITATED

The following results show differences/changes in perceptions or subjective representations of pretreatment and posttreatment clients measured in selected domains of life and in their overall systems of representation.

Program Effects Measured in Selected Domains of Life

Results are presented on perceptions and attitudes in the domains of *SELF/FRIENDS* and *PROBLEMS.*

Self/Friends. The following general observations are based on the analysis of the themes *I AM* and *FRIENDS* shown in figures 2 and 3. Perceptions in this domain provide a measure of the self-esteem and confidence of the treatment groups. The pretreatment group reveals a very low level of satisfaction with themselves, while the posttreatment group expresses much more confidence and self-worth. These self-perceptions are reflected in their opinion of friends and friendship. The pretreatment clients have a deeper sense of loneliness than the posttreatment clients. They mention the absence of friends in their lives. They are preoccupied with negative aspects of both themselves and their friends, such as *hurting, hate,* and *badness*. They also link themselves and their friends more to drugs and addiction. They have low self-esteem, and they have very mixed feelings about friends.

The posttreatment clients have more faith and confidence in themselves and in friends. They are happier with themselves and with their friends. They see themselves and their friends as more caring and loving, honest, and trustworthy. They have been helped by their friends and see them as supportive. The friendships experienced in the TC seem to have had a very positive effect on the clients' self-esteem and on their ability to trust and rely on others.

Problems. Similarly consistent trends emerged across themes used in the representation of this domain. Two are presented here: *PROBLEMS* (figure 4) and *WORRIES* (figure 5). The two groups again show differences in self-esteem. The pretreatment group has much lower self-image and is focused on internal personal problems; the posttreatment group has more self-confidence and is more externally oriented.

In the context of *PROBLEMS, WORRIES,* and *LONELINESS,* the pretreatment clients refer to themselves more frequently than the posttreatment clients, revealing that they have a more negative self-image and are more conscious of having emotional problems. They also tend to view personal and familial relationships as a predominant problem.

The posttreatment clients are more outwardly oriented. They show more apprehension about money and success. Anticipating their departure from the TC, they are concerned with work, jobs, and school. It seems that these clients have come to better terms with themselves and have greater confidence in their ability to find solutions to problems as they move back into the world. After treatment they also show more

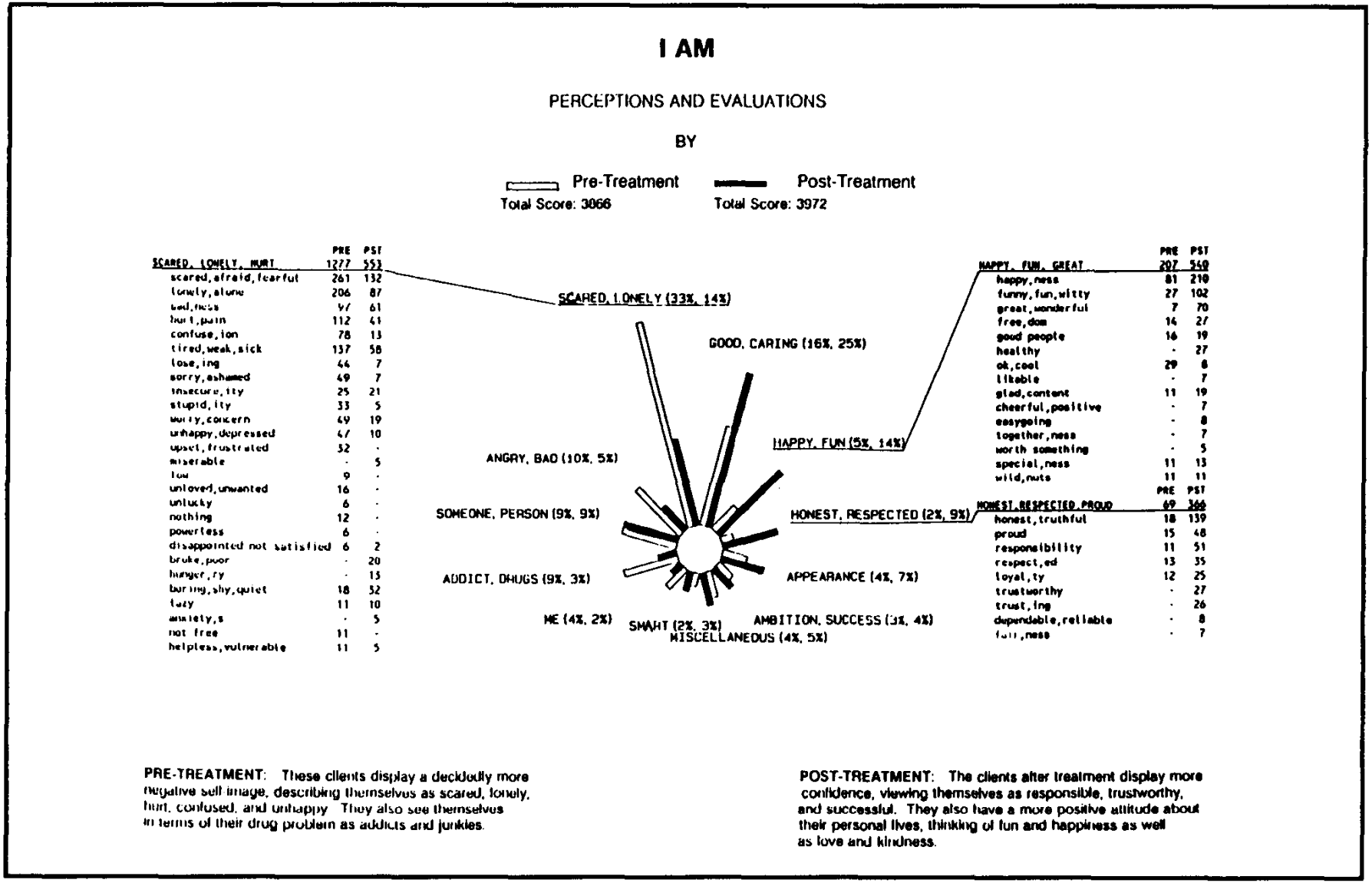
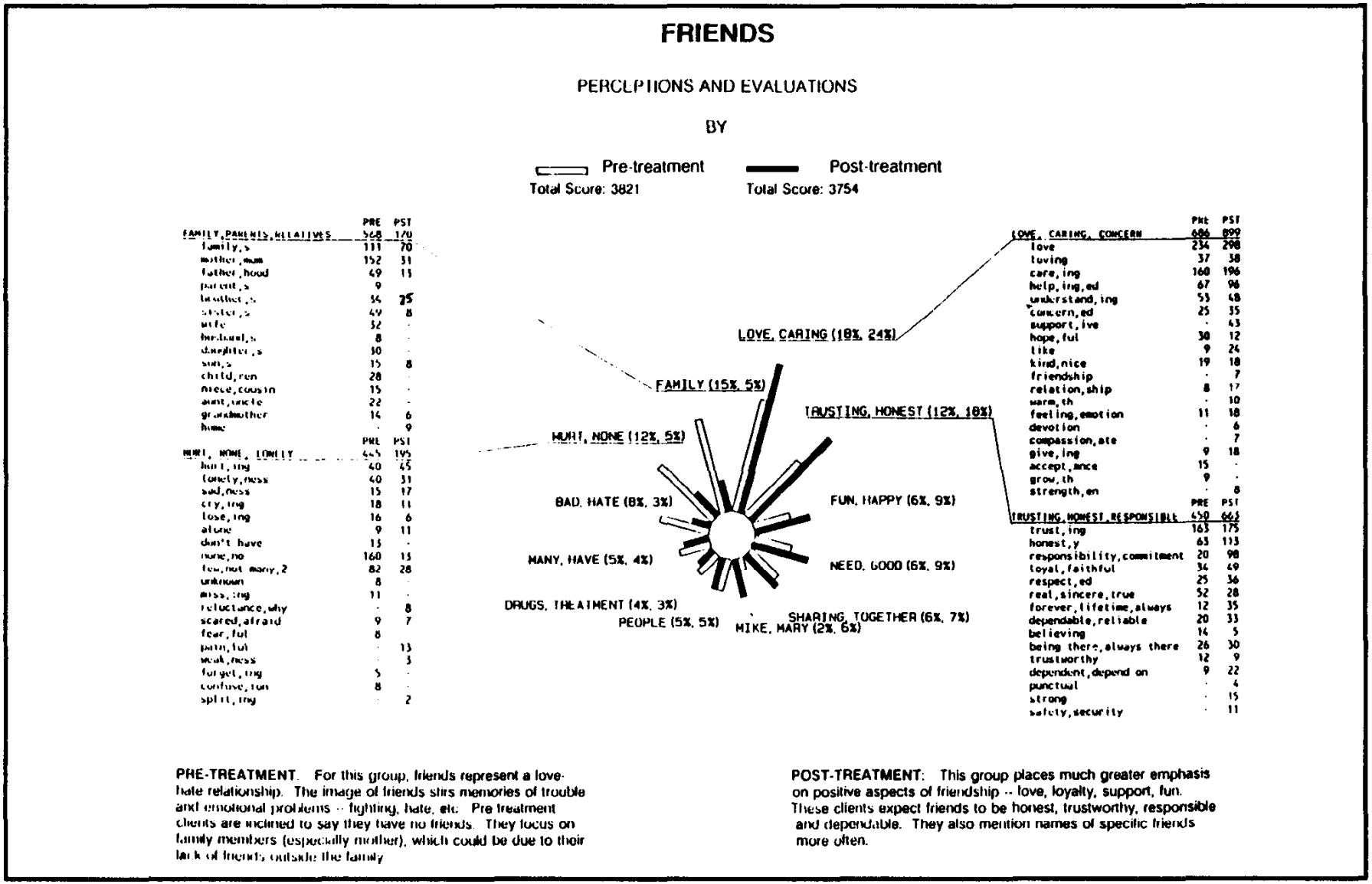


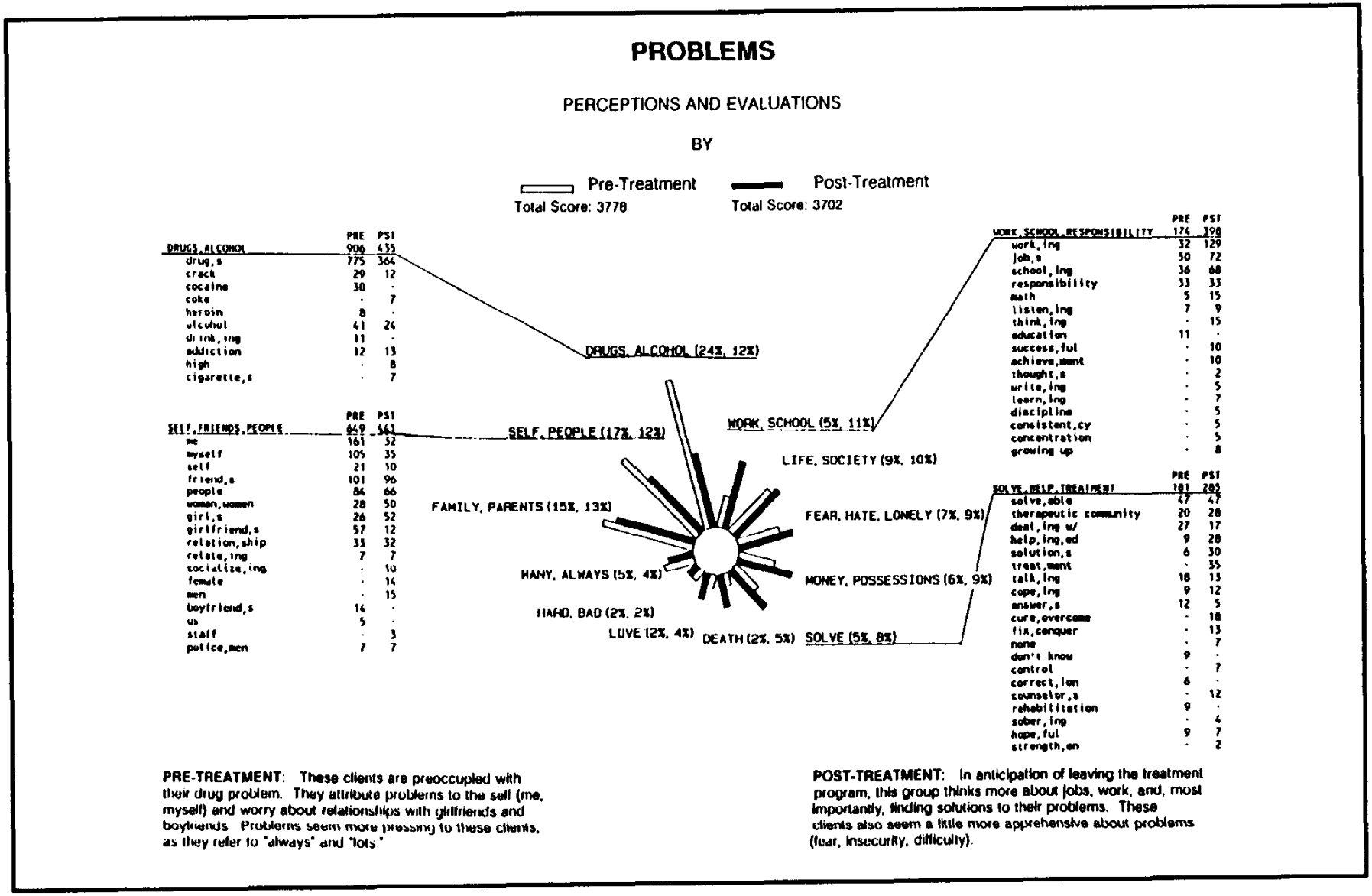
FIGURE 2. *Perceptions and evaluations of I AM*



FAMILY, PARENTS, RELATIVES	PRE 568	PST 170
family, s	111	70
mother, mom	152	31
father, hood	49	11
parent, s	9	
brother, s	54	25
sister, s	49	8
wife	52	-
husband, s	8	-
daughter, s	30	-
son, s	15	8
child, ren	28	-
niece, cousin	15	-
aunt, uncle	22	-
grandmother	14	6
home	-	9
HURT, NONE, LONELY	**PRE 445**	**PST 195**
hurt, ing	40	45
lonely, ness	40	31
sad, ness	15	17
cry, ing	18	11
lose, ing	16	6
alone	9	11
don't have	13	-
none, no	160	15
few, not many, 2	82	28
unknown	8	-
miss, ing	11	-
reluctance, shy	-	8
scared, afraid	9	7
fear, ful	8	
pain, ful	-	13
weak, ness	-	3
forget, ing	5	-
confuse, ion	8	-
split, ing	-	2

LOVE, CARING, CONCERN	PRE 686	PST 899
love	234	298
loving	37	38
care, ing	160	196
help, ing, ed	67	96
understand, ing	53	48
concern, ed	25	35
support, ive	-	43
hope, ful	30	12
like	9	24
kind, nice	19	18
friendship	-	7
relation, ship	8	17
warm, th	-	10
feeling, emotion	11	18
devotion	-	6
compassion, ate	-	7
give, ing	9	18
accept, ance	15	-
grow, th	9	-
strength, en	-	8
TRUSTING, HONEST, RESPONSIBLE	**PRE 450**	**PST 663**
trust, ing	163	175
honest, y	63	113
responsibility, commitment	20	98
loyal, faithful	34	49
respect, ed	25	36
real, sincere, true	52	28
forever, lifetime, always	12	35
dependable, reliable	20	33
believing	14	5
being there, always there	26	30
trustworthy	12	9
dependent, depend on	9	22
punctual	-	4
strong	-	15
safety, security	-	11

FIGURE 3. *Perceptions and evaluations of FRIENDS*



DRUGS, ALCOHOL	PRE	PST
	906	435
drug,s	775	364
crack	29	12
cocaine	30	-
coke	-	7
heroin	8	-
alcohol	41	24
drink,ing	11	-
addiction	12	13
high	-	8
cigarette,s	-	7

SELF, FRIENDS, PEOPLE	PRE	PST
	649	561
me	161	32
myself	105	35
self	21	10
friend,s	101	96
people	84	66
woman,women	28	50
girl,s	26	52
girlfriend,s	57	12
relation,ship	33	32
relate,ing	7	7
socialize,ing	-	10
female	-	14
men	-	15
boyfriend,s	14	-
us	5	-
staff	-	3
police,men	7	7

WORK, SCHOOL, RESPONSIBILITY	PRE	PST
	174	398
work,ing	32	129
job,s	50	72
school,ing	36	68
responsibility	33	33
math	5	15
listen,ing	7	9
think,ing	-	15
education	11	-
success,ful	-	10
achieve,ment	-	10
thought,s	-	2
write,ing	-	5
learn,ing	-	7
discipline	-	5
consistent,cy	-	5
concentration	-	5
growing up	-	8

SOLVE, HELP, TREATMENT	PRE	PST
	181	285
solve,able	47	47
therapeutic community	20	28
deal,ing w/	27	17
help,ing,ed	9	28
solution,s	6	30
treat,ment	-	35
talk,ing	18	13
cope,ing	9	12
answer,s	12	5
cure,overcome	-	18
fix,conquer	-	13
none	-	7
don't know	9	-
control	-	7
correct,ion	6	-
counselor,s	-	12
rehabilitation	9	-
sober,ing	-	4
hope,ful	9	7
strength,en	-	2

FIGURE 4. *Perceptions and evaluations of PROBLEMS*

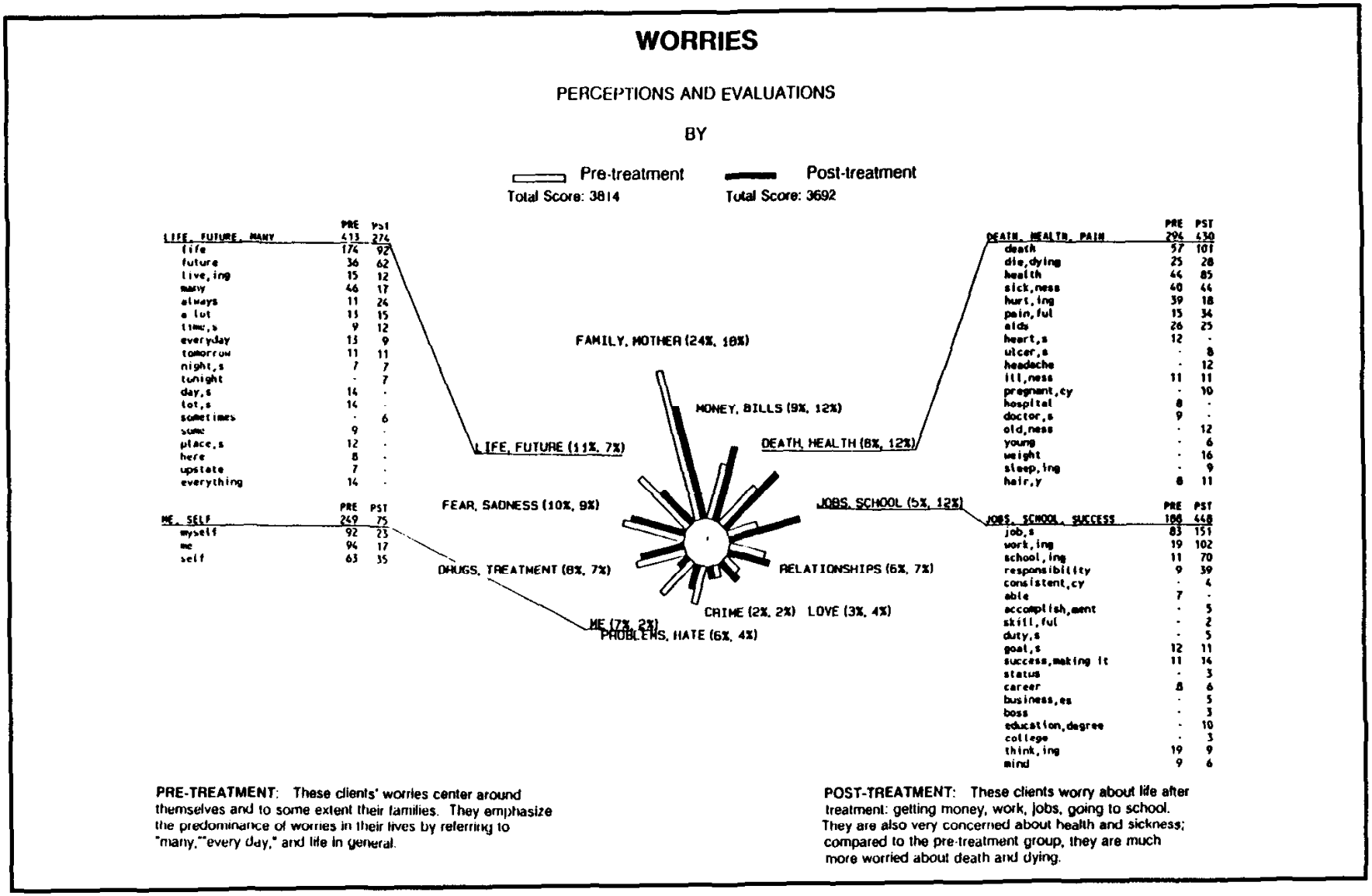
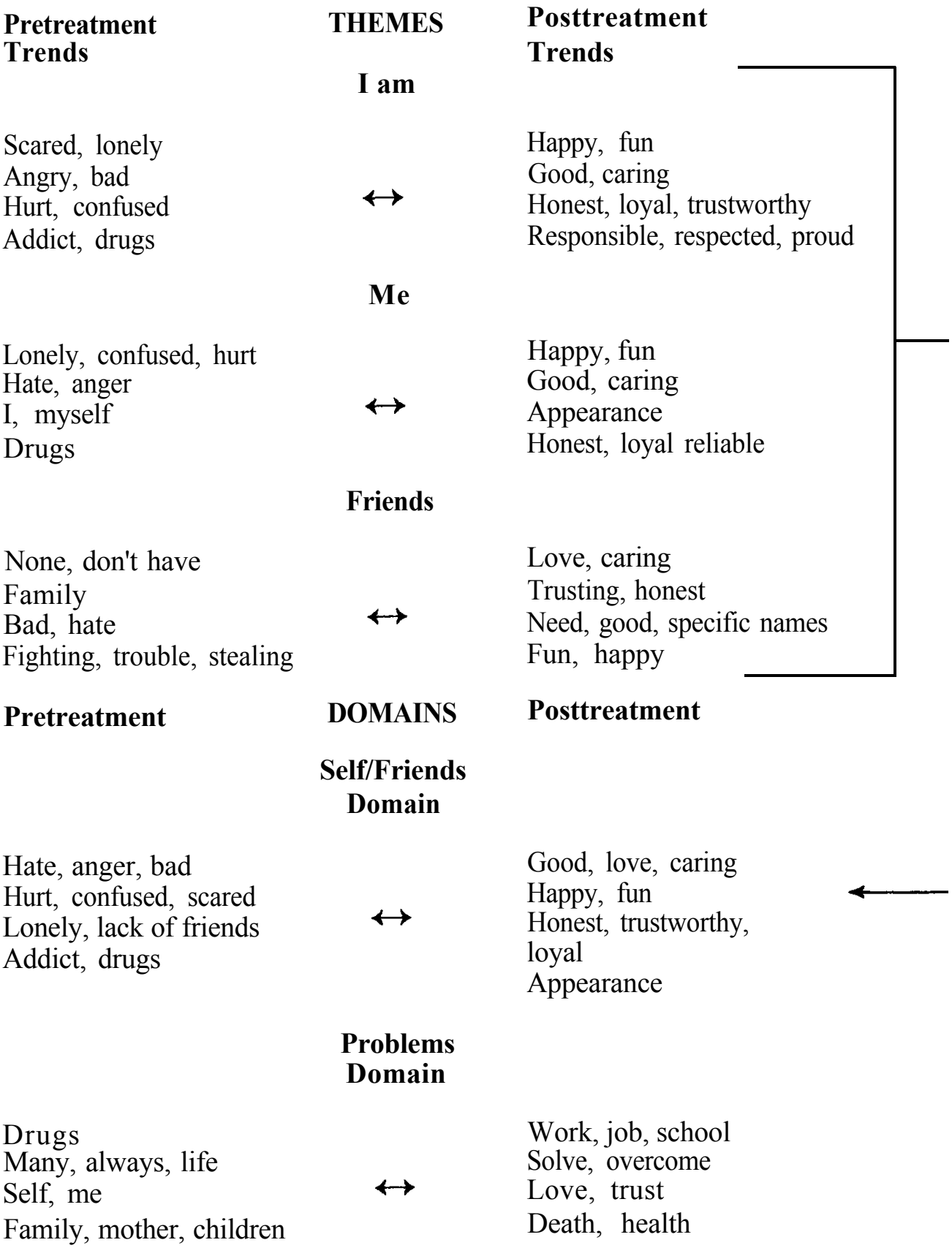


FIGURE 5. *Perceptions and evaluations of WORRIES*

FIGURE 6. *Dominant trends of perceptions and evaluations differentiating pretreatment and posttreatment clients*



sensitivity to pain and hurt, health, and illness, particularly the idea of death.

The results obtained in these domains have shown several characteristic differences between pretreatment addicts and rehabilitated clients who have reached a stable drug-free status. Figure 6 illustrates trends or perceptions and evaluations that set the rehabilitated posttreatment group apart from the pretreatment addicts.

In general, the results show changes in clients' subjective views and in their systems of mental representation in important domains related to drug abuse. At the same time, the findings offer a host of partially contrasting perceptual and evaluative dimensions to trace client progress in domains related to drug use and program success.

Perceptual and Attitudinal Trends Differentiating Drug Users and Nonusers

The comparison of pretreatment and posttreatment client samples revealed marked differences in their views and attitudes, which are explicable largely by the effects of the treatment process and by the influences of the treatment environment. The nature and consistency of these differences lead to the question: Can such differences be identified between drug users and nonusers as well?

Extensive comparative studies conducted with elementary to college-level students across the country allow the author to answer this question conclusively and affirmatively. To illustrate such differences, the next section compares user and nonuser college students on their image of *MARIJUANA* (figure 7) and on their image of *DRUGS* (figure 8).

Again, studies found highly consistent trends across several themes *(MARIJUANA, DRUGS, GETTING HIGH,* and *ALCOHOL),* showing that the users consistently pay more attention to the fun and entertainment value and the high and euphoric effects of these substances. They show more awareness of altered states of mind. The users are more familiar with types and brands of drugs and alcohol, and they tend to make more references to hard drugs and hard liquors. They do not pay such close attention to the harm or health hazards of addiction; in general, they have much more positive attitudes toward drugs, alcohol, and addiction. In addition, there is a stronger association between the use of harmful substances and sex. The nonusers, on the other hand, show more awareness about and concern with the lawfulness and addictive nature of drugs. They emphasize danger, death, and killing, and they show more negative attitudes and categorical rejection. The nonusers focus on drugs and alcohol in general terms rather than on specific types or varieties; they are less familiar with slang terms. They also have a stronger

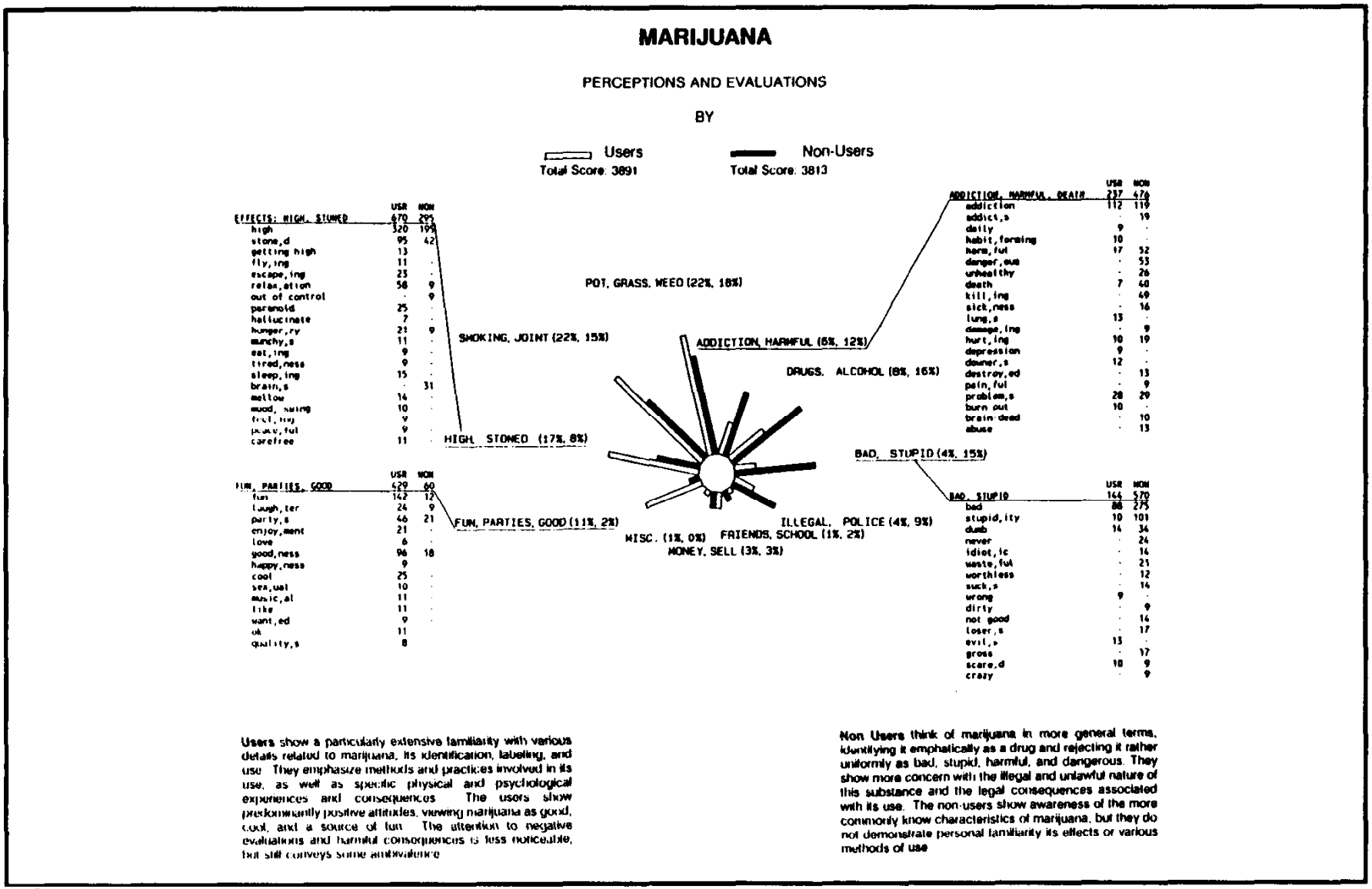


FIGURE 7. *Perceptions and evaluations of MARIJUANA*

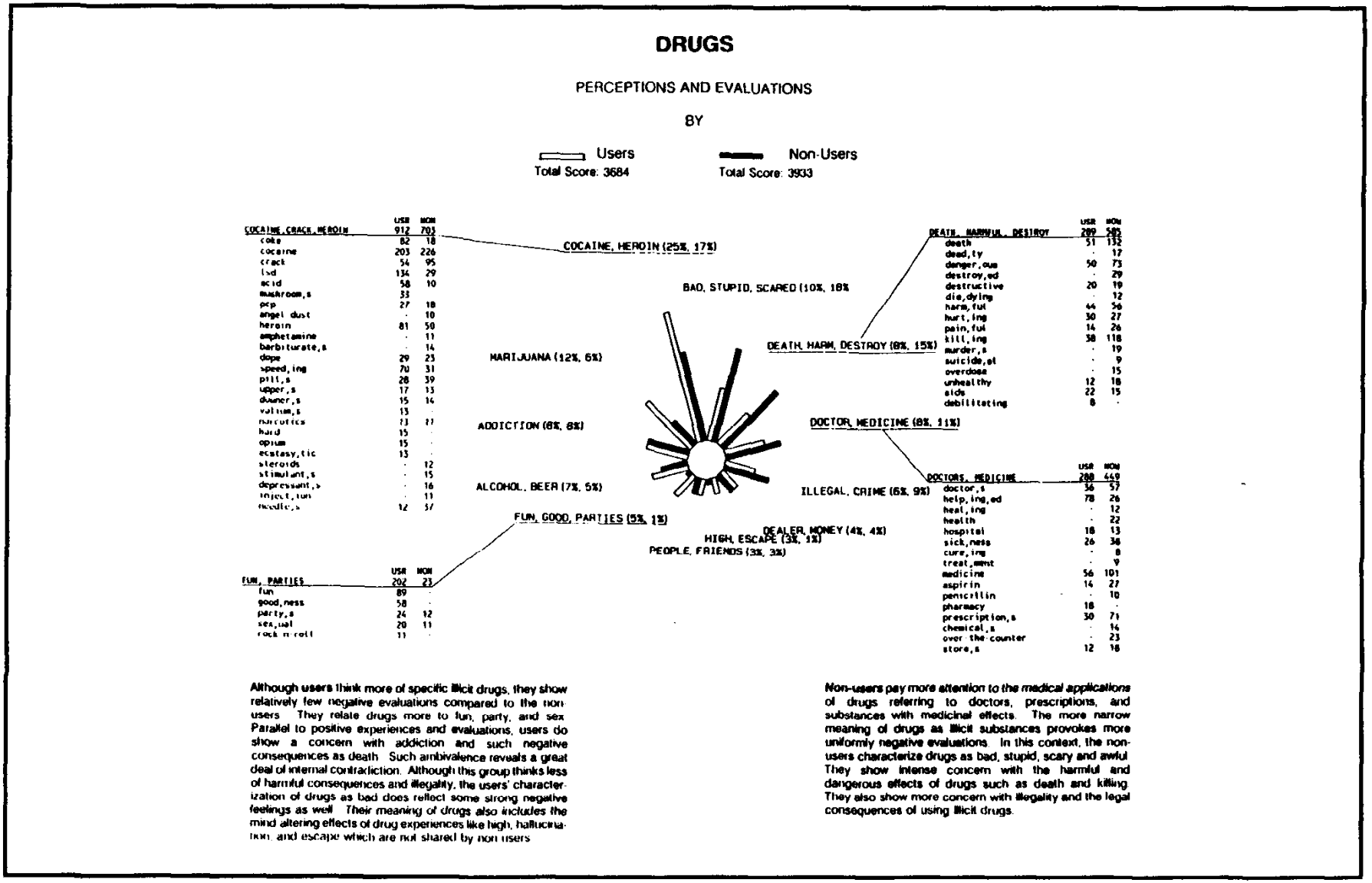


FIGURE 8. *Perceptions and evaluations of DRUGS*

identification with marijuana as a drug. These differences between drug users and nonusers are not limited to the perception of drugs; they involve several other domains, ranging from self-image to the view of the social environment.

Testing the Use of Perceptual/Representational Data to Identify Changes in Behavior

Finally, it is of interest to examine how useful the perceptual/evaluative information obtained through the AGA is in differentiating people with different behavior. How successfully can it differentiate those who have completed the treatment program and have maintained a drug-free status for several months from the addicts who have just started treatment? To answer this question, one may rely on the three AGA measures to assess the system of cognitive behavioral organization along three of its main dimensions.

1. To chart changes in priorities reflected by differences in the subjective importance or meaningfulness of the themes examined, dominance scores were calculated based on the number of responses to each theme produced by each respondent in both the pretreatment and posttreatment groups.

2. To assess changes in the perceptual dimension of subjective meanings, individual perceptual similarity scores were calculated. These scores show the correspondence between the client's responses to each theme and the response distributions of pretreatment and posttreatment groups across all 40 themes.

3. To measure changes in the dimension of attitudes or evaluations, the differences between pretreatment and posttreatment individual evaluative scores were calculated based on the evaluation scores obtained for each of the 40 themes.

The individual scores were analyzed for their potential to accurately identify whether respondents belonged to the pretreatment or the posttreatment group. Discriminant function analyses of the three types of scores based on 40 themes were used to show the percentage of cases correctly classified: 87 percent based on the perceptual measure (can. corr. = 0.75, chi-square = 327.3, degrees of freedom (DF) = 1, $p < .000$); 75 percent based on the dominance measure (can. corr. = .56, chi-square = 140.4, DF = 40, $p < .000$); and 77 percent based on the evaluative measure (can. corr. = 0.62, chi-square = 187.6, DF = 40, $p < .000$). The accuracy of identification shows a high correspondence between AGA-based perceptual/attitudinal information and behavior: pretreatment drug dependence versus posttreatment drug-free status.

Results based on the individual perceptual similarity measure are presented in figure 9. Discriminant analysis was used on this one variable (based on responses to 40 themes) for convenience in showing the percentage correctly classified, and a histogram was created in a format comparable to the results presented in figure 10. So far, this variable has shown the strongest relationship to behavior. Since the results in figure 9 are based on within-group comparisons for which the individual subjects may have contributed to the norms used in the evaluation, a second test split the pretreatment and posttreatment samples and measured perceptual similarity across independent samples. Under these conditions, the correlations between perceptual similarity and pre/post status dropped from 0.85 to 0.66, still a very strong relationship. Correct classification dropped from 94 percent to 80 percent, again still high. Since these figures are based on 200 subjects, it is difficult to compare them directly with the correlation of 0.75 and 87-percent correct classification obtained for the sample of 400. However, these figures are higher than the cross-group results based on 100 respondents and lower than the within-group results based on 100 respondents.

Discriminant function analysis also was used to assess the accuracy of the identification of drug users versus nonusers based on dominance, perceptual similarity (cross-group), and evaluative scores generated from the responses of 400 college students in the context of 24 themes. Results based on all three measures combined are presented in figure 10. The percentage of cases correctly identified by discriminant function analysis was 77 percent based on the criterion of self-report.

Essential Characteristics of the Method and Their Relevance to TCs

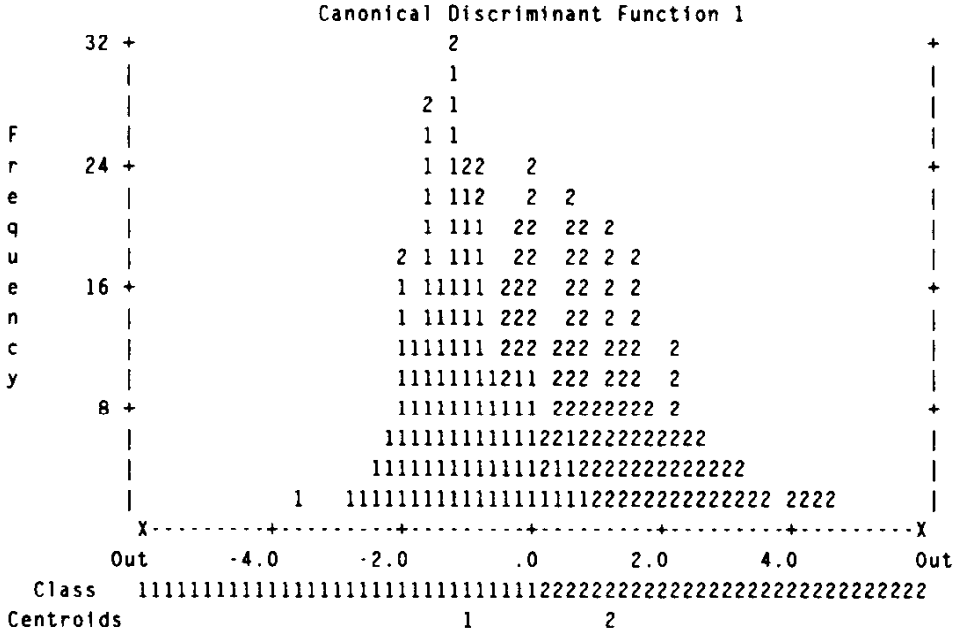
TCs represent a treatment modality that places a strong emphasis on the resocialization of clients. TCs use the power of social influences—the internal dynamics of close community settings where the clients live together and share their problems over many months and even years. These social forces and dynamics are directed by the treatment process toward helping clients overcome the debilitating effects of their chemical dependencies. TCs help to develop a new outlook on life that is conducive to coping with the problems of life and to developing a drug-free lifestyle.

The results of this investigation offer new empirical evidence on the depth and nature of perceptual and attitudinal dispositions and changes in dynamic client variables that make a critical difference in influencing the outcome of the treatment process. The results show the effectiveness of the AGA to assess client variables systematically along three major dimensions of cognitive/behavioral organization: priorities, perceptions, and attitudes that reflect the impact of treatment. The extent and nature

Fcn.	Eigenvalue	Pct. of Variance	Cum. Pct.	Can. Corr.	After Fcn.	Wilks' Lambda	Chi-square	DF	Sig.
					0	.4389	327.320	1	.0000
1*	1.2783	100.00	100.00	.7491					

* Marks the 1 canonical discriminant functions remaining in the analysis.

All-Groups Stacked Histogram



Symbols Used in Plots

Symbol	Group	Label
1	1	Pretreatment clients
2	2	Posttreatment clients

Classification Results

Actual Group	No. of Cases	Predicted Group Membership 1	2
Group 1	200	184	16
Pretreatment		92.0%	8.0%
Group 2	200	37	163
Posttreatment		18.5%	81.5%

Percentage of grouped cases correctly classified: 86.75%

KEY: Fcn. = function; Cum. Pct. = cumulative percent; After Fcn. = after function; DF = degrees of freedom; Sig. = significance

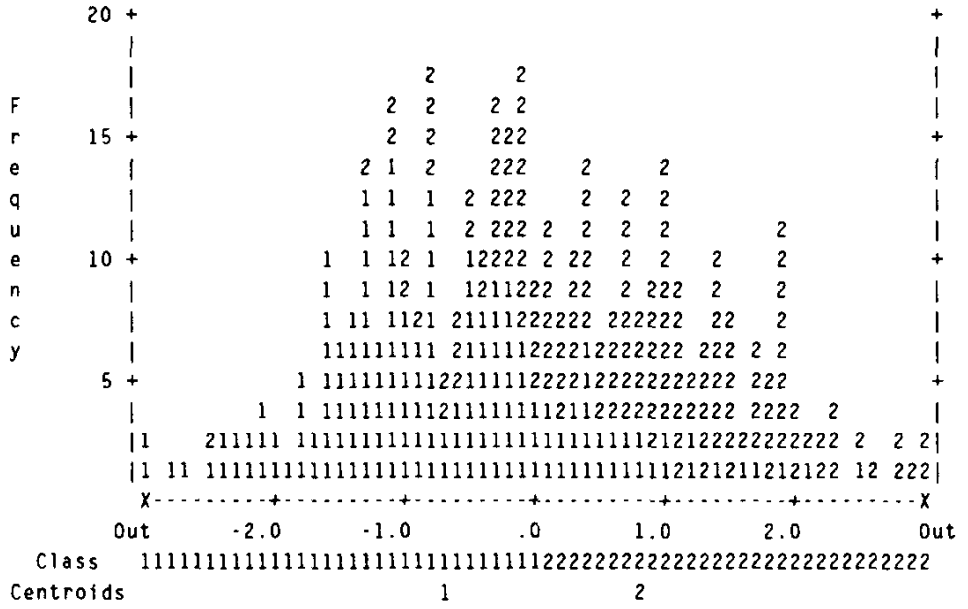
FIGURE 9. *Identification of client status based on perceptual similarity*

Fcn.	Eigenvalue	Pct. of Variance	Cum. Pct.	Can. Corr.	After Fcn.	Wilks' Lambda	Chi-square	DF	Sig.
				:	0	.6349	169.679	49	.0000
1*	.5751	100.00	100.00	.6042	:				

* Marks the 1 canonical discriminant functions remaining in the analysis.

All-Groups Stacked Histogram

Canonical Discriminant Function 1



Symbols Used in Plots

Symbol	Group	Label
1	1	Frequent Drug Users
2	2	Nonusers

Classification Results

Actual Group		No. of Cases	Predicted Group Membership 1	2
Group	1	200	161	39
Users			80.5%	19.5%
Group	2	200	52	148
Nonusers			26.0%	74.0%

Percentage of grouped cases correctly classified: 77.25%

KEY: Fcn. = function; Cum. Pct. = cumulative percent; After Fcn. = after function; DF = degrees of freedom; Sig. = significance

FIGURE 10. *Identification of drug users and nonusers based on perceptions, evaluations, and dominance*

of changes indicate the client's progress from perceptions and attitudes characteristic of drug addicts toward perceptions and attitudes characteristic of those who have reached a drug-free status more or less permanently. The results provide valuable insights into the resocialization process through access to highly subjective perceptual and motivational variables, where changes occur mostly below the level of the client's conscious awareness and are almost inaccessible through direct techniques that use questions and scales.

The investigations offer new empirical evidence of a close relationship between drug abuse and psychological makeup (i.e., the dominant perceptions and attitudes of the drug abuser). They demonstrate the importance of the socialization process as a natural means of achieving the desired changes. The investigations show that changes in relevant perceptions and attitudes correlate significantly with changes in drug dependence. The demonstration of this relationship is of special relevance to the TC model, which works toward such changes by using resocialization as the main focus of the treatment process. By showing the close relationship between psychological dispositions and drug dependence, it becomes possible to test to what extent resocialization of the addict is necessary for successful rehabilitation.

Three Major Fields of Practical Applications

Identification of Critical Treatment Variables. The author's investigations have identified five or six main dimensions, such as self-image and relationship to others, that are significantly related to treatment success. There are indications that this may be a somewhat incomplete list, but it does provide a solid foundation for practical use. By testing additional pretreatment addicts and clients who have successfully reached drug-free status after completing a full treatment cycle, the AGA method offers a promising analytic tool for obtaining group profiles on relevant pretreatment and posttreatment populations. These population norms and profiles provide opportunities to gain insights into the effects of various treatment strategies, treatment modalities, environmental conditions, gender, and ethnicity on the success of the treatment process. The psychosocial parameters of the treatment process that have been recognized as important are made more accessible through investigations that rely on the AGA in tracing the relevant variables.

Monitoring Treatment Progress of Individual Clients. By administering an instrument developed for this task to diagnose individual clients, progress toward response norms developed from successfully treated drug-free clients can be systematically assessed along relevant dimensions such as self-image, relationship to family and friends, and perception of harmful substances. The diagnostic profile that emerges from such an assessment can be used to show a particular

client's overall position in the process toward the final goal of stable drug-free status. The diagnostic profile also offers information on treatment progress achieved by the client along the main dimensions that are critical to program success. Dynamic client variables, particularly perceptions, have been identified by recent findings as most promising in predicting retention and treatment success (Condelli and De Leon 1993; De Leon 1991).

Therapy and Counseling of Clients. In addition to extending the field of quantification to client variables that had been beyond the reach of more structured instruments, the AGA method produces rich empirical insights into perceptual and motivational dispositions that are valuable in therapy and counseling. These insights show how individual clients or their cohort perceive and evaluate problems and determine their subjective construction of reality. Sterman (1991), for example, spoke of the task involved in reducing the distance between the client's private meanings in his or her own representational system and the public meanings in his or her external world. This type of information is relevant to clinicians and counselors working along the models of logotherapy (Frankl 1962), cognitive behavior therapy (Beck 1976), rational-emotive therapy (Ellis 1962; Ellis and Murphy 1975), and neurolinguistic programming (Bandler and Grinder 1982). The AGA-based information helps the counselor or therapist to approach the subjective world of the client and reframe the client's subjective world as necessary to promote the desired behavioral change or outcome.

Much of the strength of the AGA method lies in its intrinsic characteristics as a nondirective, inferential approach and nontransparent strategy in assessing perceptions and motivations without asking direct questions. The AGA's potential to reveal dominant dispositions of which the clients themselves are frequently unaware underscores its value in application to process evaluation in TCs.

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