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# SITUATIONAL AND TRAIT AFFILIATIVENESS AS RELATED TO INPATIENT GROUP PSYCHOTHERAPY OUTCOME

By

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## ABSTRACT

### SITUATIONAL AND TRAIT AFFILIATIVENESS AS RELATED TO INPATIENT GROUP PSYCHOTHERAPY OUTCOME

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Group psychotherapy, a treatment modality widely used with psychiatric inpatients, has been studied extensively. any questions remain, however, regarding what benefits will be experienced by which kinds of patients and under what conditions. Widely regarded as vital to group psychotherapy's outcome, group cohesiveness has been criticized as being defined too vaguely and ungrounded in psychological theory. Affiliation, one of the two principal dimensions of interpersonal theories of personality, has been advanced to more satisfactorily account for the outcomes attributed to group cohesiveness. The present study examined the relevance of affiliativeness to an intensive group psychotherapy program at the Battle Creek, Michigan, Veterans Administration Medical Center.

Composed of volunteers from admissions during a six-month period, 67 male veterans--heterogeneous in age and race--presenting a wide variety of psychiatric diagnoses were assigned to this three week, 54-hour group program and pretested on selected measures of symptoms, moods, and thoughts. They also completed Millon's Clinical Multiaxial Inventory and a brief personal affiliativeness scale. Within their psychotherapy group, each rated the

affiliativeness of that group's emotional climate twice weekly. After finishing this group program, 34 patients were readministered the pretreatment measures plus a questionnaire addressing their small group's environment. Although similar to these finishers by most measures at pretreatment, the 33 other patients were unavailable for posttesting.

The posttest finishers registered lessened disorder by 24 of 26 pertinent measures, shifting significantly ($p < .05$, one-tailed test) on 10 of 12 symptom indices, on 3 of 6 mood measures, and on 2 of 8 cognitive scales. Many of these measures proved related with diminished depression the salient finding. Individuals' perceptions of their therapy group's affiliativeness correlated positively and significantly with reductions in depression, global symptoms, and anger. Those who earlier described their personality style as more affiliative than disaffiliative also tended to have greater symptom reduction. Generally modest and sometimes nonsignificant correlations among three affiliativeness measures indicated that this construct has divergent facets. The findings clearly supported affiliativeness as an important, and perhaps the salient, construct associated with group psychotherapy outcomes.

**For My Family: Mom, Dad, Robert, & Michael**

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# INTRODUCTION

Group psychotherapy is a widely used treatment modality among psychiatric inpatients (Butler & Fuhriman, 1986). In determining what effects these treatments have on behavior, theorists (Carson, 1979; Endler & Magnusson, 1976) argue that behavior is a joint product of situational and dispositional factors. Consequently, the way individuals perceive their social atmosphere seems very likely to be related to their obtained satisfaction within a social milieu (e.g., their experience within a psychotherapy group). The individual's personality structure also seems likely to influence perceptions of both group atmosphere and outcome. The present study was designed to partially identify the variables which psychiatric patients perceived to be salient within inpatient psychotherapy groups and the links of these variables to important features of the patients' personality.

## The Marathon Group Psychotherapy Program

The psychotherapy groups examined were the salient feature of an existing intensive group therapy program for psychiatric inpatients at the Battle Creek, Michigan, Veterans Administration Medical Center. Unique to this facility, this group therapy program had been functioning for over 15 years. These groups were composed of

approximately 12 patients, almost all men, who attended group therapy for four hours per day Monday-Thursday and two hours on Friday for a total period of three weeks. The group met for two 50-minutes sessions in the morning and afternoon interrupted only by a 10-minute smoke break between sessions as well as a one-hour lunch break. This provided approximately 54 hours of group contact. Because approximately one-third of the group was discharged each Friday and about four new members were added the following Monday, group membership was constantly changing.

Four different experienced PhD level psychologists (all men), each bringing their own therapeutic orientation and style, rotated hourly as group leaders. The groups never met unless a psychologist was present to facilitate the session. If the psychologist was unable attend, that hour would be cancelled. Two of these psychologist's orientation was psychodynamic, one was primarily existential/humanistic, and the fourth's approach was cognitive/behavioral. Each psychologist, although different in personality and theoretical orientation, was a motivated therapist and demonstrated commitment to the groups and patients. In addition, considering they all had much experience facilitating this group program each carried a significant degree of comfort and confidence in their therapeutic approach. Although the psychologists met for a weekly meeting to discuss termination reports for discharged group members, they operated independently of each other and

little discussion took place concerning the on-going therapy groups.

Rules for the group included confidentiality and the reporting of suspected child or elderly abuse as well as serious suicidal or homicidal thoughts. Patients were also expected to be on-time or bring a written excuse. Attendance was recorded at the start of each 50-minute session. Group members were almost always punctual for the sessions and would rarely leave once the group began. Occasionally a patient would have another medical or personal appointment and would miss a session or leave early. All participation was voluntary and overall level of psychological functioning was the main selection factor, with the higher functioning admittees routinely assigned to this program.

Group sessions were largely unstructured and the conversations were generally directed by the patients. Level of participation and intensity varied from session to session. Topics ranged from "small talk" to highly emotionally charged interactions. The majority of concerns discussed focused on alcohol and drug abuse, relationships, and post-traumatic war symptoms. Group sessions typically featured one patient discussing his current problems while the other patients listened. Group members occasionally interacted, but this varied in amount depending on the group's composition. Newer patients generally sat quietly, sometimes drifting into medication-induced dozes during group

sessions while the more seasoned group members controlled the discussions. Despite this diversity, mental health professionals who observed these sessions typically viewed the patients as engaged and the groups as productive in providing patients a safe place to discuss their concerns.

Bearing a wide variety of psychiatric diagnoses, almost all of these patients also received medications. Although medication may have an effect on the outcome of the group psychotherapy experience (e.g., helping patients to focus and attend more accurately), the psychotherapeutic benefits of medications are too complex a problem to also address satisfactorily in the present work. However, to add pertinent medical information, the patients' current medications was assessed as well as other treatments currently involved in, psychiatric diagnosis, and physical problems.

Group Psychotherapy Outcome

This study's primary goal was to examine the outcome of the group psychotherapy experience in relation to social climate and personality factors. Although the outcomes of other group psychotherapy programs have been studied extensively with generally positive results, many specific questions remain. Frank (1975) noted the dearth of rigorous outcome research in group therapy and emphasized the need for stronger links between research and clinical practice. A brief review of the literature concerning outcomes of group psychotherapy follows.

In a review of 43 controlled studies of group

psychotherapy with schizophrenics, Kanas (1986) concluded that group psychotherapy treatment provided a favorable outcome in 67% of these studies. Also, that 80% of the outpatient studies reported favorable results for patients diagnosed as schizophrenic. These works suggested that the time spent in therapy may be a key issue, as those patients in group therapy for three or more months (representing at least 37 one hour sessions three times per week) attained the most favorable outcomes. In comparing various treatment forms, Beutler and his colleagues (1984) examined 176 psychiatric patients in three separate group programs (process-oriented: emphasized patients' interpersonal roles; expressive- experiential-oriented: created increased awareness of negative affect; and behaviorally oriented: established reinforcement contingencies and developed individualized behavioral programs) and found that the process-oriented program produced the best initial results which were also maintained in a 13 month follow-up study. In a review of group psychotherapy outcome research from 1966-1975, Parloff and Dies (1977) concluded that group psychotherapy was not necessarily a valuable treatment within itself, but was more helpful when accompanied by other resocialization methods occurring within the hospital setting. The effectiveness of group psychotherapy for psychiatric hospital inpatients was also questioned by Kanas and his colleagues (1980). In their study of 231 inpatients, significantly more psychotic patients fared

worse in group psychotherapy than control patients. They concluded that these results suggest that insight-oriented group psychotherapy may not be a beneficial treatment modality during the first three weeks of hospitalization (eight hour long group sessions), especially for psychotic patients. In summary, these several works suggested that, although group psychotherapy has some benefits, questions remain as to what benefits will be experienced by which types of patients and under what conditions.

The present study proposed to assess group therapy outcome by four different kinds of measures. Widely used in psychotherapy outcome research, the Symptom Check List, Revised (SCL-90R) provided a general overview of symptomatology. Addressing cognitive operations by assessing patients' responses to a variety of statements reflecting constructive and destructive modes of thinking, Epstein's (1989) Constructive Thinking Inventory (CTI), was also selected. The CTI yields a global factor (Constructive Thinking) as well as six subfactors including measures of Emotional Coping, Behavioral Coping, Categorical Thinking, Superstitious Thinking, Naive Optimism, and Negative Thinking. Among college students, Epstein (1989) found that the Constructive Thinking scale correlated substantially and positively with independent measures of ego-strength (.55) and, self-esteem (.50), but negatively with indices of neuroticism (-.54), anxiety (-.50), and depression (-.48). The Profile of Mood States (POMS) was also used which

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measures multiple dimensions of affect and has been cited as useful in psychotherapy change studies (Spielberger, 1972). Finally, Luborsky's (1975) Health-Sickness Rating Scale, a therapist's rating of the patient on seven criteria of health and one global rating, was proposed to be used to provide an additional measure of outcome from a different perspective.

The pertinent research literature endorses two methods of measuring changes by such instruments. The first method addresses pre- to posttreatment differences after corrections for possible floor and ceiling effects to yield a residual shift score. Green, Gleser, Stone, and Seifert (1975) have noted that correcting raw differences for the pretreatment scores consistently increased the agreement of change scores with other outcome measures. Because small difference scores may be unreliable, posttreatment scores were used as the second measure to assess outcome. Mintz (1972) found that rated change correlated much higher with the end of treatment rating than with actual raw change scores. From their analysis of final status scores, pretreatment to posttreatment difference scores, and direct ratings of global improvement, Green et al. (1975) concluded that the final status ratings were "the most appropriate method for assessing outcome in psychotherapy (p.698)." Hurley and Rosenberg (1990) found that final status and residual change indicators of small group outcomes correlated substantially for ratings of group leaders on

scales of acceptance of self and others.

Cohesiveness and Social Climate Influences on Outcome

Many studies have addressed connections between group therapy outcomes and the perceived social environment. Yalom (1985) contended that a dozen specific "curative factors" contributed to the success of group psychotherapy. Among these, patients reported that feedback about one's own behavior, catharsis, and group cohesiveness were among the most helpful whereas factors labeled identification, guidance, and family reenactment were viewed as distinctly less important. Moos (1968) earlier identified another set of variables involved in the social climate of psychiatric wards. In his Ward Atmosphere Scale (WAS), 12 subscales differentiated among elements of a treatment milieu. These included spontaneity, support, practicality, affiliation, order, insight, involvement, aggression, variety, clarity, submission, and autonomy. Including these same components, the Group Atmosphere Scale (GAS) was later developed from Moos' WAS as a means of assessing the psychosocial environment of diverse psychotherapy groups (Silbergeld, Koenig, Manderscheid, Meeker, & Hornung, 1975).

In one of the first studies of variables influencing group psychotherapy, Frank (1957) seems to have been among the early clinicians to systematically account for the importance of the concept of cohesiveness, defined as "the attractiveness of a group for its members (p.55)." He believed that the development of cohesiveness was a

reflection of man's inherent need to be gregarious. To Frank, cohesiveness was therapeutic because it enhanced self-esteem, reinforced change, helped to resolve conflicts, facilitated the release of feelings, and allowed the patient to be influenced by the group's norms. Group Cohesiveness has remained a central variable in most subsequent accounts of curative factors within psychotherapy groups. Budman and his colleagues (1987) viewed cohesion as the single most valuable factor within group psychotherapy. They described this factor as being the counterpart to the "therapeutic relationship" within individual psychotherapy. They stated that cohesion keeps the members coming to the group and allows the members to support each other even when there is no clear reward for doing so and that cohesiveness allows the members to maintain involvement in the group even during periods of confrontation.

In a 1971 review article suggesting the benefits of group psychotherapy, Bednar and Lawlis (1971) identified group cohesion as an important curative agent much like the patient-therapist relationship in individual therapy. They stated that cohesive groups: (a) are more productive; (b) are more open to influence by other group members; (c) experience more security; (d) express hostility more often and adhere more closely to group norms; (e) attempt to influence others more frequently; and (f) continue membership longer. They concluded that "the cohesive atmosphere of the group is a primary antecedent to

constructive personality change (p. 826)." In an analogue study involving 16 students, Flower, Booraem, and Hartman (1981) also found that more problems were disclosed during psychotherapy group sessions higher in cohesiveness than were disclosed during sessions lower in cohesiveness.

Butler and Fuhriman's (1983) review of articles about the curative factors involved in group therapy concluded that severely disturbed psychiatric patients experience cohesiveness as a vital feature. They also asserted that hospitalized patients value group therapy differently than outpatient groups and that the former regarded factors such as self-understanding, catharsis, and interpersonal learning as more important than the latter. Maxmen's (1973) survey of 100 hospitalized patients also found that outpatients primarily valued insight and catharsis, whereas inpatients rated, in the following order, instillation of hope, group cohesiveness, altruism, and universality as most important. Butler and Fuhriman's (1980) study of 28 day-treatment outpatients also found that cohesiveness was the most salient factor.

Other authors have stressed the interpersonal aspect of the cohesion factor. Orlinsky and Howard (1978) stated that "effective psychotherapy as an interpersonal process is distinguished most consistently by the positive quality of the bond that develops between its participants. Whether it occurs in a didactic relationship or in a primary group, the bond among participants in beneficial therapy is marked by a

high degree of cohesiveness (p. 316)." From studying 51 psychiatric inpatients, Leszcz, Yalom, and Norden (1985) also concluded that group psychotherapy decreases the patient's sense of isolation and estrangement while augmenting participation. Through this process, the patient comes to better comprehend the interpersonal environment and how to relate within it. From their study of 124 psychiatric patients, Kahn, Webster, and Storck (1986) also concluded that the opportunity for the patient to reconnect socially is what is most important. In addition, Rohrbaugh and Bartels (1975) discussed the concept of "relatedness" as a primary factor in group psychotherapy which they, too, associated with the concept of cohesiveness.

Affiliativeness as a Primary Dimension

Although, extensively studied, cohesiveness remains a somewhat poorly defined and asystematic construct. Bloch, Crouch, and Reibstein (1981) stated that the relationship between cohesiveness and outcome remains largely unexplored and asserted that cohesiveness has not been adequately distinguished from acceptance. Bednar and Kaul (1978) also complained of the variability and vagueness of the concept of cohesiveness which they described as a product of inadequate measurement. Recently, Mudrack (1989) has criticized the concept of cohesiveness as lacking a substantial operational definition. He stated that the understanding of group cohesiveness is "taken for granted" and that many researchers rely on this undefined construct

without awareness of its underlying confusions and inconsistencies.

Looking more closely at this problem, Hurley and Brooks (1987 & 1988) examined the 12-item form of MacKenzie's (1983) Group Climate Questionnaire which was initially scored for three miniscales labeled Avoiding, Conflict, and Engaged. From this analysis, they derived a 10-item affiliation/evaluation factor and viewed it as central to group members' benefits from small group experiences. They further suggested that affiliativeness or acceptance versus rejection of others is central to a wide variety of socialization experiences. They argued that high affiliative groups, withstanding the ambiguities of group cohesiveness, will be much more beneficial than low-affiliative groups. From a subsequent study of 63, 50-hour Small Experiential Groups for Interpersonal Learning (SEGIL) for college students, Hurley (1989) reported that favorable outcome, as defined by members' mean aggregated postsession ratings of "Everything considered, I gained something of value from today's [small group] session," correlated highly (.80) with the corresponding group unit of affiliation.

The construct of affiliation is also central to the interpersonal dimensions of personality discussed by Freedman, Leary, Ossorio, & Coffey (1951). They stated that, by identifying certain interpersonal traits, one may characterize the way in which an individual perceives his

social world and himself. They specified the nodal points of their circular model as dominance, hostility, submission, and affiliation. Wiggins (1982) also acknowledged that bipolar dimensions of affiliation and dominance were the two central components within diverse circumplex models of interpersonal conduct and that other interpersonal behaviors generally represent different blends of these two components. He also noted that this model lends itself well to the analysis of the relationship occurring between the therapist and client within the course of psychotherapy and also to their evaluations of the therapeutic outcome. Lending further support to the salience of these dimensions, Conte and Plutchik (1981) reported that, for interpersonal personality data, any factors after the first two (affiliation and dominance) account for very little of the total variance.

The definition of affiliation tends to vary among theorists. Webster's New World Dictionary (1970) defined to affiliate as "to take in as a member or branch, to connect or associate (p. 23)." The affiliation-disaffiliation dimension has also been named acceptance-rejection (Symonds, 1939; Bierman, 1969; Foa (1961), affiliation-hostility (Freedman et al., 1951), positive-negative (Chance, 1954), loving-rejection (Roe, 1957), love-hostility (Schaefer, 1959), and love-hate (Carson, 1969). The affiliativeness composite used by Hurley and Brooks (1987) incorporated five positive items labeled Confronted, Revealed, Participated,

Reasoned, and Cared along with five negatively keyed items labeled Avoided, Withdrawn, Angry, Rejected, and Anxious. This operationalization of the affiliativeness term adds complexity to specify the connectedness. Silbergeld et al.'s (1976) scales for assessing the important features of the small group's environment defined Affiliation as "promotes helpfulness and emotional support," separated from Support defined as "facilitates interpersonal encouragement," or the concept of Involvement described as "encourages participation in day to day functions." Jackson's (1974) Personality Research Form, assessing personality traits, described Affiliation as "Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people (p. 6)." Adjectives used to explain this trait also included: neighborly, loyal, warm, amicable, good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable, sociable, affiliative, and good-willed.

To measure the concept of social climate in the present study, especially the affiliation component, two questionnaires were used. The first was MacKenzie's (1981) Group Climate Questionnaire, short form (GCQ-S) designed to measure what MacKenzie called "group climate," defined as "dealing with the concept of environmental press: a property or attribute of an environment that facilitates or impedes the efforts of the person to reach a given goal (p. 287)." By developing an understanding of individual member's

perception of the group milieu, MacKenzie thought the GCQ would help in understanding the effects of the group on that participant. The 12-item GCQ-S seems increasingly popular due to its manifest relevance and ease of administration. A second measure, Silbergeld et al.'s (1975) the Group Atmosphere Scale, mentioned earlier, was also be used to measure perceptions of environmental factors impinging upon psychotherapeutic groups. In an analysis of the GAS, its authors concluded that it had the potential to be used as a tool for quantitative prediction of therapy outcome.

Personality Style and Outcome

The individual's personality also seems likely to influence one's experiences within the group psychotherapy. In a recent article, Andrews (1989) explored the concept of one's interpersonal diagnosis and its effects on therapy. He posited that each individual has his or her own "vision of reality" which is partially reflected in her or his personality profile. Consequently, both therapist and client bring their own views of reality into the therapeutic relationship. Andrew regarded these views as having an important effect on how a client ultimately experiences psychotherapy. So, knowledge of a client's personality profile may also be helpful in understanding the therapeutic experience and, ultimately, its outcome.

In the present study, personality measures from Millon's (1983) Clinical Multiaxial Inventory (MCMI) were used to examine how personality variables link with outcome.

This relatively popular self-report inventory includes scales measuring basic personality traits, pathological personality patterns, and clinical syndromes. Wiggins (1982) stated that Millon's diagnostic system shares many factors that are similar to the interpersonal system discussed before. He contended that Millon identified persons with pathological patterns as functioning within a social milieu where their interpersonal style determines the course of their impairment. The Affiliation scale from Jackson's (1974) Personality Research Form (PRF) was also selected to assess the degree of affiliativeness within the individual. To distinguish affiliative from disaffiliative personality styles, an appropriate selection criteria can be determined using the relationships between the PRF's affiliation scale and the MCMI's numerous specific scales. These personality differences can then be examined with respect to the individual's experience in group psychotherapy.

The following hypotheses will be investigated:

I. Group members will show a reduction in symptoms from pre- to post-treatment after attending three weeks of group psychotherapy as measured by their scores on the scales of the SCL-90R, CTI, POMS, and the HSRS.

II. Individuals' ratings of perceived affiliativeness within their group, as measured by affiliation scales from the

GCQ-S and the GAS, will be positively associated with greater symptom reduction.

III. Individuals with affiliative personality tendencies, as measured by a significant and substantial correlation between the MCMI scales and the PRF's Affiliation scale, are more likely to experience a pre- to post-treatment reduction of symptoms after attending three weeks of group psychotherapy than are those having disaffiliative personality tendencies as measured by a significant and substantial negative correlation between the MCMI scales and PRF Affiliation.

## METHOD

### Sample

Of the 106 patients scheduled to participate in the Marathon Group Therapy program at the Veteran's Administration Medical Center in Battle Creek, Michigan and who were referred to me for psychological testing over the six month period of October 10, 1989 to April 6, 1990, 67 patients consented to be pretested and one consented only to be posttested for a total of 68 (64%) participants. Fourteen patients (13%) declined participation in this research project and 24 patients (23%) did not show at the scheduled testing time due to either being on a pass, previously discharged, declined to met with me, or could not be located. Of the 67 pretesting Completers, 34 (51%) also completed the posttests (32% of the original referral pool). Those who did not complete testing were either discharged early, transferred to a different program, left this program, left the hospital against medical advise, could not be located, or declined to be posttested. The majority of those not completing the posttesting were discharged early.

The 34 Completers of both pretests and posttests, all men, had a mean age of 42 years (range from 26-56). Twenty-two were Caucasian, 11 were African-American, and one was Hispanic. Partial records were available for 24 (71%) of

these patients. These records indicated that nine patients were divorced, four were separated, two were single and the marital status of the other nine were unknown. In education, they ranged from a High School equivalency exam to a Masters degree. All had prescribed psychotropic medications and none of the patients were participating in any other specific treatments during the period of this program. Only one had previously attended this particular group therapy program. Primary psychiatric diagnoses included four patients classified as Adjustment Disorder, two as Major Depression, four as Schizophrenic, four as Dysthymia, four as Post-Traumatic Stress Disorder, one as Organic Affective Disorder, one as Bipolar Disorder, one as Cyclothymic, and three as either Alcohol or Substance Dependence. Half of this sample also were classified with a secondary diagnosis of Alcohol or Substance Dependence. Fourteen patients also had physical disorders, including such problems as hypertension, diabetes, seizures, asthma, ulcer, and others. The average length of time spent in the psychotherapy treatment group was 43.6 hours ranging from 28-50 hours, during a three week period.

For the 34 Noncompleters who had completed pretesting but were not posttested, one was female and the others were male. The mean age of this group was 39.5 years (range of 29-59 years). Twenty-two were Caucasians and 12 were African-Americans. Additional information on 21 (62%) of these patients was available. Five were reported to be

married, five divorced, four separated, and two single. The remaining five's marital status was not established. All but one was prescribed psychotropic medication. The primary psychiatric diagnoses included seven Dysthymics, four as Schizophrenic, four as Adjustment Disorder, two as Substance Dependent, one as Major Depression, one as Bipolar Disorder, and one as Impulse Control Disorder. In addition, three patients also had a concurrent diagnosis of Post Traumatic Stress disorder and three had a concurrent diagnosis of Schizo-affective disorder. Also 62% of these patients carried either an Alcohol or Substance Dependence diagnosis. Thirteen had physical disorders which included seizures, arthritis, hypertension, heart disease, and others. Consequently, the Completers and Noncompleters appear similar with respect to age, race, marital status, diagnosis, and medical condition.

Assessment Instruments

Symptom Check List 90-Revised (SCL-90R; Derogatis, 1983). This 90-item self-report symptom inventory was designed to reflect the psychological symptom patterns of psychiatric and medical patients at a current point in time (e.g., headaches; feelings of worthlessness; crying easily, etc.) Each item is rated on a five-point scale (not at all [0], a little bit [1], moderately [2], quite a bit [3], and extremely [4]). Nine symptom scales and three global distress indices constitute the SCL-90R. These include: Somatization, Obsessive-Compulsive, Interpersonal

Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, Psychoticism, Global Severity Index, Positive Symptom Total, and Positive Symptom Distress Index (Grand Total / Positive Symptom Total). The internal consistency of each scale was calculated with the coefficient alpha's ranging from .77 (Psychoticism) to .90 (Depression) for an earlier version of this instrument (Derogatis, Rickels, & Rock, 1976). Test-retest reliabilities over a one-week period for 94 psychiatric outpatients were between .80 and .90 for this earlier version.

Correlations of the SCL-90R scales with MMPI scales ranged from .40 to .75. Each SCL-90R scale had its highest correlation with the most parallel MMPI scale except for the Obsessive-Compulsive scale which had no parallel MMPI scale direct parallel (Derogatis et al., 1976). Brophy, Norvell, and Kiluk (1988) also found significant correlations between the SCL-90R's scales with both the Beck Depression Inventory (BDI; Beck, 1967) ($r$'s of .46 to .73) and with several MMPI scales ($r$'s from .12 to .64). However, they reported no support for the SCL-90R scales' discriminant validity. The strong relationships between the BDI and the SCL-90R's symptom scales suggested that the latter measures a "dysphoric quality" instead of independent symptoms. Dinning and Evans (1977) reached a similar conclusion, finding support for the SCL-90 scales' convergent validity but little evidence of their discriminant validity when compared

with the MMPI scales of inpatients. Analyses of the SCL-90R's factor structure also suggested that it measures a global distress factor. That it depicts the nine symptom scales was questioned, especially for inpatients. Related findings suggest that the SCL-90R's primary initial factor, labeled Depression, accounts for a very large proportion of its total variance (Brophy et al., 1988; Cyr, McKenna-Foley, & Peacock, 1985; Hoffmann & Overall, 1978, Holcomb, Adams, Ponder, 1983).

Constructive Thinking Inventory (CTI; Epstein & Meier, 1989). This instrument (see Appendix A) is a 64-item self-report inventory designed to measure one's use of constructive and destructive modes of thinking. The items consist of statements about feelings, beliefs, and behavior (e.g., I worry a great deal about what other people think of me. I am very sensitive to being made fun of. etc.) scored from 1-5 (definitely false, mostly true, undecided, mostly true, or definitely true). Factor analysis of CTI responses by 124 college students yielded a global scale, Constructive Thinking (alpha = .87) composed of 26 items taken from most other scales (excluding Naive Optimism) and six basic scales, including: Emotional Coping (alpha =. 85), Behavioral Coping (alpha = .84), Categorical Thinking (alpha = .70), Superstitious Thinking (alpha = .75), Naive Optimism (alpha = .67), and Negative Thinking (alpha = .73) (Epstein & Meier, 1989). In an examination of construct validity, the CTI's global scale was found to correlate substantially

with measures of Ego-strength (.55), Neuroticism (-.54), Anxiety (-.50), Depression (-.48), and Self-esteem (.50) from the Primary Emotions and Traits Scales (Epstein, 1989). Further supporting the CTI scales' discriminant validity, Anxiety was more highly correlated with Emotional Coping than with Behavioral Coping, but the opposite was true for Vigor. Categorical Thinking was more directly associated with Anger than any other emotion, and Superstitious Thinking was most strongly associated with Depression (Epstein, 1989). The Emotional and Behavioral Coping scales represented factors which accounted for more than half of the variance among the six specific factors. The remaining scales appear to refer to maladaptive ways of thinking (Epstein & Meier, 1989).

Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1981). This instrument is a 65-item, adjective checklist designed to measure dimensions of affect quickly and economically. It consists of adjectives that describe moods or feelings (e.g., angry, lively, helpless, etc.) with response alternatives ranging from "Not at all" (0) to "Extremely" (4) on a five-point scale and addresses six mood/affective states: Tension-Anxiety; Depression-Dejection; Anger-Hostility; Vigor-Activity; Fatigue-Inertia; and Confusion-Bewilderment. Internal consistency reliability for four of the six scales was .90 or greater, and .84 or greater for both shorter scales (Vigor and Confusion; McNair & Lorr, 1964). Test-retest

stability coefficients for psychiatric patients over a 20-day period ranged between .65 and .74 (McNair & Lorr, 1964). Supporting the POMS scales' concurrent validity, significant correlations were found between its scales and clinically-derived distress scores from the Hopkins Symptom Distress Scale (Parloff, Kelman, & Frank, 1954), ranging from .33 to .86 (McNair, Lorr, & Droppleman, 1981). Reddon, Marceau, and Holden (1985) examined the convergent and discriminant validity of the POMS items and found good support for convergent validity of these items with congruence and consistency between items for different populations. However, little support was found for the POMS scales' discriminant validity and the large size of its primary factor, as compared to the others, led them to suggest that the POMS might best be used as a general measure of mood disturbance. However, Norcross, Guadagnoli, and Prochaska's (1984) analysis of the POMS factor structure supported factors of Anger-Hostility, Vigor-Activity, and Fatigue-Inertia, but suggested that the other three scales are too highly correlated and more likely present a complex measure of psychopathology. Spielberger's (1972) earlier review of the POMS concluded that it is a useful measure for research with psychiatric patients and especially for examining the effects of psychotherapy.

Health-Sickness Rating Scale (HSRS; Luborsky, 1975). This measure is a simple survey instrument to assess a patient's mental status by a clinician's ratings. The

scales include one measure of overall status and seven additional scales measuring psychological adjustment. All scales are rated on a 0 (ideal functioning) to 100 (completely regressed) point scale with 5 point increments. Luborsky (1962) described several studies by his research group which addressed the reliability of this measure with different types of patients using a variety of judges who differed in amount of training. In the first such study, the correlation of the agreement between 30 judges was .65 with 53% of the ratings 5 points or less apart and 83% were within 10 points or less. Independent ratings on eight patients by four psychiatrists resulted in a correlation coefficient of .90. Agreement between psychologists and psychiatrists was reported to be .79 and ratings by two teams correlated .91. Practical considerations later dictated dropping this instrument from the present study.

Group Climate Questionnaire-Short Form (GCQ-S; MacKenzie, 1983). This questionnaire (see Appendix B) contains 12 items, each rated on a seven-point Likert scale, ranging from "not at all" to "extremely." It addresses the individual impression of his group's environment (e.g., The members liked and cared about each other., The members appeared tense and anxious., etc.). Hurley and Brooks (1987) derived a 10-item composite assessing affiliativeness from the GCQ-S which was used in the present study. Their analysis yielded a subset of five items labeled Affiliative (consisting of positively scored items denoted Confronted,

Revealed, Participated, Reasoned, and Cared) and a separate quintet of disaffiliative items (all negatively scored items denoted Avoided, Withdrawn, Angry, Rejected, and Anxious). A comparison of members' and observers' ratings of the same sessions of small groups on the GCQ-S revealed a .86 correlation (Hurley & Brooks 1988). The statement "Everything considered, I gained something of value from today's session" was appended to the GCQ-S as an independent measure of outcome. Among a series of 63 small groups, this statement was later found to correlate .80 with the 10-item Affiliativeness composite (Hurley, 1989).

Group Atmosphere Scale (GAS; Silbergeld et al., 1976). This scale (see Appendix C) systematically measures the psychosocial environment of therapy groups. It was devised from Moos and Houts'(1968) Ward Atmosphere Scale (WAS). It is composed of 130 true-false statements about group behavior (e.g., This is a lively group. The therapist doesn't order the members around. etc.). It is divided into the following 14 subscales: Aggression, Submission, Autonomy, Order, Affiliation, Involvement, Insight, Practicality, Spontaneity, Support, Variety, Clarity, Halo, and Inconsistency. Items are scored 0 or 1. Silbergeld, Koenig, Manderscheid, Meeker, and Hornung (1975) successfully differentiated the environments of three modalities of therapy (academic counseling, long-term psychotherapy, and short-term intervention) on the GAS scales. Alpha values, although not reported, were said to

be of an "acceptable level" of internal consistency for each subscale. Test-retest reliability was also reported to be adequate for each of the subscales. The validity of the GAS was also stated (Silbergeld et al., 1975) to be "acceptable" as indicated by correlations with the Hill Interaction Matrix (Hill, 1965). Factor analysis of the Ward Atmosphere Scale yielded one main factor embracing of 8 of the 10 subscales which accounted for 50% of the total variance. This suggests that the WAS largely assessed global evaluation (Alden, 1978). Examination of the Social Climate Scale (Moos, 1968), also derived from the WAS, similarly yielded a principal factor which was labeled Value (Wilkinson, 1973).

Millon Clinical Multiaxial Inventory (MCMI; Millon, 1983). This self-report measure addresses major personality characteristics and symptom diagnoses which correspond to Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980) labels. It consists of 175 statements which are answered either true or false as applicable to the individual's current life (e.g., I always feel I am not wanted in a group. I am often cross and grouchy. etc.). It claims to assess eight basic personality patterns (Schizoid, Avoidant, Dependent, Histrionic, Narcissistic, Antisocial, Compulsive, and Passive-Aggressive), three pathological personality disorders (Schizotypal, Borderline, and Paranoid), and nine clinical symptom syndromes (Anxiety, Somatoform, Hypomanic,

Dysthymic, Alcohol Abuse, Drug Abuse, Psychotic Thinking, Psychotic Depression, and Psychotic Delusions). A Validity measure is also available and participants whose scores did not fall within a reasonable level on this index, three in the present sample, were omitted. Much item overlap occurs on the MCMI scales.

Millon (1983) reported that MCMI one week, test-retest coefficients were generally in the mid-80's. Internal consistency as measured by the Kuder-Richardson Formula 20, had a median value of .88 for the clinical scales, ranging from .58 to .95; eight scales attained coefficients in the .90's and only one was below .70 (Psychotic Delusion). The MCMI has been correlated with the MMPI, the Psychological Screening Inventory (PSI; Lanyon, 1973) and the Symptom Distress Check List (SCL-90). Significant correlations have generally been found between the corresponding interinventory scales. Widiger and Sanderson (1987) found evidence to support the MCMI scales' convergent validity with DSM-III diagnosis, but little support for its discriminating ability. Weltzer's (1990) review of the MCMI validity research concluded that although some MCMI scales were consistent with DSM-III, the MCMI's discriminating ability was limited and required future research.

Millon's (1983) factor analysis of the 20 scales revealed four factors summarized as (a) Labile Emotionality, (b) Paranoid Behavior, (c) Schizoid Behavioral Detachment, and (d) Social Restraint and Conformity. Choca, Peterson,

and Shanley's (1986) factor analysis using the same procedure as Millon (1983) yielded three factors denoted Maladjustment, Extraverted Acting Out, and Psychoticism. In a study comparing the scales' factor structure for differing populations, Flyn and McMahon (1984) found evidence of a sturdy factor measuring a negativistic-avoidant personality style but little evidence of any other consistent factor across samples. Reviewing these several factor analytic studies, Weltzer (1990) concluded that three separate dimensions can be identified which are consistent across diverse patient populations, labeled (a) Depressive Emotionality, (b) Paranoid and Manic Thinking, and (c) Schizoid Thinking.

Affiliation Scale. This scale (see Appendix D) consists of 16 items taken from Jackson's (1974) Personality Research Form-E addressing Affiliation. The measure consists of statements describing personality (e.g., My friendships are many.) which may be responded to by either true or false. A Spearman-Brown reliability coefficient of .82 for psychiatric patients has been reported (Jackson, 1974) as well as a one week, test-retest reliability coefficient of .79 (Bentler, 1964). Correlations with the Jackson Personality Inventory yielded significant associations of PRF Affiliation with JPI's scales of Social Participation (.63), Interpersonal Affect (.55), and Self-esteem (.46) as well as its significant correlations with the Extraversion (.51) Self-acceptance (.51), and

Cheerfulness scales (.57) from the Bentler Psychological Inventory (Bentler, 1964) and with the Agreeableness (.46) and Self-sufficiency (-.48) scales of Cattell's High School Personality Questionnaire (Jackson, 1974).

Procedure

Prior to the commencement of data collection, a meeting was held to train those VAMC staff psychologists who would be referring patients to the intensive group psychotherapy program. Five of these six psychologists attended this meeting. At this session, I discussed the procedure and rational for using the Health Sickness Rating Scale. After this discussion, two short vignettes were distributed and each psychologist was asked to rate each one on the HSRS (see Appendix E). Discussion took place after ratings of the first vignette were complete. The scale seemed well-accepted by the group and the concurrence of the scoring on the vignettes was reasonably high considering the short introduction to the measure. All psychologists ratings of the vignettes were within 10 points of each other on the HSRS. Approximately one week after this meeting, but still prior to the beginning of data collection, the head psychologist of the intensive psychotherapy program (Bruce Vreeland, Ph.D.) announced that the logistics of having a psychologist rate each referred patient before and after the program would be too demanding because recent changes in the hospital's administration had caused extreme time constraints for the psychologists. Consequently, the HSRS

and any related staff psychologist's rating had to be eliminated from this project.

Participation in the Present Study

Those patients selected to participate in the intensive group psychotherapy program were asked to attend a meeting the Friday before their group's scheduled beginning. One to seven patients were referred to the group program each week through this study's October, 1989-April, 1990 time span. At these meetings the research project was introduced and consent for participation was obtained (see Appendix F). Those patients who chose not to participate left the meeting. Approximately two-thirds of the original referrals remained available for testing at this point. Attempts were made to locate all patients on the referral list who had not attended these meetings. The patients were then administered the SCL-90R, the POMS, the PRF's Affiliation scale, the CTI, and the MCMI in that order. Instructions for each test was given on an individual basis and patients completed these instruments at their own pace. The author was present during each testing session to answer questions and to handle any other problems that might arise. Each group testing session lasted approximately two hours. At the session's end, the patients were reminded of the posttesting at the end of the program and advised that their group treatment program would begin on the following Monday morning.

During the three week period that the patients

participated in the group psychotherapy program, the Group Climate Questionnaire (GCQ) was administered to each patient who had consented to participate in the research. This short 13-item questionnaire usually required less than five minutes to complete and was administered to each patient twice weekly during their treatment period. The psychologist leading each group distributed GCQ's following the group sessions on Tuesday morning and Thursday afternoon.

On the Thursday at the end of this three week psychotherapy program, the patients were reminded to attend a meeting to complete the posttest questionnaires later that afternoon. At this meeting each patient was asked to fill out the SCL-90R, the POMS, the CTI, and the GAS in that order. The patients were advised to answer the questions on the outcome measures as to how they had been feeling within the last week. They were instructed individually, and completed these questionnaires at their own pace. Posttesting took approximately one hour to complete. The author attended all posttesting sessions. Patients were instructed that they could request feedback on any of the assessments and individual appointments were scheduled on demand. All data were individually coded by number to attain confidentiality. Relevant information concerning demographics and medical and hospital history was collected several weeks after all posttesting had been completed by examining the patient's VA medical chart (see Appendix G).

The author individually scored all the assessment protocols. Accuracy in scoring was calculated by rescoring 10% (seven cases randomly selected) of the data and comparing these scores to the original scores which were used in the analysis. Those scores not within the "significant error" range (less than 95% accuracy) were tabulated and the percentage of correct scores was calculated [(total number of scores minus number of errors) / total number of scores]. Using this method, accuracy was calculated to be 92%. By the same method, 77% of all scores were completely accurate. Errors in the rescored 10% of the data were corrected.

# RESULTS

## Sample and Subsamples

To identify any statistically significant differences between the 68 original patient volunteers and those 34 who completed the measures again after this three-week treatment, two-tailed *t*-tests were applied to the mean scores of the posttesting Completer and Noncompleter subsamples for all scales of the SCL-90R, POMS, CTI, and MCMI as well as for the Affiliation measures from the Group Climate Questionnaire (GCQ) and PRF; also for differences in age and race. As shown in Table 1, those subsample means did not differ significantly for the 12 SCL-90R and 6 POMS scales or on 7 of the 8 CTI scales. Only on the remaining CTI scale, Naive Optimism, did Completers score significantly below Noncompleters (respective *M*'s of 24.0 and 27.5). No significant Completer-Noncompleter differences were found on the PRF Affiliation scale, for GCQ mean Affiliativeness, or for patients' age or race.

Significant Completer-Noncompleter differences were found on 5 of the 20 MCMI scales, as shown in Table 2. Noncompleters exceeded Completers on MCMI's Narcissistic and Antisocial scales while Completers scored significantly higher than Noncompleters on the Borderline, Dependent, and Schizotypal scales. These five MCMI scales were notably

Table 1

Pretest Scores of Completers versus Noncompleters and Related Differences

| | Completers M (sd) (n = 34) | Noncompleters M (sd) (n = 33+) | Mean Diff. |
|---|---|---|---|
| SCL-90R(n's = 33++) | | | |
| Global Severity | 1.71 (.73) | 1.71 (.82) | .00 |
| Pos. Sym. Total | 64.03 (17.53) | 63.52 (17.73) | .53 |
| PSD Index | 2.36 (.60) | 2.27 (.72) | .09 |
| Somatization | 1.24 (.85) | 1.55 (1.01) | -.31 |
| Obssesive-Compul. | 1.87 (.93) | 1.95 (1.01) | -.08 |
| Interper. Sensit. | 1.79 (.90) | 1.65 (.86) | .14 |
| Depression | 2.32 (.84) | 2.00 (.79) | .32 |
| Anxiety | 1.87 (.94) | 1.84 (1.01) | .03 |
| Hostility | 1.45 (1.20) | 1.61 (1.09) | -.16 |
| Phobic Anxiety | 1.13 (1.03) | 1.40 (1.10) | -.27 |
| Paranoid Ideation | 1.79 (.91) | 1.64 (.98) | .15 |
| Psychoticism | 1.44 (.74) | 1.49 (.95) | .05 |
| POMS (n's = 34) | | | |
| Tension-Anxiety | 21.24 (8.19) | 21.81 (6.94) | -.57 |
| Depres.-Deject. | 35.47 (14.76) | 30.88 (14.48) | 4.59 |
| Anger-Hostility | 20.44 (12.98) | 20.55 (10.89) | -.11 |
| Vigor-Hostility | 12.18 (6.09) | 14.73 (6.43) | -2.55 |
| Fatigue-Inertia | 12.85 (8.10) | 12.88 (7.23) | -.03 |
| Confus.-Bewild. | 14.03 (5.95) | 14.27 (5.82) | -.24 |

continued

Table 1 (cont'd.)

Pretest Scores of Completers versus Noncompleters and Related Differences

| | Completers M (sd) (n = 34) | Noncompleters M (sd) (n = 33) | Mean Diff. |
|---|---|---|---|
| Constructive Thinking Inv. | | | |
| Const. Thinking | 79.97 (11.33) | 81.42 (13.17) | -1.45 |
| Emotional Coping | 22.71 (5.75) | 23.55 (6.71) | -.84 |
| Behav. Coping | 38.68 (7.10) | 40.58 (6.84) | -1.90 |
| Categ. Thinking | 31.97 (5.86) | 32.09 (6.31) | -.12 |
| Superst. Think. | 21.85 (6.36) | 24.21 (7.27) | -2.36 |
| Naive Optimism | 24.09 (5.26) | 27.52 (5.08) | -3.43* |
| Neg. Thinking | 36.71 (5.37) | 36.33 (4.99) | .38 |
| Validity Scale | 22.09 (2.80) | 21.91 (2.87) | .18 |
| Other Measures | | | |
| PRF Aff. scale | 4.34 (3.43)[a] | 5.06 (3.88) | -.72 |
| Group Climate Af. | 8.88 (5.66) | 8.56 (8.98)[b] | .32 |
| Age | 42.06 (7.33)[a] | 39.51 (6.37)[c] | 2.55 |
| Race | 1.37 ( .55) | 1.36 ( .49) | .01 |

*t-test value = -2.71; p < .008.

+One participant completed posttest only data.

++One data point missing due to incompleted SCL-90R.

[a] n = 35.

[b] n = 24.

[c] n = 31.

Table 2

MCMI Pretest Scores of 34 Completers versus 28 Noncompleters and Related Differences

| | | Completers M (sd) | Noncomleters M (sd) | t-value | p |
|---|---|---|---|---|---|
| 1a* | Avoidant | 83.82 (22.89) | 76.14 (26.05) | 1.22 | |
| 1b | Schizoid | 76.47 (20.20) | 71.75 (23.67) | .83 | |
| 1c | Schizotypal | 62.56 (13.04) | 52.68 (17.21) | 2.50 | .02 |
| 1d | Passive-Aggr. | 79.21 (25.15) | 82.46 (24.67) | -.51 | |
| 1e | Psych. Think. | 65.71 (14.38) | 63.32 (9.25) | .79 | |
| 1f | Alcohol Abuse | 72.29 (16.63) | 72.93 (14.67) | -.16 | |
| 1g | Compulsive | 44.38 (20.48) | 39.68 (20.37) | .90 | |
| 2a | Anxiety | 87.64 (19.82) | 84.43 (18.35) | .66 | |
| 2b | Dysthymic | 85.82 (19.35) | 81.04 (17.16) | 1.03 | |
| 2c | Borderline | 72.97 (16.51) | 65.14 (13.95) | 2.02 | .05 |
| 2d | Somatoform | 64.03 (16.40) | 61.93 (18.01) | .48 | |
| 2e | Psych. Depres. | 65.50 (16.95) | 61.00 (16.26) | 1.06 | |
| 3a | Hypomanic | 41.26 (28.37) | 55.14 (27.30) | -1.96 | |
| 3b | Drug Abuse | 65.56 (18.96) | 74.39 (20.78) | -1.73 | |
| 4a | Paranoid | 59.76 (18.32) | 65.57 (13.28) | -1.44 | |
| 4b | Psych. Delus. | 54.29 (20.48) | 62.00 (15.39) | -1.69 | |
| 5a | Histrionic | 48.61 (22.17) | 57.18 (20.94) | -1.56 | |
| 5b | Narcissistic | 47.76 (21.01) | 59.39 (16.38) | -2.45 | .02 |
| 6a | Antisocial | 53.59 (25.10) | 74.96 (19.27) | -3.79 | .001 |
| 6b | Dependent+ | 70.26 (29.86) | 55.50 (27.14) | 2.04 | .05 |

*Denotes scale position among Elem. Factors (see Table 14).
+Scale loads inversely on this factor.

interlinked in the total sample, as 8 of their 10 correlations were statistically significant (see Table 14). Central to this quintet was the Schizotypal scale which correlated positively with Borderline (.60) and Dependent (.49), but negatively with Narcissistic (-.54) and Antisocial (-.29).

Pretest means for the present sample were generally quite comparable to those of pertinent prior inpatient samples. Compared to the SCL-90 scores of male psychiatric inpatients (Dergogatis, 1983), the current sample means were between T-scores of 55 and 60 on all scales. On the Profile of Mood States, when compared to a male outpatient sample (McNair, Lorr, & Droppleman, 1981), the current sample's means also fell within T-scores from 52-57. No clinical samples were available to compare the means on the Constructive Thinking Inventory. When compared to a sample of college undergraduates, however, these VA patients scored lower on the Constructive Thinking and Emotional Coping scales (means = T scores of 40) as well as higher on the Categorical Thinking and Negative Thinking scales (T-scores of 65). The intersample differences were small on the Superstitious Thinking, Naive Optimism and Behavioral Coping scales (T-score of 45).

Evidence of Reduced Symptoms

The evidence that Completers' symptoms diminished during the group treatment period seems strong. Reliable improvements were registered on each of the three pertinent

instruments. As shown in Table 3, Completers registered statistically significant symptom reductions on 9 of the 12 SCL-90R scales and improved at near this level on two of the remaining scales. Completers made similar reductions on POMS measures of Anger, Anxiety, and Depression. They also reduced their Categorical and Negative Thinking significantly. Additionally, Completers' responses shifted toward thinking more constructively or less nonconstructively on five of the six remaining CTI scales, although these differences were not statistically significant. Thus, Completers moved toward "improvement" on 24 of 26 outcome indicators (12 SCL-90, 6 POMS, and 8 CTI scales). One POMS scale, Activity, registered no change and only the shortest (five-item) and least reliable CTI scale, Validity, recorded a slight ($\underline{M}$ = -.27) unfavorable shift. Using the Bonferroni test, the level for rejection probability for a one-tailed test adjusted to $\underline{p} < .004$ for 26 comparisons. With this new criterion, significance was attained for the SCL-90's Global Severity, PSDI, Obsessive-Compulsive, Depression, and Paranoid Ideation as well as POMS' Anxiety. The POMS scale for Depression was also close to reaching significance by this more stringent test.

For analysis of Hypothesis II and III, only those outcome measures which showed statistically significant pre- to posttest changes were used. Also excluded from these analyses because of poor reliability were all SCL-90R

Table 3

Completers' Pretest and Posttest Scores and Differences on Three Outcome Instruments

| | Pretest M (sd) | Posttest M (sd) | t-value | p* |
|---|---|---|---|---|
| SCL-90R (n's = 33) | | | | |
| Global Severity | 1.71 (.73) | 1.43 (.77) | 3.63 | .001 |
| Pos. Symptom Tot. | 64.03 (17.53) | 59.39 (21.19) | 2.29 | .02 |
| Pos. Sym. Dis. In. | 2.36 (.60) | 2.08 (.62) | 4.43 | .001 |
| Somatization | 1.24 (.85) | 1.06 (.77) | 1.78 | .04 |
| Obsessive-Compul. | 1.87 (.93) | 1.53 (.90) | 3.74 | .001 |
| Interper. Sensit. | 1.79 (.90) | 1.57 (.97) | 1.86 | .04 |
| Depression | 2.32 (.84) | 1.89 (.94) | 3.12 | .002 |
| Anxiety | 1.87 (.94) | 1.73 (1.47) | .57 | .29 |
| Hostility | 1.45 (1.20) | 1.20 (1.13) | 1.65 | .06 |
| Phobic Anxiety | 1.13 (1.03) | .92 (.87) | 2.01 | .03 |
| Paranoid Ideation | 1.79 (.90) | 1.35 (.76) | 3.36 | .001 |
| Psychoticism | 1.44 (.74) | 1.27 (.78) | 1.66 | .06 |
| POMS (n's = 34) | | | | |
| Tension-Anxiety | 21.24 (8.19) | 18.44 (8.14) | 2.87 | .004 |
| Depression-Reject. | 35.47 (14.76) | 29.85 (15.41) | 2.68 | .006 |
| Anger-Hostility | 20.44 (12.98) | 17.35 (10.81) | 1.86 | .04 |
| Vigor-Activity | 12.18 (6.09) | 12.18 (5.86) | .00 | .50 |
| Fatigue-Inertia | 12.85 (8.10) | 11.03 (7.88) | 1.53 | .07 |
| Confusion-Bewild. | 14.03 (5.95) | 13.29 (5.45) | .78 | .22 |

continued

Table 3 (cont'd.)

Completers' Pretest and Posttest Scores and Differences on Three Outcome Instruments

| | Pretest M (sd) | Posttest M (sd) | t-value | p |
|---|---|---|---|---|
| CTI (n's = 34) | | | | |
| Construct. Think. | 79.97 (11.33) | 81.00 (10.40) | -.64 | .26 |
| Emotional Coping | 22.71 (5.74) | 23.76 (6.10) | -1.33 | .10 |
| Behavioral Coping | 38.68 (7.10) | 38.85 (6.25) | .24 | .41 |
| Categorical Think. | 31.97 (5.86) | 30.50 (6.67) | 1.84 | .04 |
| Superstit. Think. | 21.85 (6.36) | 21.50 (6.26) | .50 | .31 |
| Naive Optimism | 24.09 (5.26) | 23.21 (5.44) | 1.22 | .12 |
| Negative Thinking | 36.71 (5.37) | 34.23 (6.16) | 2.61 | .01 |
| Validity | 22.09 (2.80) | 21.82 (3.34) | .49 | .31 |

*One-tailed test of significance.

specific symptom scales except Depression. The latter scale was retained because it has been identified as the SCL-90R's primary discriminating factor (Brophy et al., 1988; Cyr et al., 1985; Hoffmann & Overall, 1978; Holcomb et al., 1983). Correlations among these nine retained symptom outcome measures were generally statistically significant, as shown in Table 4, as merely one of these 36 correlations did not reach the .05 level.

Associations of Affiliativeness with Reduced Symptoms

Next, the second hypothesis linking individuals' percepts of the affiliativeness of their psychotherapy group with reduced personal symptoms was appraised by Pearson product-moment correlations using the one-tailed test of significance. The relationship between the patients' mean Affiliativeness scores on the Group Climate Questionnaire (GCQ) and their mean responses to the added item "Everything considered, I gained something of value from today's session," for the 58 patients (Completers and Noncompleters) who completed the questionnaire yielded $r = .50$ ($p < .0001$), indicating a substantial association. Preparatory to assessing the relationship of individuals' GCQ Affiliativeness scores with outcomes, a grand mean Affiliativeness score across sessions for each patient was calculated. Estimated using the part-whole correlation (Thorndike, 1949), the stability of individuals' Affiliativeness grand mean was .84.

Residual change scores were computed to determine each

Table 4

Pearson Correlations Between Pretest Scores on the Nine Selected Outcome Scales

| | SCL-90R | | | POMS | | | CTI | |
|---|---|---|---|---|---|---|---|---|
| | PST | PSDI | DEP | ANX | DEP | ANG | CAT | NEG |
| SCL-90R (n = 66) | | | | | | | | |
| Global Sev. | .82 | .77 | .78 | .67 | .63 | .76 | .43 | .47 |
| Pos. Sym. Tot. | | .34 | .56 | .59 | .46 | .69 | .33 | .35 |
| Pos. Sym. Dis. Index | | | .72 | .55 | .63 | .55 | .34 | .45 |
| Depression | | | | .70 | .80 | .61 | .26 | .44 |
| POMS (n = 67) | | | | | | | | |
| Anxiety | | | | | .74 | .66 | .20 | .32 |
| Depression | | | | | | .64 | .30 | .34 |
| Anger | | | | | | | .31 | .41 |
| CTI (n = 67) | | | | | | | | |
| Categorical Thinking | | | | | | | | .36 |

Note.--Only the underlined correlation did not reach the .05 level of significance using the two-tailed test.

patient's shift in symptoms from pre- to posttest. These scores indicated the amount of change on each scale after adjusting for the relevant pretest score [Positive Residual Change = (Posttest - Pretest Score) / (Maximum Possible Score - Pretest Score); Negative Residual Change = (Posttest - Pretest) / (Pretest - Minimum Possible Score]. Consequently, the more positive the residual change, the larger the symptom reduction. Presented in Table 5's first two data columns, Pearson correlations between individual's mean all-session GCQ Affiliativeness and residual change scores for the selected outcome measures attained statistical significance in only 2 of the 18 instances. Thus only the SCL-90R's Depression scale correlated significantly with the GCQ's Affiliativeness index. Interestingly, the POMS Depression scale also yielded a significant correlation with the Affiliation scale from the Group Atmosphere Scale (GAS). It is also noted that the Affiliativeness scores from the GCQ and the GAS overlapped modestly ($r$ = .35, $p$ < .02, $n$ = 35). Furthermore, 17 of the 18 correlations involving residual shifts were in the expected direction and seven ranged from .23 to .27, closely approaching the .05 level ($r$ = .29).

Next, the correlations between individual's final status scores on these outcome measures were correlated with each Affiliativeness indicator. Presented in Table 5's last two columns, the nine correlations involving GCQ Affiliativeness yielded four significant values (Global

Table 5

Correlations of Affiliativeness Scales from the GCQ and GAS with Two Outcome Measures: Residual Changes and Final Status Outcomes

| | Residual Changes | | Final Status[+] | |
|---|---|---|---|---|
| | GCQ* | GAS[+] | GCQ (n = 34) | GAS (35) |
| Outcome Measures | | | | |
| SCL-90R | | | | |
| Global Severity | .17 | .08 | -.29[a] | -.14 |
| Positive Sympt. Total | .20 | -.03 | -.33[a] | -.02 |
| Pos. Sympt. Dist. Index | .15 | .12 | -.02 | -.16 |
| Depression | .32[a] | .26 | -.35[a] | -.25 |
| POMS | | | | |
| Anxiety | .13 | .17 | -.11 | -.09 |
| Depression | .23 | .50[a] | -.24 | -.40[a] |
| Anger | .23 | .24 | -.34[a] | -.30[a] |
| CTI | | | | |
| Categorical Thinking | .27 | .26 | -.19 | -.15 |
| Negative Thinking | .27 | .08 | -.28 | .04 |

[a] $p < .05$, one-tailed test.

*$n = 33$ except for SCL-90R where $n = 32$.

+$n = 34$ except for SCL-90R where $n = 33$.

Note.--One Completer provided only posttest data, another Completer provided no GCQ data, and an additional Completer provided no SCL-90 pretest data.

Severity, Positive Symptom Total, SCL-90R Depression, and POMS Anger). All five remaining correlations were also in the direction hypothesized. The Group Atmosphere Scale Affiliation index correlated significantly with two symptom scales (POMS Depression and Anger) and six of the seven remaining were also in the hypothesized direction.

For the nine outcome indicators, all correlations between pretest and final status for Completers were in the expected direction, as shown in Table 6, and most (69 of 81) attained statistical significance. The median same-scale pretest-posttest correlation was .73. Table 7 shows all correlations for the nine outcome measures' residual change and final status scores. All 81 correlations were in the expected direction and 68 were statistically significant ($p < .05$, one-tailed test). The median same-scale $r$ was -.67.

Associations of Affiliative Personality Style with Symptom Reduction

Pearson correlations (with one-tailed significance tests) were also used to test the final hypothesis which posited positive relationships between symptom outcome and affiliative personality types. To determine affiliative versus disaffiliative personality styles, correlations were calculated between patients' Affiliation scores on the Personality Research Form (Jackson, 1974) and their scores on each of the 20 scales from the Millon Clinical Multiaxial Inventory (MCMI), as shown in Table 8. These correlations identified substantial positive relationships (.40 or above)

Table 6

Pearson Correlations Between Nine Outcome Measures at Pretest and Posttest or Final Status

| | Selected Outcome Measures at Pretest | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SCL-90R | | | | POMS | | | CTI | |
| | GSI | PST | PSDI | DEP | ANG | DEP | ANG | CAT | NEG |
| Final Status | | | | | | | | | |
| SCL-90R (n = 33) | | | | | | | | | |
| Global | .83 | .69 | .56 | .52 | .60 | .58 | .62 | .56 | .50 |
| PST | .70 | .84 | .20 | .37 | .55 | .49 | .55 | .45 | .47 |
| PSDI | .61 | .20 | .83 | .47 | .44 | .44 | .44 | .46 | .42 |
| Depres. | .63 | .44 | .53 | .61 | .56 | .65 | .50 | .35 | .40 |
| POMS (n = 34) | | | | | | | | | |
| Anxiety | .75 | .58 | .58 | .65 | .76 | .65 | .58 | .28 | .43 |
| Depres. | .54 | .34 | .49 | .54 | .59 | .67 | .41 | .21 | .35 |
| Anger | .75 | .69 | .42 | .42 | .46 | .40 | .68 | .36 | .46 |
| CTI (n = 34) | | | | | | | | | |
| Cat. T. | .52 | .45 | .27 | .11 | .22 | .25 | .34 | .73 | .18 |
| Neg. T. | .46 | .49 | .19 | .15 | .39 | .32 | .43 | .22 | .55 |

Note.--Only the underlined r's did not reach the .05 level by one-tailed test.

Table 7

Pearson Correlations between Residual Change and Final Status Outcomes

| | Residual Change | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SCL-90R | | | | POMS | | | CTI | |
| | GSI | PST | PSDI | DEP | ANX | DEP | ANG | CAT | NEG |
| | (n = 33) | | | | (n = 34) | | | (n = 34) | |
| Final Status | | | | | | | | | |
| SCL-90R | | | | | | | | | |
| Global | -.63 | -.57 | -.54 | -.64 | -.54 | -.46 | -.28 | -.38 | -.35 |
| PST | -.62 | -.72 | -.36 | -.63 | -.41 | -.36 | -.30 | -.36 | -.36 |
| PSDI | -.48 | -.28 | -.55 | -.50 | -.46 | -.41 | -.20 | -.21 | -.14 |
| Depr. | -.67 | -.62 | -.50 | -.76 | -.50 | -.56 | -.22 | -.35 | -.28 |
| POMS | | | | | | | | | |
| Anxiety | -.48 | -.46 | -.37 | -.43 | -.61 | -.40 | -.23 | -.41 | -.27 |
| Depr. | -.59 | -.56 | -.46 | -.68 | -.48 | -.67 | -.25 | -.44 | -.28 |
| Anger | -.42 | -.34 | -.39 | -.48 | -.56 | -.50 | -.41 | -.36 | -.32 |
| CTI | | | | | | | | | |
| Categ. | -.50 | -.43 | -.44 | -.52 | -.38 | -.36 | -.30 | -.70 | -.39 |
| Neg. T. | -.49 | -.44 | -.46 | -.54 | -.27 | -.36 | -.24 | -.38 | -.72 |

Note.--Only the underlined r's did not reach the .05 level by one-tailed test.

Table 8

Pearson Correlations of PRF Affiliation Scale with each MCMI Scale (n = 62)

| MCMI Scale | | |
|---|---|---|
| 1a* | Avoidant | -.46[a] |
| 1b | Schizoid | -.40[a] |
| 1c | Schizotypal | -.40[a] |
| 1d | Passive Aggressive | -.43[a] |
| 1e | Psychotic Thinking | -.25[c] |
| 1f | Alcohol Abuse | .02 |
| 1g | Compulsive+ | .22[c] |
| 2a | Anxiety | -.22[c] |
| 2b | Dysthymic | -.30[b] |
| 2c | Borderline | -.16 |
| 2d | Somatoform | .08 |
| 2e | Psychotic Depression | -.44[a] |
| 3a | Hypomanic | .23[c] |
| 3b | Drug Abuse | .27[c] |
| 4a | Paranoid | .07 |
| 4b | Psychotic Delusion | -.03 |
| 5a | Histrionic | .53[a] |
| 5b | Narcissistic | .46[a] |
| 6a | Antisocial | -.26[c] |
| 6b | Dependent+ | .22[c] |

*Identifies factorial position of MCMI scale in Table 13.

+Scale loaded negatively on this factor.

[a] $p < .001$, 2-tailed test.
[b] $p < .01$, 2-tailed test.
[c] $p < .05$, 2-tailed test.

between PRF Affiliation with the MCMI's Histrionic and Narcissistic scales and substantial negative correlations (-.40 or above) between Affiliation and the MCMI's Avoidant, Psychotic Depression, Passive Aggressive, Schizoid, and Schizotypal subscales. Eight additional MCMI scales had statistically significant associations of $\pm$.30 or lower with PRF Affiliation. These lesser correlations indicated weaker relationships with PRF Affiliation, so it was decided to limit analyses to the seven MCMI measures which correlated $\pm$.40 or above with PRF Affiliation.

Table 9 shows all Pearson correlations of the seven affiliativeness-linked MCMI scales with residual changes on the nine selected outcome scales. Of those scales which were related to affiliative personality styles, the Narcissistic scale revealed significant correlations in the directions predicted with all four of the selected SCL-90R outcome scales. Also, 10 of the 14 remaining correlations between affiliative personality styles and the residual outcome scores were in the predicted direction. For the five MCMI scales which were related to disaffiliative personality styles, significant relationships held between the MCMI Passive-Aggressive scale with three SCL-90R scales, and with POMS Anger. Also, two SCL-90R scales were significantly related to the MCMI Avoidant scale. These relationships, as well as 29 of the remaining 39 correlations, were in the predicted direction.

Final status outcome scores correlated even more firmly

Table 9

Correlations of Residual Change Outcomes with Seven MCMI Scales Ordered for Affiliativeness

| | Affil. MCMI scales | | Disaffil. MCMI scales | | | | |
|---|---|---|---|---|---|---|---|
| | Hist. | Narci. | Schizt. | Schiz. | P-Agr. | PsyD. | Avoid. |
| SCL-90R | | | | | | | |
| GSI | .21 | .31* | -.05 | -.24 | -.34* | -.22 | -.28 |
| PST | .21 | .31* | -.11 | -.20 | -.46* | -.26 | -.37* |
| PSDI | .22 | .32* | -.04 | -.29 | -.22 | -.25 | -.18 |
| Depres | .28 | .37* | -.10 | -.26 | -.31* | -.20 | -.34* |
| POMS | | | | | | | |
| Anxiety | .21 | .09 | -.04 | -.08 | -.30* | -.16 | -.18 |
| Depres | .17 | .20 | .06 | .01 | -.11 | -.03 | -.04 |
| Anger | -.19 | -.16 | .19 | .18 | -.05 | .11 | .12 |
| CTI | | | | | | | |
| Cat. T. | -.00 | -.03 | .10 | .02 | -.03 | .20 | .03 |
| Neg. T. | .25 | .07 | .03 | -.12 | -.16 | -.08 | -.12 |

Note--*n*'s = 33 for POMS and CTI, 32 for SCL-90R.

*$p < .05$, one-tailed test.

with these seven MCMI scales. The 63 pertinent correlations, given in Table 10, strongly supported Hypothesis three, as 49 were statistically significant in the expected direction. Thus, the more symptoms of depression, anxiety, and anger that patients reported at posttest, the less affiliative was their personality style and vice versa. All 14 nonsignificant correlations in Table 10 also tended to support this hypothesis.

Interestingly, the Personality Research Form's Affiliation scale did not correlate significantly with either the Group Climate Questionnaire's mean Affiliativeness index ($r$ = .06, $p$ = .36, $n$ = 58) nor with the GAS Affiliation Scale ($r$ = .09, $p$ = .26, $n$ = 35). However, the PRF Affiliation scale did correlate significantly with the supplemental "Everything considered = 58, one-tailed) consistent with Hypothesis III.

Supplemental Analyses

Although not part of the hypotheses, all subscales of the Group Atmosphere Scale were correlated with each outcome score to identify possible additional associations among these outcome measures. Only four of Table 11's 126 correlations between the 14 GAS scales and residual change outcomes attained statistical significance. However, the Affiliation scale yielded the two highest (.50 and .39) associations in Table 11. Its .50 correlation with the POMS Depression scale added support for the salience of Affiliativeness. Similar correlations of these GAS

Table 10

Correlations of Final Status with Seven MCMI Scales Ordered for Affiliativeness at Pretest ($n$ = 34)

| | Affil. MCMI scale | | Disaffil. MCMI scale | | | | |
|---|---|---|---|---|---|---|---|
| | Hist. | Narci. | Schizt. | Schiz. | P-Agr. | PsyD. | Avoid. |
| SCL-90R | | | | | | | |
| GSI | -.43* | -.47* | .41* | .47* | .63* | .57* | .64* |
| PST | -.34* | -.39* | .38* | .40* | .73* | .50* | .65* |
| PSDI | -.35* | -.38* | .34* | .35* | .31* | .42* | .41* |
| Depres. | -.38* | -.48* | .29 | .42* | .50* | .47* | .55* |
| POMS | | | | | | | |
| Anxiety | -.45* | -.44* | .29 | .33* | .57* | .48* | .53* |
| Depres. | -.33* | -.47* | .26 | .31* | .44* | .41* | .47* |
| Anger | -.23 | -.25 | .28 | .22 | .54* | .37* | .46* |
| CTI | | | | | | | |
| Cat. Th. | -.13 | -.12 | .24 | .25 | .24 | .11 | .26 |
| Neg. Th. | -.51* | -.50* | .43* | .51* | .58* | .46* | .60* |

*$p$ < .05, one-tailed test.

Table 11

Pearson Correlations between Group Atmosphere Subscales and Residual Change Selected Outcome Scales

| | Selected Outcome Scales | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SCL-90R | | | | POMS | | | CTI | |
| | GSI | PST (n = 33) | PSDI | DEP | ANX | DEP (n = 34) | ANG | CT (n = 34) | NT |
| GAS Subscales | | | | | | | | | |
| 1a. Halo | -12 | -12 | -10 | -02 | 22 | 13 | -10 | -02 | -10 |
| 1b. Support | -17 | -26 | -02 | -25 | 02 | -00 | -12 | -28 | -33 |
| 1c. Order | -10 | -04 | -18 | -20 | 02 | 06 | -03 | -13 | -26 |
| 1d. Clarity | -18 | -12 | -02 | -23 | -24 | -18 | -12 | -08 | -11 |
| 1e. Incon. | -16 | -09 | -07 | -00 | 13 | 25 | 05 | -15 | 01 |
| 1f. Autonomy | -08 | -17 | 02 | -00 | 21 | 12 | 01 | -03 | -21 |
| 1g. Submis. | -18 | 02 | -16 | -12 | 08 | 12 | 06 | -26 | -23 |
| 1h. Aggress. | -04 | -13 | -03 | -03 | -08 | 05 | -11 | 33 | 13 |
| 2a. Involv. | 01 | -16 | 18 | 08 | 04 | 28 | 06 | 06 | -15 |
| 2b. Variety | 22 | 07 | 20 | 21 | 06 | 39* | 37* | 26 | -06 |
| 2c. Affil. | 08 | -03 | 12 | 26 | 17 | 50* | 24 | 26 | 08 |
| 2d. Practic. | -22 | -24 | -13 | -08 | -08 | 05 | -03 | 03 | -09 |
| 2e. Spontan. | -06 | -06 | -00 | -01 | 18 | 27 | 35* | 03 | 01 |
| 2f. Insight | -19 | -16 | -12 | -03 | -03 | 01 | 01 | 03 | -12 |

Note. All decimals omitted; multiply entry by .01 for r.

[a]GAS scales ordered by factors, see Table 13.

*p < .05, 2-tailed test.

subscales with posttest outcome score, given in Table 12 revealed only two significant relationships, and again each was associated with the GAS Affiliation scale.

Also not part of the hypotheses, correlations among all 14 subscales of the Group Atmosphere Scale were examined. Given in Table 13, these data revealed many significant interscale correlations. Elementary Factor Analysis (McQuitty, 1961), which requires only that each scale correlate more strongly with one other same-factor scale than it correlates with any scale from a different factor, yielded two GAS factors. One bipolar factor consisted of six scales (Halo, Support, Order, Clarity, Inconsistency, and Autonomy) weakly related to a pair of very peripheral scales (Submission and Aggression), the last of which was negatively associated with the others. The second factor included six positively interlinked scales (Involvement, Variety, Spontaneity, Affiliation, Practicality, and Insight) except for the lone inverse linkage between Affiliation and Practicality. Factor one's Support scale also has consistently firm positive links with most scales of factor two. Confidence in the stability of these factor structures is limited by the modest sample size ($n$ = 35).

Intercorrelations were also determined for the MCMI's twenty scales as shown in Table 14. Elementary Factor Analysis yielded the six factors noted. Factor one consisted of six positively interlinked scales including Avoidant, Schizoid, Schizotypal, Passive-Aggressive,

Table 12

Pearson Correlations between Group Atmosphere Subscales and Final Status Outcome (n = 35)

| | Selected Outcome Scales | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SCL-90R | | | | POMS | | | CTI | |
| | GSI | PST | PSDI | DEP | ANX | DEP | ANG | CT | NT |
| GAS Subscales | | | | | | | | | |
| 1a. Halo | -17 | -15 | -08 | -10 | -20 | -12 | -23 | 00 | -02 |
| 1b. Support | 03 | 05 | 02 | 17 | 06 | 13 | -11 | 13 | 20 |
| 1c. Order | -03 | -11 | 13 | 05 | -13 | -08 | -23 | 09 | 11 |
| 1d. Clarity | 06 | 02 | 16 | 29 | 09 | 17 | -12 | -01 | 07 |
| 1e. Inconsis. | 20 | 18 | 19 | 14 | 12 | 02 | 03 | 31 | 07 |
| 1f. Autonomy | 01 | -08 | 15 | 05 | 06 | 02 | -12 | -21 | 14 |
| 1g. Submiss. | 20 | 13 | 26 | 20 | 22 | -01 | 08 | 24 | 22 |
| 1h. Aggress. | 02 | -01 | 12 | 06 | 06 | 02 | -19 | -22 | 11 |
| 2a. Involv. | 04 | 13 | -06 | -14 | 02 | -20 | -03 | 08 | 17 |
| 2b. Variety | -06 | -11 | -09 | -11 | -04 | -19 | -17 | -18 | 02 |
| 2c. Affil. | -14 | -02 | -16 | -25 | -09 | -40* | -30* | -15 | 04 |
| 2d. Pract. | 01 | 12 | -12 | 03 | 06 | -03 | -05 | 05 | 12 |
| 2e. Spont. | 09 | 08 | 10 | 10 | 07 | 16 | -20 | 14 | 11 |
| 2f. Insight | 03 | -04 | 05 | 11 | 15 | 11 | -23 | -07 | 04 |

Note. All decimals omitted; multiply entry by .01 for r.

[a]GAS scales ordered by factors, see Table 13.

$p < .05$, 2-tailed test.

**Table 13**

**Correlations Among All Group Atmosphere Scales Ordered by their Underlying Elementary Factors in this Sample ($n$ = 35)**

| | | 1b | 1c | 1d | 1e | 1f | 1g | 1h | 2a | 2b | 2c | 2d | 2e | 2f |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Halo | (1a) | 63[a] | 50[a] | 22 | 50[a] | 30[c] | -07 | -21 | 32 | 03 | 32 | 22 | 28 | 22 |
| Support | (1b) | | 47[b] | 42[b] | 26 | 44[b] | 00 | -02 | 49[a] | 26 | 24 | 39[b] | 36[b] | 29 |
| Order | (1c) | | | 37[c] | 12 | 22 | 38[c] | -04 | 07 | 20 | 20 | 06 | 25 | 27 |
| Clarity | (1d) | | | | 16 | 14 | 12 | -01 | -05 | -20 | 04 | 18 | 09 | 27 |
| Inconsistency | (1e) | | | | | 22 | 10 | -14 | -18 | -12 | 30[b] | -09 | 24 | 25 |
| Autonomy | (1f) | | | | | | -00 | -27 | 28 | -29 | 39[b] | 00 | 20 | 33 |
| Submission | (1g) | | | | | | | 23 | -16 | 10 | 20 | -08 | -04 | 04 |
| Aggression | (1h) | | | | | | | | 01 | 07 | 13 | 15 | 09 | 24 |
| Involvement | (2a) | | | | | | | | | 54[a] | 52[a] | 52[a] | 46[b] | 15 |
| Variety | (2b) | | | | | | | | | | 46[b] | 30 | 35[c] | 46[b] |
| Affiliation | (2c) | | | | | | | | | | | -30 | 28 | 32 |
| Practicality | (2d) | | | | | | | | | | | | 36[c] | 31 |
| Spontaneity | (2e) | | | | | | | | | | | | | 46[b] |
| Insight | (2f) | | | | | | | | | | | | | |

[a] $p < .001$ by the 2-tailed test ($r = \pm .336$).

[b] $p < .01$ "

[c] $p < .05$ "

Table 14

Correlations Among All MCMI Scales Ordered by their Underlying Elem. Factors in this Sample ($n$ = 62)

| | | 1b | 1c | 1d | 1e | 1f | 1g | 2a | 2b | 2c | 2d | 2e | 3a | 3b | 4a | 4b | 5a | 5b | 6a | 6b |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avoidant | (1a) | 80[a] | 80[a] | 78[a] | 77[a] | 38[a] | -50[a] | 65[a] | 63[a] | 66[a] | 36[b] | 68[a] | 08 | 00 | 00 | 03 | -41[a] | -54[a] | -13 | 39[a] |
| Schizoid | (1b) | | 68[a] | 61[a] | 68[a] | 19 | -36[b] | 51[a] | 50[a] | 50[a] | 26[c] | 61[a] | -13 | -12 | -04 | 22[c] | -50[a] | -49[a] | -14 | 28[c] |
| Schizotypal | (1c) | | | 58[a] | 68[a] | 29[c] | -34[b] | 54[a] | 42[a] | 60[a] | 37[b] | 53[a] | 01 | -01 | -03 | 03 | -36[b] | -54[a] | -29 | 49[a] |
| Passive-Aggres. | (1d) | | | | 66[a] | 57[a] | -73[a] | 71[a] | 61[a] | 70[a] | 43[a] | 70[a] | 39[a] | 31[b] | 21 | 13 | -17 | -33[b] | 17 | 19 |
| Psychotic Think. | (1e) | | | | | 47[a] | -45[a] | 46[a] | 30[c] | 57[a] | 36[b] | 67[a] | 25[c] | 22 | 23 | 29[c] | -26[c] | -31[b] | -06 | 41[a] |
| Alcohol-Abuse | (1f) | | | | | | -53[a] | 54[a] | 53[a] | 61[a] | 53[a] | 47[a] | 53[a] | 51[a] | 29[c] | 47[a] | 21 | 01 | -04 | 38[a] |
| Compulsive | (1g) | | | | | | | -45[a] | -42[a] | -51[a] | -34[b] | -56[a] | -43[a] | -46[a] | -22 | 05 | -05 | 18 | -22 | -08 |
| Anxiety | (2a) | | | | | | | 87[a] | 83[a] | 79[a] | 57[a] | | 35[b] | 14 | 13 | 57[a] | -10 | -34[b] | -13 | 41[a] |
| Dysthymia | (2b) | | | | | | | 74[a] | 70[a] | 51[a] | | | 15 | -08 | -17 | -29[c] | -17 | -51[a] | -23 | 28[b] |
| Borderline | (2c) | | | | | | | 74[a] | 71[a] | | | | 41[a] | 61[a] | 23 | 05 | -10 | -41[a] | -19 | 44[a] |
| Somatoform | (2d) | | | | | | | 36[b] | | | | | 41[a] | 28[c] | 14 | -06 | 19 | -17 | -24 | 50[a] |
| Psychotic Dep. | (2e) | | | | | | | | | | | | 20 | 05 | 24 | 22 | -37[a] | -44[a] | 07 | 19 |
| Hypomania | (3a) | | | | | | | | | | | | | 75[a] | 54[a] | 18 | 54[a] | 38[a] | 28[c] | 11 |
| Drug Abuse | (3b) | | | | | | | | | | | | | | 56[a] | 54[a] | 60[a] | 66[a] | 40[a] | 06 |
| Paranoid | (4a) | | | | | | | | | | | | | | | 66[a] | 15 | 38[a] | 50[a] | -03 |
| Psychotic Delus. | (4b) | | | | | | | | | | | | | | | | -12 | 28[c] | 37[a] | -06 |
| Histrionic | (5a) | | | | | | | | | | | | | | | | | 65[a] | 08 | 09 |
| Narcissistic | (5b) | | | | | | | | | | | | | | | | | | 49[a] | -34[b] |
| AntiSocial | (6a) | | | | | | | | | | | | | | | | | | | -63[a] |
| Dependent | (6b) | | | | | | | | | | | | | | | | | | | |

[a] $p < .001$, [b] $p < .01$, and [c] $p < .05$ by the two-tailed test, $r = \pm .251$.

Psychotic Thinking, and Alcohol Abuse. The Compulsive scales is also significantly but negatively aligned with this factor. Factor two consisted of five scales (Anxiety, Dysthymic, Borderline, Somatoform, and Psychotic Depression), all interlinked positively and significantly. All scales of factor's one and two were so strongly associated as to constitute something of a superfactor. Factor three consisted of the firmly correlated (.75) Hypomanic and Drug Abuse scales. This pair was also significantly related to factor one's scales of Passive Aggressive and Alcohol Abuse, also negatively with the Compulsive scale plus the Borderline and Somatoform scales from factor two. Factor four included positive linkings between the Paranoid and Psychotic Delusion scales which were also positively related to Drug Abuse (factor 3) and Alcohol Abuse (factor one) scales. The Histrionic and Narcissistic scales constituted a positive fifth factor which was also negatively related to several scales from within factor one including Avoidant, Schizoid, Schizotypal, and Psychotic Thinking. Lastly, the Antisocial and Dependent scales linked negatively to form factor six which was also significantly bonded with the Narcissistic scale of factor five.

# DISCUSSION

## Generalizability of the Sample

The present sample appeared quite similar to prior samples of psychiatric patients on the several measures of psychopathology and outcome, as the intersample mean ratings did not differ significantly on any of the 12 SCL-90R or on the 6 POMS scales. The sharpest differences concerned the Constructive Thinking Inventory, where these patients scores were less favorable, as expected, than the normative sample of college undergraduates. Thus the present sample seems reasonably representative of males manifesting adjustment problems of the types and severity of the general psychiatric population. The subsample of 34 posttesting Completers did not differ importantly from the 33 Noncompleters of posttesting on any outcome measure. Nor did these two subgroups differ notably in age, race, or demographics. They were also similar with respect to psychiatric diagnoses as well as having similar educational backgrounds and medical histories. Some personality differences between these groups were observed on an interrelated quintet of MCMI scales, as the Noncompleters scored significantly lower than the Completers on the MCMI Schizotypal, Borderline, and Dependent scales, but higher on the Narcissistic and Antisocial scales. Thus, the

Noncompleters were disinclined to acknowledge psychopathology and more egocentric than the Completers--attributes which appear consistent with the Noncompleters evasion of the posttreatment phase of this research program. Aside from this distinction, it is unclear whether the Completer and Noncompleter subgroups differed importantly from those patients who declined to participate in this study.

Outcomes within the Psychotherapy Group

The findings clearly support the hypothesis that participation in this group therapy program would be accompanied by a reduction in psychiatric symptoms. This is consistent with prior research indicating that short term intensive inpatient group psychotherapy is helpful in reducing symptoms in patients with a broad range of diagnoses (Beutler et al., 1984; Kanas, 1986; Parloff & Dies, 1977). The pre- to posttest differences on the SCL-90R yielded the clearest supporting evidence, showing reductions on the global symptom scales as well as on each of the more specific scales except Anxiety. However, the meaning of the SCL-90R's specific symptom scales appears cloudy (Brophy et al., 1988; Cyr et al., 1985; Hoffmann & Overall, 1978; Holcomb et al., 1983) and these shifts likely reveal a global reduction in general level of distress. Shifts on the Profile of Mood States also supported the symptom reduction hypothesis, for three of the six POMS scales registered significant symptom declines. Caution is

warranted in discriminating between such symptom scales, since they appear to be highly interrelated and may also be addressing general psychopathology (Norcross et al., 1984). The Constructive Thinking Inventory yielded the least evidence of reduced symptoms, for only two of its seven scales indicated significant movement toward more rational thinking. Only a slight and statistically nonsignificant advance was registered by the CTI's global Constructive Thinking index.

Suggesting that reduced depression was the strongest shift associated with this program of intensive group psychotherapy, all three of the outcome measures of depression declined significantly. The relatively smaller shifts on measures from the Constructive Thinking Inventory suggests that short-term group psychotherapy may not readily alter thinking patterns. Perhaps they were either not addressed sufficiently or are difficult to change. Also, the modest CTI shifts may reflect technical features of measures which were not designed to assess symptomatology within a psychiatric population. Despite such issues, the significant reduction of Negative Thinking Scores is consistent with the findings of reduced symptoms of depression. The absence of a suitable control group presents difficulties in the interpretation of these findings, as they cannot be assessed for random fluctuation or for statistical regression toward the mean.

Many of the measures used were interrelated. The

highest correlations were between the SCL-90R and the POMS scales. All were substantial and highly significant. The CTI scales also correlated significantly with the others, yet these associations were generally weaker. This pattern suggests that the CTI was addressing different aspects of behavior than the SCL-90R and POMS.

Of the 34 Completers of both test phases, only three indicated a substantial negative outcome from their treatment groups. One, a 39 year-old Caucasian male, had entered treatment reporting mild to moderate symptoms but registered significantly increased symptomatology on the posttests. As reported by one of his group therapists, this man appeared to experience an extreme negative transference to this therapist as a result of a misunderstanding. The patient's reaction was so extreme that he threatened to kill this therapist. This reaction may have been exacerbated because the therapist was also this patient's ward psychologist. Additionally, the patient had many physical characteristics similar to those of this therapist. This patient did not present any obvious psychotic symptoms, although he did manifest paranoid personality traits. The reasons for the other two negative outcomes are unclear. Their symptom increases were substantially less than for the case described.

Affiliation as a Primary Social Climate Factor

The findings clearly supported the hypothesized positive relationship between the individual patient's

perceived affiliativeness of his psychotherapy group and reduced symptoms. The substantial correlation (.50) found between the patient's GCQ Affiliativeness ratings and the statement "Everything considered I gained something of value from today's session" is consistent with past research (Hurley, 1989) and links perceived affiliativeness with perceived positive benefits from participating in this short term, intensive, inpatient psychotherapy group. Additional support for this relationship was provided by the significant correlations of the SCL-90R and POMS depression scales with affiliative measures from both the GCQ and GAS using either the residual change or final status outcome indicators. Similar trends on other outcome scales reinforced this finding. Also, relatively larger although statistically nonsignificant correlations with other measures of decreased depression indicate this reduction as the primary benefit of affiliation within this psychotherapy group.

The final status outcome measures also supported the significant associations of the group climate indicators of perceived affiliation with the Global Severity and Positive Symptom Total scales. Furthermore, the POMS Anger scale also correlated significantly with both group climate affiliation measures. Thus, the findings also linked increased affiliation with the reduction of both global symptoms and anger. It seems noteworthy, however, that the correlations between perceived affiliation and posttest

outcomes were almost all in the predicted direction.

Added support for the centrality of affiliativeness as a primary dimension of the social climate is provided by the supplemental analysis of linkages between the outcome measures and the other 13 Group Atmosphere Scales. For both residual change and final status outcome measures, only 6 of 252 correlations reached the .05 level of significance. However, the GAS Affiliation scale figured prominently in these data by contributing half of these significant values. Furthermore, the outcome correlations of GAS Affiliation with POMS depression were the largest associations in each series of 126 correlations with outcomes ($r$ = .50 for residual changes and $r$ = .40 for final status). Positively and firmly aligned ($r$ = .46) with the GAS Affiliation scale, the GAS Variety scale was also significantly associated with decreased POMS Depression and POMS Anger. The only other GAS scale significantly related to decreases in POMS Anger was Spontaneity which was also linked factorally with GAS Affiliation. Thus, while very few statistically significant associations between outcome and the 14 GAS scales were found (6 of 252)--fewer than the 9 expected by chance--all six were consistent with the hypotheses.

Validity of the Outcome Measures and Effect Sizes

The validity of using posttest scores as a measure of outcome was strengthened by the strong correlations between residual change and final status scores on almost all of the outcome scales. However, the significant relationships of

pretest with posttest scores on many of the outcome scales raises questions about the utility of taking final status scores as the only measure of outcome (Mintz, Luborsky, & Christoph, 1979 & Green et al., 1975). Yet, Mintz et al. (1979) did report a .56 correlation between posttreatment ratings of overall health at the end of treatment with posttreatment ratings of amount of change or benefit from the treatment.

The lack of statistically significant shifts on the nonselected scales may indicate small changes during this three week treatment period and the difficulties of linking such small shifts with the other measures. Yet, it is important to note that residual gain scores have been reported to be the best predictor of success ratings (Mintz et. al, 1979). Effect sizes (Cohen, 1969) for these outcome measures were also determined (see Table 15). As expected, these calculations indicated medium to modest effects sizes for each of the selected outcome measures. A mean effect size of .34 was found which can be compared to the .68 effect size reported by Mintz and his colleagues (1979) and also in the Smith and Glass (1977) review of 375 individual psychotherapy studies. Considering that the present study evaluated a short term, inpatient group therapy program, it seems reasonable to anticipate more moderate effect sizes than for long term individual therapy. In describing the notation for effect size, modification was needed since the levels described by May et al. (1976) and Mintz et al.

Table 15

Effect Size for Nine Selected Outcome Measures

| | Effect Size[a] | Notation[b] |
|---|---|---|
| Outcome Measure | | |
| SCL-90R (n = 33) | | |
| Global Symptom Index | .41 | Medium |
| Positive Symptom Total | .32 | Medium |
| Pos. Sym. Dist. Index | .36 | Medium |
| Depression | .39 | Medium |
| POMS (n = 34) | | |
| Anxiety | .38 | Medium |
| Depression | .24 | Modest |
| Anger | .24 | Modest |
| CTI (n = 34) | | |
| Categorical Thinking | .28 | Modest |
| Negative Thinking | .48 | Medium |

[a]Effect Size = absolute value of the quantity: posttest mean minus pretest mean divided by pretest standard deviation.

[b]Notation modified from May et al. (1976) and Mintz et al. (1979).

(1979) did not correspond. Consequently, in adjusting for these inconsistencies, new notations were devised to adequately represent this data in comparison to the Mintz et al. (1979) data.

Affiliative Personalities and their Association to Positive Outcomes

With respect to the final hypothesis of a positive relationship between affiliative personality attributes and improvement within group psychotherapy, many MCMI scales related significantly to individuals' Affiliation scores on the Personality Research Form. Firmly associated ($r \leq .40$) with the PRF's Affiliation scale were MCMI's Histrionic and Narcissistic scales, while similar but inverted correlations obtained with the MCMI's Avoidant, Schizoid, Schizotypal, Passive-Aggressive and Psychotic Depression scales. These MCMI scales were also interrelated in terms of factor structures as the Avoidant, Schizoid, Schizotypal, and Passive-Aggressive personalities constituted a major portion of the MCMI's first factor while the Histrionic and Narcissistic scales composing a separate but polar factor. Consequently, the affiliation-disaffiliation dimension may well underline these two MCMI factors. The salience and perhaps even the primacy of affiliativeness among personality dimensions (Conte & Plutchik, 1981; Freedman et al. 1951; Wiggins, 1982) is suggested by the finding that 15 of the MCMI's 20 scales correlated significantly with the PRF Affiliation scale.

Some support for hypothesis three was noted in the linkages of residual change outcomes to these affiliative and disaffiliative attributes. For affiliative traits, the strongest evidence was provided by correlations between the SCL-90R scales with the MCMI Narcissism scale. For the disaffiliative traits, the MCMI's Passive-Aggressive and Avoidant scales had the strongest negative associations with outcome. Furthermore, all of these relationship were in the predicted direction. The only other significant relationship found was between the MCMI's disaffiliative Passive-Aggressive trait with the POMS Anxiety scale. The remaining associations between the five MCMI scales with the POMS and CTI measures were statistically nonsignificant and sometimes in directions contrary to the hypothesis. This lack of significant finding may be explained by previously noted limitations of change scores.

Final status outcome indicators again yielded much stronger evidence of linkages with affiliative and disaffiliative traits. Virtually all of these outcome measures correlated significantly with the affiliative and disaffiliative personality scales except for the CTI's Categorical Thinking scale. Furthermore, all of these relationships were in the predicted direction. Consequently, assuming that final status is an appropriate outcome measure, substantial evidence indicated a relationship between affiliative personality style and symptom reduction. For the present sample, the stronger the affiliative

propensity, the larger the symptom reduction, and the stronger the disaffiliative propensity, the smaller the symptom reduction. One difficulty with this analysis may be that it only indicates associations between expressed symptoms and personality style without reference to treatment. Thus, individuals with affiliative personality styles tended to report less symptoms as opposed to disaffiliative personality types who tended to report more symptoms at this particular point in time. Significant correlations between pretest symptom scores and the affiliative and disaffiliative MCMI personality scales (see Appendix H) further support the possibility of a reporting bias .

Because individuals who described themselves as more affiliative were more likely to report feeling helped from the group psychotherapy session, the significant relationship between the PRF Affiliation scale and the GCQ's "gained something of value" item adds support for hypothesis three. In addition, although not addressed in the hypothesis, the lack of significant relationships between the PRF Affiliation Scale and the similarly named GCQ and GAS suggest little relationship between the individual's trait affiliativeness and their reports of affiliation within their treatment group. Thus dissociation suggests that how one these patients perceived affiliation within the therapy group environment was largely independent of their diposition toward affiliativeness as tapped by this brief

PRF scale.

Defining the Construct of Affiliation

The modest to weak correlations among the three affiliation measures used in this study presents an interesting problem. Each scale apparently addressed a different facet of affiliativeness. The two measures used to assess perception of affiliation within the social climate correlated only modestly ($r$ = .35, $p$ < .02). Definitions of these two measures may shed some light on their differences. The GAS Affiliation scale was defined as "promotes helpfulness and emotional support" and this 10-item set focused primarily on the general willingness of the group members to interact socially. This scale also appears to be highly related to experiences of involvement and variety. The GCQ affiliativeness index, however, addresses only the member's positive and negative feelings towards a specific group session. Although this measure also taps the experience of emotional support, it adds psychological complexity to the concept by including experiences of engagement such as feeling challenged and confronted as well as feeling cared for and liked.

As mentioned earlier, neither of these two affiliativeness scales was associated with the PRF Affiliation scale. This latter scale's items emphasize the degree of social involvement and friendliness the individual generally experiences which appears to not be significantly related to the degree of affiliation they perceive in the

environment. Jackson (1974) described a higher Affiliation scale scorer as one who "Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people" (p. 6). Each of the three affiliation measures focuses on the social aspect of affiliation; however, what is involved inside these relationships tends to vary with each measure.

Conclusions and Caveats

In summary, the finding strongly supported each hypothesis. The patients in this group treatment program, which consisted of three weeks (four hours per day) of nonstructured psychotherapy led by psychologists, clearly reported reduced symptoms at the end of treatment. These finding added support to the view that even a relatively short but intensive inpatient group psychotherapy program is likely to be helpful in reducing general symptomatology, especially depression. The findings also revealed a clear linkage between these reduced symptoms and the amount of affiliation that the individual perceives within his therapy group. In addition, the affiliativeness of the individual's personal style was also found to be associated with his symptom reduction. These several findings firmly support the salience, and perhaps even the primacy of affiliativeness as a curative mechanism within group psychotherapy.

There are several limitations to the present findings. The type of population used, the lack of a controlled

comparison group, and the difficulties in measuring change all present cautions. Since measurements in this study included targeting emotional status, degree of affiliativeness, and personality, all somewhat tenuous constructs, problems with the validity and reliability of the measurements also existed. It is important to recognize that all of the results are based on self-reported data. However, the addition of rating by different sources does present conflicting results in the literature (Stiles, 1980 & Mintz et al., 1979). Additionally, the second and third hypothesis were tested only by correlations, so it important to not infer causality from this study. Finally, no follow-up study was made of these inpatients, so the stability of the reported changes is unknown.

Some of these limitations resulted from administrative problems. The attempt to collect outcome data from an independent source--the therapists--had to be eliminated due to an inability to coordinate time and resources. In addition, the only way this research project could have been implemented was to fit it into the hospital's existing administrative procedures. This circumstance barred the availability of an appropriate control group and the possibility of random assignments. However, the success of the present study may in part be a result of this particular set of psychotherapy groups. They were unique in being conducted by four highly experienced PhD level psychologists. In addition, the intensive and ongoing

nature of this group program, as contrasted with more traditional inpatient therapy groups which usually meet only a few hours per week, may well have contributed to their successes in facilitating affiliation and in producing beneficial outcomes.

Unfortunately, approximately six months after the completion of the data collection for this project, this intensive group psychotherapy program was terminated as a treatment option at the VA Medical Center. A new Clinical Director had been appointed who wanted more emphasis placed on treatments being focused on the individual wards. This program's demise seems a noteworthy loss in view of the present evidence of its effectiveness. Speculations as to the possible repercussions of disbanding such a long standing and promising treatment program brings to question where the future trends in psychology treatment will lead.

Directions for Future Research

Future research should continue to focus on the psychotherapy process so that it can continue to be empirically evaluated. When possible, the inclusion of an appropriate controlled comparison group with a random selection procedure as well as efforts to attain follow-up data would strengthen the findings. The inclusion of outcome measures which were not dependent on self-report would also broaden the perspective on what types of changes occurred. For example, the use of behavioral observation rating or other types of third party rating would decrease

subjectivity. The use of personal interviews with each patient could also add valuable qualitative information concerning their perceptions of the variables pertinent to outcomes from group psychotherapy processes.

Although the importance of affiliation as a primary factor in group psychotherapy outcome seems evident from the present findings, research should continue to explore the relevance of this dimension and how it may be used within the therapeutic framework to promote change. For example, considering the inconsistencies in the relationships between the various affiliation measures used in the this study, attempting to more accurately define and operationalize this concept is a primary task. The present findings clearly suggest that affiliation has a central relationship to therapeutic outcome; however, investigators need to continue to assess other personality and environmental dimensions of psychotherapy and their relationship to change.

# APPENDICES

# APPENDIX A

# CONSTRUCTIVE THINKING INVENTORY

## CT INVENTORY

The following are some statements on feelings, beliefs, and behavior. Score "1" if the statement is definitely false; "5" if it is definitely true. A rating of "2" will indicate that the statement is mainly false; a rating of "4" that it is mainly true. Use "3" only is you cannot decide if the item is mainly true or false.

Be honest, but do not spend too much time over any one statement. First impressions are as accurate as any.

1=Definitely False
2=Mostly False
3=Undecided or Neither False nor True
4=Mostly True
5=Definitely True

_____ 1. I worry a great deal about what other people think of me.
_____ 2. I am the kind of person who takes action rather than just thinks or complains about a situation.
_____ 3. Most people regard me as a tolerant and forgiving person.
_____ 4. I have found that talking about successes that I am looking forward to can keep them from happening.
_____ 5. When I have learned that someone I love loves me, it has made me feel like a wonderful person and that I can accomplish whatever I want.
_____ 6. I have learned from bitter experience that most people are not trustworthy.
_____ 7. When I am faced with a difficult task, I think encouraging thoughts that help me to do my best.
_____ 8 I have washed my hands before eating at least once in the past month.
_____ 9. If I said something foolish when I spoke up in a group, I would chalk it up to experience and not worry about it.
_____ 10. I often avoid facing problems.
_____ 11. I usually feel that it is acceptable for me to do well in some things and not so well in others.
_____ 12. When something bad happens to me, I feel that more bad things are likely to follow.
_____ 13. I think everyone should love their parents.
_____ 14. If I do poorly on an important task, I feel like a total failure and that I won't go very far in life.
_____ 15. I get so distressed when I noticed that I am doing poorly in something that it makes me do worse.
_____ 16. The slightest indication of disapproval gets me upset.
_____ 17. If I have something unpleasant to do, I try to make the best of it by thinking in positive terms.

_____ 18. When someone I know is rejected by a person they love, I feel they are inadequate and will never be able to accomplish anything.
_____ 19. I have never seen anyone with blue eyes.
_____ 20. I believe that some people can make me aware of them just by thinking about me.
_____ 21. I don't get very distressed over the mistakes of others, but try to deal with them in a constructive way.
_____ 22. If I do well on an important test, I feel like a total success and that I will go very far in life.
_____ 23. When I have to be in an unpleasant or boring situation for a while, I keep watching the clock and wishing I were somewhere else.
_____ 24. I think about how I will deal with threatening events ahead of time, but I don't worry needlessly.
_____ 25. I avoid challenges because it hurts too much when I fail.
_____ 26. There are basically two kinds of people in this world, good and bad.
_____ 27. I believe if I think terrible thoughts about someone, it can affect that person's well-being.
_____ 28. When people judge me unfavorably, I tend to think they are right.
_____ 29. When someone I know is loved by a person they love, I feel that they are a wonderful person and can accomplish whatever they want to.
_____ 30. When something unfortunate happens to me, it reminds me of all the other things wrong in my life, which adds to my unhappiness.
_____ 31. It bothers me when anyone doesn't like me.
_____ 32. I look at challenges not as something to fear, but as an opportunity to test myself and learn.
_____ 33. I think there are many wrong ways, but only one right way, to do almost anything.
_____ 34. I do not believe in any superstitions.
_____ 35. I spend much more time mentally rehearsing my failures than remembering my successes.
_____ 36. I believe that most birds can run faster than they can fly.
_____ 37. If someone I know were accepted at an important job interview, I would think that he or she would always be able to get a good job.
_____ 38. I believe that most people are only interested in themselves.
_____ 39. I don't let little things bother me.
_____ 40. If I were rejected at an important job interview, I would feel very low and think I would never be able to get a good job.
_____ 41. I believe that in order to have a good relationship, you have to work on it.
_____ 42. When I am faced with a new situation, I tend to

think the worst possible outcome will happen.

_____ 43. I believe in not taking any chances on Friday the 13th.

_____ 44. I believe that people can accomplish anything they want to do if they have enough willpower.

_____ 45. I feel that people who wear glasses usually can see better without their glasses.

_____ 46. I tend to dwell more on pleasant than unpleasant incidents from the past.

_____ 47. When unpleasant things happen to me, I don't let them prey on my mind.

_____ 48. When faced with upcoming unpleasant events, I usually carefully think through how I will deal with them.

_____ 49. If I do very poorly on a task, I realize it is only a single task, and it doesn't make me feel generally incompetent.

_____ 50. I tend to classify people as either for me or against me.

_____ 51. It would not bother me in the least if a black cat crossed my path and I walked under a ladder on the same day.

_____ 52. If I were accepted at an important job interview, I would feel very good and think that I would always be able to get a good job.

_____ 53. My mind sometimes drifts to unpleasant events from the past.

_____ 54. I tend to take things personally.

_____ 55. Although women sometimes wear pants, they do not wear them, on average, as often as men.

_____ 56. When doing unpleasant chores, I make the best of it by thinking pleasant or interesting thoughts.

_____ 57. When faced with a large amount of work to complete, I tell myself I can never get it done, and feel like giving up.

_____ 58. I try to accept people as they are without judging them.

_____ 59. I sometimes think that if I want something to happen too badly, it will keep it from happening.

_____ 60. I have very definite ideas about how things should be done, and I get distressed when they are not done that way.

_____ 61. It is so distressing to me to try hard and fail, that I rarely make an all-out effort to do my best.

_____ 62. When someone I love has rejected me, it has made me feel inadequate and that I will never be able to accomplish anything.

_____ 63. I am very sensitive to being made fun of.

_____ 64. When something good happens to me, I believe it is likely to be balanced by something bad.

# APPENDIX B

## GROUP CLIMATE QUESTIONNAIRE-SHORT FORM

# GROUP CLIMATE QUESTIONNAIRE-SHORT FORM

Initials:_____

Date of Birth:_____

Date:_____

INSTRUCTIONS: Read each statement carefully and try to think of the group as a whole. Using the Rating Scale as a guide, circle the response to each statement that best describes this group during today's session. Please avoid omissions and encircle only one response per statement.

0 NOT AT ALL
1 A LITTLE BIT
2 SOMEWHAT
3 MODERATELY
4 QUITE A BIT
5 A GREAT DEAL
6 EXTREMELY

| | |
|---|---|
| The members liked and cared about each other- | 0 1 2 3 4 5 6 |
| The members tried to understand why they do the things they do, tried to reason it out | 0 1 2 3 4 5 6 |
| The members avoided looking at important issues going on between themselves-------- | 0 1 2 3 4 5 6 |
| The members felt what was happening was important and there was a sense of participation---- | 0 1 2 3 4 5 6 |
| The members depended upon the group leader/s for direction---------- | 0 1 2 3 4 5 6 |
| The was friction and anger between the members | 0 1 2 3 4 5 6 |
| The members were distant and withdrawn from each other---------- | 0 1 2 3 4 5 6 |
| The members challenged and confronted each other their efforts to sort things out---------- | 0 1 2 3 4 5 6 |
| The members appeared to do things the way they thought would be acceptable to the group--- | 0 1 2 3 4 5 6 |
| The members distrusted and rejected each other | 0 1 2 3 4 5 6 |
| The members revealed sensitive personal information of feelings---------- | 0 1 2 3 4 5 6 |
| The members appeared tense and anxious------- | 0 1 2 3 4 5 6 |
| Everything considered, I gained something of value from today's session---------- | 0 1 2 3 4 5 6 |

# APPENDIX C

## GROUP ATMOSPHERE SCALE

Instructions: There are 130 statements here. They are statements about groups. You are to decide which statements are true of your group experiences and which are not. Circle the T when you think the statement is mostly TRUE of your group experiences. Circle the F when you think the statement is mostly FALSE of your group experiences. Please be sure to answer every item.

T F 1. Members move around within the group whenever they want to.
T F 2. The therapists spend more time with some members than with others.
T F 3. There is very little emphasis on making plans for members for after their time in the group has ended.
T F 4. The therapists don't order the members around.
T F 5. It's hard to get members together immediately before or after the group meeting.
T F 6. Most group members follow the same routine after they arrive for the group meeting.
T F 7. Group members talk very little about their past.
T F 8. The situation here is the best I've ever known.
T F 9. Group members put a lot of energy into what they do around here.
T F 10. Group members sometimes play practical jokes on each other.
T F 11. This is a lively group.
T F 12. Group members never know when the therapists will talk to them.
T F 13. Group members can wear what they want.
T F 14. Group members tend to hide their feelings from one another.
T F 15. The stronger members on the groups help the less strong ones.
T F 16. The groups emphasize training for new ways of solving problems.
T F 17. Once a mode of action is arranged for a group member, the member must follow it.
T F 18. There are some group members who hang around together a lot.
T F 19. Many group members look messy.
T F 20. Group members tell each other about their personal problems.
T F 21. The therapists here never do anything for the group members.
T F 22. A lot of group members just seem to be passing time in the group.
T F 23. It's hard to get people to argue around here.
T F 24. Most group members dress and act pretty much alike.
T F 25. The group members know when the therapists will arrive for the group meeting.

T F 26. There are no majority rules in this group.
T F 27. Group members start talking without being pushed by the therapists.
T F 28. The therapists have very little time to encourage group members.
T F 29. Most group members are more concerned with the past than with the future.
T F 30. The therapists very rarely punish group members by not letting them talk.
T F 31. These groups have very few times when the members talk with each other.
T F 32. Individual activities are carefully planned.
T F 33. Group members hardly ever discuss their sex lives.
T F 34. This is the best group I've ever been a member of.
T F 35. The members are proud of this group.
T F 36. Group members often gripe.
T F 37. New ways of relating to people are often tried in this group.
T F 38. Things are sometimes very disorganized around here.
T F 39. The therapists act on members' suggestions.
T F 40. When the group members disagree with each other, they keep it to themselves.
T F 41. The therapists know what the group members want.
T F 42. Group members here are expected to work toward goals which will help them.
T F 43. In this group everyone knows who's in charge.
T F 44. Nearly everyone here has some social contact before or after group meetings.
T F 45. The group's meeting place is often messy.
T F 46. Personal problems are openly talked about.
T F 47. The therapists here are just terribly stupid.
T F 48. Very few things around here ever get people excited.
T F 49. The therapists never start arguments in group meetings.
T F 50. The groups always stay just about the same.
T F 51. If a group member breaks a rule, he knows what will happen to him.
T F 52. Very few members have any responsibility in these groups.
T F 53. Group members say anything they want to the therapists.
T F 54. Group members rarely help each other.
T F 55. There is very little emphasis on making group members more helpful.
T F 56. Group members call the therapists by their first names.
T F 57. Therapists spend very little time talking with group members.

T F 58. This is a very well organized group.
T F 59. Group members are rarely asked personal questions by the therapists.
T F 60. I never want to leave this group.
T F 61. Discussions are pretty interesting in these groups.
T F 62. Group members often criticize or joke about the therapists.
T F 63. The therapists are always changing their style in these groups.
T F 64. People are always changing their minds here.
T F 65. Group members can move about within the groups without saying where they are going.
T F 66. It is hard to tell how group members are feeling in these groups.
T F 67. Therapists seem interested in following up members once they have finished with the group.
T F 68. Group members are encouraged to plan for the future.
T F 69. Group members who break the group rules are punished for it.
T F 70. Group members often do things together right before or after group meetings.
T F 71. The meeting place sometimes gets very messy.
T F 72. Therapists are mainly interested in learning about group members' feelings.
T F 73. The therapists dislike the members of these groups.
T F 74. Nobody ever volunteers around here.
T F 75. Members in these groups rarely argue.
T F 76. There is little going on around here most of the time.
T F 77. If a group member is criticized by the therapists, the therapists always tell him why.
T F 78. The therapists rarely give in to group members pressure.
T F 79. It's OK to act foolish around here.
T F 80. The therapists sometime don't show up for their appointments with the group.
T F 81. There is very little emphasis on what group members will be doing after they leave the group.
T F 82. Group members may interrupt the therapists when they are talking.
T F 83. There is very little sharing among the group members.
T F 84. The therapists make sure that the meeting room is always neat.
T F 85. The group members rarely talk about their personal problems with other members.
T F 86. The therapists of this group will break about any rule to help group members.
T F 87. Group members are pretty busy all of the time.

T F 88. In this group members are pretty busy all of the time.
T F 89. These groups are quite different from one session to another.
T F 90. Group members never know when they will be left out in this group.
T F 91. Group members are expected to take leadership in the group.
T F 92. Group members tend to hide their feelings from the therapists.
T F 93. Each group member is treated differently in these groups, depending on his problem.
T F 94. Group members are encouraged to learn new ways of doing things.
T F 95. Group members will be dropped from the group if they don't obey the rules.
T F 96. The therapists help new members to get to know other members in these groups.
T F 97. The meeting room is often messy.
T F 98. Group members are expected to share their personal problems with each other.
T F 99. The therapists don't really know their job.
T F 100. Group members don't do anything around here unless the therapists ask them to.
T F 101. Members here rarely become angry.
T F 102. Members of this group all have about the same kind of problems.
T F 103. The therapists tell group members when they are doing well.
T F 104. The therapists sometimes does things for a group member that he really could do for himself.
T F 105. Group members are encouraged to show their feelings.
T F 106. Therapists take very little time to encourage group members.
T F 107. Therapists care more about how group members feel than about their practical types of problems.
T F 108. Group members are rarely kept waiting when they have appointments with the therapists.
T F 109. It takes a long time for new members to get to know each other in these groups.
T F 110. The therapists set an example for neatness and orderliness.
T F 111. It's not safe for group members to discuss their personal problems abound here.
T F 112. This is the most interesting group I could possibly imagine.
T F 113. Group members here really try to improve.
T F 114. The therapists sometimes argue with members.
T F 115. The group discussion is always changing.
T F 116. The therapists don't explain what group therapy

is about to group members.

T F 117. Group members are encouraged to be independent.
T F 118. Group members are careful about what they say when the therapists are around.
T F 119. The therapists go out of their was to help group members.
T F 120. Group members must make plans before their time in the group ends.
T F 121. It's a good idea to let the therapists know that they are the boss.
T F 122. Members of these groups are concerned about each other.
T F 123. The group meeting place usually looks a little messy.
T F 124. The therapists strongly encourage group members to talk about their past.
T F 125. In this group, the therapists never talk to any of the members.
T F 126. There is very little group spirit in these groups.
T F 127. If a group member argues with another group member, he will get into trouble with the therapists.
T F 128. Everyone in these groups have pretty much the same opinion about therapy.
T F 129. Group therapy rules are clearly understood by the group members.
T F 130. The therapists discourage criticism.

# APPENDIX D

# AFFILIATION SCALE

**Directions: Read each statement and decide whether or not it describes you. If you agree with a statement or decide that it does describe you, circle TRUE. If you disagree with a statement or feel that it is not descriptive of you, circle FALSE.**

| | | | |
|---|---|---|---|
| 1. | I am quite independent of the people I know. | TRUE | FALSE |
| 2. | I choose hobbies that I can share with other people. | TRUE | FALSE |
| 3. | I seldom put out extra effort to make friends. | TRUE | FALSE |
| 4. | I go out of my way to meet people. | TRUE | FALSE |
| 5. | I don't really have fun at large parties. | TRUE | FALSE |
| 6. | People consider me to be quite friendly. | TRUE | FALSE |
| 7. | I would not be very good at a job which required me to meet people all day long. | TRUE | FALSE |
| 8. | I truly enjoy myself at social functions. | TRUE | FALSE |
| 9. | When I see someone I know from a distance, I don't go out of my way to say hello. | TRUE | FALSE |
| 10. | I spend a lot of time visiting friends. | TRUE | FALSE |
| 11. | Sometimes I have to make a real effort to be sociable. | TRUE | FALSE |
| 12. | My friendships are many. | TRUE | FALSE |
| 13. | I don't spend much of my time talking with people I see every day. | TRUE | FALSE |
| 14. | I trust my friends completely. | TRUE | FALSE |
| 15. | Often I would rather be alone than with a group of friends. | TRUE | FALSE |
| 16. | I try to be in the company of friends as much as possible. | TRUE | FALSE |

# APPENDIX E

# VIGNETTES

A 53 year-old accountant came into treatment because of moderate chronic depression and anxiety, which made his daily life a miserable experience, though he was able to perform his work well. He was constantly concerned that he was not really fully accepted by his partners; in fact, he felt that he did not really belong anywhere. He exuded a general aura of pessimism and negativism. There was no trace of enthusiasm for anything--either people or objects. Occasionally he would engage his wife in bitter discussions expounding his black view of the world, and the arguments that developed could evoke a kind of pseudo-excitement in him. He had been born in Western Europe to moderately well-off parents. His father was a grocer, his mother helped in the store, and their two children were cared for by a series of maids. The vicissitudes of war caused the patient's separation from his parents at age seven, and subsequently he grew up in a series of foster homes, but a chronic bed-wetting problem may have been an important factor. During treatment it became apparent, from both the reconstruction of his history as well as from manifestations in the transference, that he had no expectation of any real interest in him from anybody. Yet equally apparent was his need for recognition and confirmation of his worth by his coworkers and, especially, from me. His underestimated self manifested as a chronic depression. (Wolf, 1988, p. 70)

A 45 year-old professional man came into treatment because of chronic depression. As the only child of elderly parents, he was doted on by an overprotective mother who effectively prevented him from participating in the rough-and-tumble of playing with his peers. Instead, he was given much encouragement and profuse approbation for intellectual activities of all kinds in which he, indeed, excelled. From the point of view of the parents, this was not only reasonable--after all, why should he risk getting hurt playing with those roughnecks when he could spend that time enjoying good reading and good music?--but also suited the aged parents' low tolerance for the confusing noisiness of children and adolescents. The youngster thus grew up in compliance with his parents' needs, while his own needs for gratifying self-object experiences evoked by pleasure in the effectiveness of his body and by self-enhancing self-object experiences with his peer group were greatly curtailed. No one admired him, only certain parts of him were acceptable to others, and consequently his self lacked cohesion and was prone to fragmentation. A resulting sense of both physical and social inadequacy were symptomatic of this vulnerability. To keep from regressing further, he engaged in certain sexualized rituals and obsessive preoccupations that distract him from the ever-present sense of inadequacy. He yearned for the selfobject experiences, particularly with his peer group, that were so needed for the strengthening of his self. But the very defenses of intellectualization and

certain haughtiness that protected his self-esteem simultaneously interfered with peer relations and thus led to further deprivation. He became a loner--talented, moody, living in fantasy, deprived of the self-sustaining self-object experiences if an active social life. (Wolf, 1988, p. 95)

# APPENDIX F

## CONSENT FORM

# CONSENT FORM

Name:_____

Date of Birth: _____

As a doctoral student in psychology at Michigan State University, I am seeking volunteers to participate in a research project concerning some of the personality and situational factors associated with the Marathon Group Psychotherapy program. As a volunteer, you will be asked to fill out a series of questionnaires before attending these group psychotherapy sessions which will take about 90 minutes. During your period of participating in this program, you will also be asked to fill out a short questionnaire twice a week which will take less than five minutes each time. And finally, after attending this 3 week program of marathon group, you will be asked to complete a series of questionnaires which will take approximately one hour.

Participation is completely voluntary and you may choose to not participate at all or may choose to not answer certain questions or may discontinue participating in the research at any time without penalty, and your therapy will not be affected in any way. All results of these questionnaires will be kept strictly confidential by the researcher. Upon request, you will be given personal feedback concerning the results after completing these tasks. If you are willing to participate, please read and sign this statement and the attached statement which further outlines your rights and the responsibilities of the VA and its staff. Please ask if you have any questions.

_____ _____

Participant Signature Date

Questions may be addressed to:

Rosemarie Ratto, M.A.
Dept. of Psychology
Snyder Hall
Michigan State University
East Lansing, MI 48823
(517) 355-9561

-or-

Larry Schwartz, Ph.D.
VA, Psychology Service
ext. 3727

# APPENDIX G

# HISTORY FORM

# HISTORY FORM

Subject ID #: _____

Age: _____

Sex: M F

Race: _____

Marital Status:_____

Official Diagnosis: _____

Admission date of current hospitalization: _____

Current medications:_____

_____

_____

Physical problems:_____

_____

Amount of time spent in Marathon Group:_____

Other treatments currently involved in:_____

_____

Number of prior times in Marathon Group (include dates):___

_____

_____

Date of discharge from hospital: _____

Discharge recommendations:_____

_____

_____

_____

_____

History of other hospitalizations and treatments (include dates, length of stay, and treatments):_____

_____

_____

_____

_____

_____

_____

# APPENDIX H

## TABLE 16

Table 16

Correlations of Pretest Status with Seven MCMI Scales Ordered for Affiliativeness

| | Affil. MCMI scales | | Disaffil. MCMI scales | | | | |
|---|---|---|---|---|---|---|---|
| | Hist. | Narci. | Schizt. | Schiz. | P-Agr. | PsyD. | Avoid. |
| SCL-90R | | | | | | | |
| Global | -.19 | -.27* | .30* | .40* | .45* | .51* | .54* |
| PST | -.24* | -.26* | .28* | .36* | .50* | .44* | .55* |
| PSDI | -.12 | -.24* | .28* | .34* | .28* | .39* | .42* |
| Depres. | -.20 | -.36* | .26* | .36* | .31* | .44* | .46* |
| POMS | | | | | | | |
| Anxiety | -.34* | -.43* | .23* | .39* | .50* | .47* | .49* |
| Depres. | -.31* | -.47* | .24* | .40* | .26* | .48* | .50* |
| Anger | -.38* | -.39* | .22* | .36* | .41* | .50* | .46* |
| CTI | | | | | | | |
| Cat. T. | -.01 | -.15 | .25* | .31* | .35* | .43* | .32* |
| Neg. T. | -.27* | -.48* | .56* | .42* | .55* | .50* | .62* |

*$p < .05$, one-tailed test.

Note.--$n$'s = 61 for POMS and CTI, 60 for SCL-90R.

# LIST OF REFERENCES

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