A Study Of The Predictive Validity Of The Hill Interaction Matrix Form-B Total Scores For Their Use As A Screening Device For Potential Group Members

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A STUDY OF THE PREDICTIVE VALIDITY OF THE HILL INTERACTION MATRIX FORM-B TOTAL SCORES FOR THEIR USE AS A SCREENING DEVICE FOR POTENTIAL GROUP MEMBERS

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A Study of the Predictive Validity of the Hill Interaction Matrix Form-B Total Scores for Their Use as a Screening Device for Potential Group Members

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Education in Counseling and Educational Psychology

by

Ronald E. Shaver

April 1982
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This study was designed to provide information regarding the predictive validity of the Hill Interaction Matrix Form-B (HIM-B), a test of interpersonal behavior, for its use in screening potential group members.

Group counselors who desire to screen potential group members are faced with a dilemma. Traditional screening methods such as intake interviews, waiting list groups and standard psychological testing have proven inadequate for the task of screening for groups. Tests of interpersonal behavior seem appropriate for screening purposes but flaws in some of these tests limit their usefulness. A review of the literature generated concerns about the HIM-B's composition and the recommended interpretation of the HIM-B's Total Acceptance Score. Problems with the scoring method for the test and the interpretation of scores raise some research questions concerning (1) the shape of the relationship between HIM-B total score variations and quality of group behavior and (2) the ability of HIM-B total score variations to predict quality of group behavior.

Three groups were selected for inclusion in the study: (1) graduate students in a group dynamics class with an experiential component, (2) patients attending a
drug and alcohol awareness group, and (3) a group of emergency room nurses attending a stress management group. The total sample size was 44 with 31 female and 13 male subjects.

The HIM-B was administered to the subjects prior to the beginning of the group sessions and their interactions from three of their group sessions was recorded on the Hill Interaction Matrix as an indication of quality of group behavior.

The results of a test for linearity indicated that the shape of the relationship between the HIM-B total score variations and quality of group behavior tended toward linearity although the results were significant at the .05 level for only one of the three HIM-B total score variations. The Pearson r predictive validity coefficients indicated that the correlation between HIM-B total score variations and quality of group behavior was negative, a direction not anticipated from the literature, with two of the three score variations significant at the .05 level.

The results of the study fail to support Hill's recommended interpretation of the Total Acceptance Score and further, do not support the use of HIM-B total score variations for screening purposes.
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Many people deserve recognition for their role in the completion of this doctoral dissertation.

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I would like to thank my numerous martial arts instructors who taught me the self discipline necessary to complete an undertaking of this scope and magnitude. Without their input many years ago, this could easily have turned into an exercise in futility. I would also like to thank my typist Pat Hudson who came in at the last minute and did a beautiful job.

Finally, I would like to dedicate this work to my grandfather George Proal who taught me about life and also to my wife Camille and daughter Kristi who are helping me enjoy it.
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CHAPTER I

STATEMENT OF THE PROBLEM

... man is an indivisible, social, decision-making being whose actions have social purpose. Recognizing that human beings are social beings creates a new awareness of both verbal and non-verbal interactions and transactions. Thus, all the transactions that occur within the group take on added meaning insofar as they enable us to observe the personality of the individual as it is developed in interaction patterns with others (Dinkmeyer and Murro, 1979, p. 7.).

Workers in the helping professions as far back as Anton Mesmer in 1790 have recognized the therapeutic potential of groups. Yalom (1965), Dinkmeyer and Muro (1979), Andrews (1972) and Corsini and Rosenberg (1955) have all identified curative factors unique to groups. A climate of trust develops among group members through increasingly personal self disclosures that allows for the examination of personal problems. Members then can try out new behaviors and receive feedback from the group. This climate of trust and the resultant reality testing is jeopardized by group members who monopolize the group with irrelevant conversation, demand attention and attack other group members and the group leader with little provocation. These members hinder group process and cause psychological harm to the other group members.

The Ethical Standards of the American Personnel and Guidance Association presently mandate that leaders protect
group members from psychological harm. Gazda (1973) proposed an addition to the APGA Ethical Standards that would require group leaders to screen prospective group members in order to identify those clients whose behavior might not be appropriate for groups. Gazda's addition may have foreshadowed the Association of Specialists in Group Work's proposed Ethical Standards that are specific to the group setting.

An issue in group counseling which has caused a great deal of controversy is the selection of clients. "A considerable number of group leaders are in favor of screening while others believe that a decision regarding a client's appropriateness is contrary to the concepts and principles of human relations training" (Morris and Cinnamon, 1976, p. 73). Ellis (Morris and Cinnamon, 1976) and Gazda (1970) favor screening as a means of avoiding disruption of the group and harm being done to the group members. Jourard (Morris and Cinnamon, 1976) and Gibb (in Gazda, 1970) favor open membership in groups claiming that the group leader should have the expertise to handle potentially disruptive clients.

Yalom and Lieberman (1971) suggested that certain personality types are unsuitable for inclusion in a group setting because of their potentially disruptive effect on the group. Reddy (1970) concluded that the group experience may be psychologically harmful for some people. Results of a number of premature termination studies (Kotkov and Meadow,
1952; Kotkov, 1958; Yalom, 1966; Yalom et al, 1967; Melnick and Rose, 1979) underscore the need for some type of selection process for group clients. Screening of clients anticipating membership in groups might eliminate some of the potential harm to members and the group as a whole.

An equally controversial subject is that of the method and criteria used in screening. Screening techniques currently being used include; intake interviews, waiting list groups and psychological testing. The failure of these traditional techniques to adequately screen potential group members implies a need for the development of screening techniques that sample interpersonal behavior.

Although the development of tests of interpersonal behavior is still in a primitive stage, tests that examine interpersonal behavior include; the Bales Interaction Process Analysis (Bales, 1950), the Fundamental Interpersonal Relations Orientation-Behavior (Schutz, 1960), the Interpersonal Circular Grid (Leary in Yalom, 1976) and the Hill Interaction Matrix Form-B (Hill, 1965). Flaws in the first three tests limit their applicability for screening purposes. The Bales Interaction Process Analysis (IPA) was designed for use with problem solving groups, the Interpersonal Circular Grid is complex and cumbersome and the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) has never been used to predict behavior in groups.

However, the Hill Interaction Matrix Form-B (HIM-B)
is designed for the specific purpose of selection of group members in addition to its suggested use for the description of group leader behavior and analysis of conflicts created by group composition (Hill, 1965). The HIM-B is a sixty-four item test that examines anticipated behaviors in a real or imaginary group. The HIM-B is based on the Hill Interaction Matrix, a device used to chart group interactions (Hill, 1965).

In its use as a group selection device, Hill (1965) suggests that the HIM-B's Total Acceptance Score (TAS) is the most appropriate scoring combination for interpretation purposes. Hill (1965) has divided the TAS into three score groups; scores below 43, scores between 43 and 102 and scores above 102. These score groupings are based on the therapeutic potential of the item and cell scores of the HIM-B that contribute to the TAS.

The major problem that exists with the HIM-B is that, even though the test was created in 1965, a review of the literature and telephone contact with Dr. Hill reveals that predictive validity studies of the HIM-B have never been performed. Therefore, the presumption of predictive validity for its use as a screening device for groups has never been demonstrated.

The purpose of this study is to examine the HIM-B's ability to predict behavior in groups in order to establish its utility as a screening device for potential group cli-
ents. The results of this study might contribute empirical evidence of the predictive validity of the HIM-B, thus allowing group counselors a better basis for decisions concerning the use of the HIM-B and also providing more information to improve the interpretation of HIM-B profiles. The question of interest in this investigation concerns the optimal use of information provided on the HIM-B in the prediction of actual group behavior of clients.
CHAPTER II

REVIEW OF THE LITERATURE

The Therapeutic Potential of Groups

Multiple factors unique to groups make the group situation an effective therapeutic milieu. A major drawback of individual therapy is that the therapist must often accept a subjective description of the client's pathological or maladaptive behavior since the client is often on good behavior while in the presence of the therapist. This description may come from the client, the client's family or a referral agency. The use of groups provides an alternative to this problem. In a group situation

... given enough time, every patient will begin to be himself, to interact with the group members as he interacts with others in his social sphere, to create in the group the same interpersonal universe which he has always inhabited. In other words, patients will begin to display their maladaptive interpersonal behavior in the group; there is no need for them to describe their pathology--they will sooner or later act it out before the group's eyes (Yalom, 1975, p. 29).

The group therapist can observe not only the maladaptive behavior of the client but also the reactive behavior that it elicits from the other group members. They are likely to react in much the same way as the people in the client's larger social universe.
While the therapist is working with one group member, the other members begin to realize that other people have problems similar to theirs. Universalization, the concept that "one is not unique and that others have similar problems" (Dinkmeyer and Muro, 1979, p. 103), reduces the individual's feelings of loneliness and alienation. Problems become less frightening when they are shared. Universalization "relieves guilt, which permits certain beginning insights and gives a base for reality testing, while usually opening the gates for extensive emotional support from other group members" (Andrews in Diedrich and Dye, 1972, p. 157).

The feeling of being accepted into the group also has powerful therapeutic potential. "The group will usually accept an individual regardless of his past, his problem or his feelings and this acceptance by others often forces the client to examine his feelings of being unloved and unwanted" (Frank in Yalom, 1975, p. 46). Peer acceptance or member to member acceptance may be a more powerful force in therapy than therapist to member acceptance because the other group members are not paid to care and do not have to understand, they give of themselves freely. Acceptance is an important element of the process of therapy because "A person must feel accepted by the others and supported by them if he is to let down his defenses and accept interpretations" (Andrews in Diedrich and Dye, 1972, p. 160).

Knowing that they do not have a unique or insurmount-
able problem and being accepted by the other members helps to extinguish the client's feeling of hopelessness. Over the course of the group's meetings clients also have continued contact with group members who have improved because of their membership in the group. The more hesitant clients begin to feel that group therapy might work for them because they see it helping others. The exposure to group members who are making progress in therapy helps prevent the deterioration of group discussion into the game of "Ain't It Awful" (Berne, 1964).

As their social interest increases in the group, clients begin to share information with each other. As they begin to see similarities in their behavior, they self disclose not only about their own problems but also about ways in which they have handled those problems either effectively or ineffectively. "The process of advice giving . . . implies and conveys a mutual interest and caring" (Yalom, 1975, p. 1). Through advice giving clients develop the feeling of having helped someone and of being useful, feelings that enhance their self esteem. According to Glasser (1965), in order to fulfill our basic psychological needs we must be involved with others.

Another curative factor unique to groups is spectator therapy in which clients develop an understanding of their own problems and personalities by hearing the concerns of others and by observing the therapy of other clients with
similar problems. Social learning is accomplished simply by observing the universe of behaviors presented by the group leader and the other group members over the course of the group. Yalom, Lieberman and Miles (1972) observed that members who underwent change often profited from incidents in which they were merely observers obtaining cognitive input.

Finally, there is the powerful curative factor of reality testing or experiential validation in which a group member can practice new behaviors in the relative safety of the group and receive constructive feedback about how these new behaviors are perceived by the other group members.

"The appropriateness or inappropriateness of a patient's behavior responses is validated by the group's response to the behavior both in their actions and in their verbalizations regarding the patient's behavior" (Andrews in Diedrich and Dye, 1972, p. 163). Behaviors consensually agreed on as being non-productive can then be altered before the client tries them in the world outside of the group.

These curative factors are contingent on the creation of a climate of trust and emotional support in which a client feels comfortable verbalizing his or her problems without fear of censure, ridicule or interruption. Group members who vent their hostility by verbally attacking other group members, monopolize the group by presenting long vague monologues and who constantly criticize the group process jeopardize the creation of that climate of trust so essen-
tial to progress in groups. Prospective group members who manifest these potentially disruptive behaviors could possibly be identified and deselected from the group environment by some type of screening procedure.

Screening: The Issue

The Ethical Standards of the American Personnel and Guidance Association state that "In a group setting, the member-leader is also responsible for protecting individuals from physical and/or psychological trauma resulting from interaction within the group" (American Personnel and Guidance Association Ethical Standards, Section B, Item 4, Revised, 1974). A screening or selection process which identifies clients whose behavior is unsuitable for inclusion in the group setting could very well be the vehicle for protecting group members from harm.

Recognizing the potential dangers of open membership, Gazda, in 1973, proposed the following addition to Section B, Item 4 of the American Personnel and Guidance Association Ethical Standards. "The member has the responsibility to screen prospective clients for group counseling in order to determine their suitability for participation" (Gazda, 1973, p. 157). The same year, the American Psychological Association proposed the standard that

A screening interview should be conducted by the group leader prior to the acceptance of any participant. It is the responsibility of the leader to screen out those individuals for whom he or she judges the group expe-
rience to be inappropriate. Should an interview not be possible, then other measures should be used to achieve the same results (Clark, et al, 1973, p. 933).

Selection of members was one of the critical ethical concerns in group work discussed at the 1977 APGA convention in Dallas, Texas. This issue of member selection has caused some controversy and a resultant splitting of counselors who use groups into opposing schools of thought. "A considerable number of group leaders are in favor of screening while others believe that a decision regarding a client's appropriateness is contrary to the concepts and principles of human relations training" (Morris and Cinnamon, 1976, p. 73.)

Some group leaders who oppose selection are Gibb (Gazda, 1970), Jourard (Morris and Cinnamon, 1976) and Berne (Berne, 1966). Jack Gibb, a T-group leader and member of the encounter movement in the 1960's, feels that the low incidence of psychotic breaks in T-groups doesn't warrant the use of a screening process. His comment on screening is that "I have very little concern that things will go wrong. I think that fear is self-fulfilling" (Gibb, 1970, p. 68).

Sidney Jourard, another encounter group leader and author of The Transparent Self, stated that members are self-screening in the sense that "Only those come who wish to be there" (Jourard in Morris and Cinnamon, 1976, p. 81). He also suggests that "The leader must assume the responsibility of helping the group cope with members who are radically different" (Jourard in Morris and Cinnamon, 1976, p. 81).
Although he never defines radically different, he may be referring to what Yalom (1975) and Dinkmeyer and Muro (1979) describe as problem clients because of their negative effect on the group.

Eric Berne, founder of the Transactional Analysis Movement in counseling and author of *Games People Play*, is also opposed to screening for a number of reasons. He justifies his position against screening by stating that

> There are strong theoretical and political reasons . . . for saying that, in situations and with a few dramatic exceptions, selection of patients is not good, in fact it may be deleterious to the progress of treatment. The best policy is to pick patients at random or in order of application, or in some other fashion which is likely to increase the heterogeneity of the group (Berne, 1966, p. 5).

Berne's concern here seems to lie more with the avoidance of homogeneity of group members than with a commitment toward preventing psychological harm to group members due to the presence in the group of members unsuitable for group interactions.

Yalom (1975), in a discussion of group composition, made the following comment concerning the heterogeneity of groups.

> The social microcosm theory postulates that since the group is regarded as a miniaturized social universe in which patients are urged to develop new methods of interpersonal interaction, the group should be a heterogeneous one in order to maximize learning opportunities. It should resemble the real social universe by being composed of individuals of different sexes, professions, ages, socioeconomic and educational levels; in other words, it should be a demographic heterodox (Yalom, 1975, p. 268).
If we accept Yalom's definition of heterogeneity, it seems possible to compose a heterogeneous group but still screen out those clients whose behavior is identified as being potentially harmful to the group.

Berne also comments that "The good group therapist never misses a chance to learn and he will not fail to do so if he challenges himself by relaxing his criteria for selection. . . . such relaxation . . . frees his time and attention for more important issues" (Berne, 1966, p. 5). His concluding comment related to screening is that "It is a good thing to remember that neither the patient's behavior in a group nor the group's reaction to a patient can always be reliably predicted" (Berne, 1966, p. 6). Although it may be true that behavior can not always be predicted, completely disregarding the merits of a screening procedure for those reasons is akin to throwing out the baby with the bath water. If screening increases our ability to predict behavior beyond the chance level, then it at least warrants further examination.

Goodwin Watson, founder of the Institute for Group Psychotherapy in New York, also dismisses the screening of patients because "No kind of preliminary test or interview is valid to differentiate persons who will profit from the group and those who will not" (Watson in Morris and Cinnamon, 1976, p. 81). Research evidence will be presented in a later section of this chapter refuting Watson's statement.
". . . a considerable number of group leaders are in favor of screening" (Morris and Cinnamon, 1976, p. 81). George Gazda, author of a number of texts on group counseling, believes that "some form of screening procedure should be instituted by the leader to insure that the prospective group member understands what will be expected of him and to select only those members where there is likelihood that they will benefit themselves and other group members" (Gazda, 1975, p. 59).

Albert Ellis, a rational emotive therapist, prefers screening for group clients. His policy is that "No person can join one of my regular ongoing groups . . . unless he or she has at least one prior individual session, for screening purposes. Test screening could also work to some extent; but personally, I wouldn't trust it too far" (Ellis in Morris and Cinnamon, 1976, p. 73).

In an article critical of the lack of controls imposed on encounter groups, Beymer observed that "Since such experiences can have negative as well as positive consequences, let us see an increased interest in screening participants" (Beymer in Deidrich and Dye, 1972, p. 489). Capuzzi and Muffett (1980), in an article discussing the ethics of group work stated that "It is the responsibility of the leader to screen out those individuals for whom he or she judges the group experience to be inappropriate" (p. 101). Woods and Melnick (1979), in a discussion of criteria for
client selection, stated that "high rate of premature termination among group therapy clients underscores the necessity of identifying those individuals who will benefit from group therapy" (p. 155).

**Screening: Selection Criteria**

A second subject closely related to the issue of screening that also evokes a certain amount of disagreement among group workers is that of selection criteria for inclusion in groups. "A review of the literature discloses that there is a wide range of criteria utilized, either implicitly or explicitly, in the selection of patients for group psychotherapy" (Kotkov and Meadow, 1952, p. 324).

S. R. Slavson (1955), a pioneer in the therapeutic use of groups and founder of the American Group Psychotherapy Association, has suggested some general principles for the selection of patients for groups. According to Slavson, patients suitable for inclusion in groups have; the experience of satisfaction in the primary childhood relations, a minimal amount of sexual disturbance, an acceptable amount of ego strength for dealing with stress and a minimal superego development for determining right and wrong. He further qualifies sexual adjustment as successful resolution of Oedipal feelings.

Slavson's criteria for exclusion for group membership are much more clearly defined.
Among unsuitable patients are the non-psychotic with very intense and diffuse anxiety, full blown anxiety neurotics, the intensely narcissistic, the obsessional compulsives, depressives, cyclothymic personalities, the suicidal, perverts, active homosexuals, compulsive talkers, also patients who for a variety of reasons cannot refrain from monopolizing the stage (Slavson, 1955, p. 18).

Slavson also excludes hypochondriacs because of their persistent nonproductive discussion of their perceived symptoms. The contraindications stem from both inherent patient problems and their effect on other group members. His conclusion is that "We found that some patients who might gain from group treatment had to be rejected because of the adverse effect they would have upon others in the group or upon its total climate" (Slavson, 1955, p. 30).

Other group therapists, though amenable to screening, are more vague about selection criteria. Expounding on the successful use of Reality Therapy in an institutional setting, Glasser commented that "Everyone can benefit from involvement with others in a group. The only exclusions from the group would be those persons whose behavior is so disruptive that it does not allow the meeting to proceed" (Glasser in Gazda, 1975, p. 170). Glasser does not define disruptive behavior.

Carl Rogers comments that "There are not rules for selection of group members in a client-centered group" (Rogers in Gazda, 1975, p. 188). He further qualifies that statement by mentioning that some members may be so disruptive or obstructive to the group process that the counselor
may have to ask them not to return to the group.

Becoming slightly more specific, Stone and Tieger (1971), in a study of T-Group screening, observed that "The possibility of exacerbation of a psychosomatic illness seemed to be a very real reason for screening out" (Stone and Tieger, 1971, p. 1488). They also suggested that premature self-disclosers be excluded from groups since "Applicants who had a history of difficulty in impulse control might be pressured into acting destructively or into revealing highly personal material in a setting where confidentiality was difficult to maintain" (Stone and Tieger, 1971, p. 1488).

Ellis comments that "compulsive talkers or hypomanic individuals may benefit considerably from group work but are too disruptive of the group. . . . hence it is best to exclude them" (Ellis in Gazda, 1975, p. 311). Lazarus also claims that "I do not invite people into my groups who are likely to have a disruptive effect (e.g. extremely depressed, or overtly hostile, paranoid or deluded individuals)" (Lazarus in Gazda, 1975, p. 170).

Neighbor, Beach, Brown, Kevin and Visher (1958) have offered some ground rules for selection based on their experience in an outpatient mental hygiene clinic. They agree with both Stone and Tieger (1971) and Ellis (1975) insofar as excluding clients who, although they might personally benefit from a group experience, would disrupt the group and hinder group progress. They exclude patients who use "in-
cessant irrelevant and uninsightful talk as a defensive device because they monopolize group time and energy in this way, preventing constructive exploration of their own or others' problems" (Neighbor, et al, 1958, p. 247). They also choose to exclude anxious patients prone to defensive attacks on the therapist and patients who display tendencies toward overt suicidal, homicidal or infanticidal acts.

Freedman and Sweet (1954) offer suggestions for screening in terms of both inclusion and exclusion criteria. They indicate that group therapy serves a useful function for "certain types of borderline psychotics, patients who because of their cultural background or personality dynamics are unaccustomed to introspection and patients who for various reasons display particularly rigid character armor or social roles" (Freedman and Sweet, 1954, p. 356). Those clients can profit from exposure to positive role models in order to reality test more productive behaviors in a group setting.

Regarding exclusion criteria, "The group is probably not the best therapeutic medium for neuroses in which localized symptoms occur in a relatively well organized ego structure and for character disorders in which reality orientation is good and defenses strong and pervasive" (Freedman and Sweet, 1954, p. 364).

According to Johnson (1963), the selection of patients for groups must take into consideration their motives for treatment, ego strength, anxiety tolerance, diagnosis
and individual needs. Contraindicated are "the paranoid personality, the inadequate personality, the emotionally unstable personality disturbance and the sociopathic personality disturbance" (Johnson, 1963, p. 98). In the paranoid personality, the mechanism of blaming others is a rigid trait and occurs in the group setting with detrimental effects on the other group members. The emotionally unstable personality has a low level of tolerance for anxiety and is easily provoked to anger. The sociopathic personality denies the need for help except in a manipulative way which undermines the atmosphere of trust essential to group counseling.

Kadis, Krasner, Winick and Foulkes (1963) discuss criteria for selection in a text geared toward practicum experiences for group psychotherapists. Their suggested contraindications include;

Those who constantly interject their irrational productions cannot be reached by other members. Persons who monopolize the group over a protracted period block all interaction. Patients unable to cope with their own or others' anxiety provoking unconscious productions become a burden to the group. Patients whose behavior is destructive, impulse ridden or antisocial arouse realistic fears in other members (Kadis, et al, 1963, p. 53).

Mullan and Rosenbaum (1962) in setting up exclusion criteria state that a person should not be placed in a group when "He paralyzes group interaction over an extended period of time, cannot be reached by other group members because of his constant chaotic behavior. . . . , is constantly in a
state of acute anxiety . . . or shows destructive, antisocial behavior . . ." (Mullan and Rosenbaum, 1962, p. 102). The habitual monopolist who defends himself from anxiety by non-stop talking is often anathema to group progress.

Surveys of group practices and procedures support some of the previously mentioned selection criteria. Responses to a questionnaire sent to 200 institutions in the midwest by Corsini and Lundin (1955) indicated that 42 of the institutions were using groups as a therapeutic milieu. A wide variety of opinions were in evidence in response to the question 'Which patients ought not to be in group therapy?'. "The major groups mentioned were: acutely disturbed, psychopaths, organics, character disorders, acutely delusional" (Corsini and Lundin, 1955, p. 318).

A survey was taken at the 16th Annual Conference of the American Group Psychotherapy Association in 1959 in order to clarify some group practices. Rosenbaum and Hartley (1962) discussed the results of the survey to which 92 group therapists responded. The therapists were asked the question 'For what kinds of patients would you say the indications are definitely against using group therapy?' (Rosenbaum and Hartley, 1962, p. 497). Excluded were; acute psychotics, psychopaths, impulse disorders, suicidal and acutely depressed, character disorders, homosexuals, neurotics, acute anxiety states. The second most common response to the question was that all people were suited for inclusion
in groups. In a concluding remark it was stated that "it is disturbing to note the overlapping of responses in the lists of those for whom it [group counseling] is recommended and those for whom it is not" (Rosenbaum and Hartley, 1962, p. 198).

Woods and Melnick (1979) have identified selection criteria derived from a research base. Research relating pretherapy variables to outcome revealed that "Clients who improve tend to have a high pretherapy level of self-disclosure, an ability to participate actively in the group and to introspect. The pretreatment presence of severe thought disorder, marked interpersonal withdrawal or a negativistic demanding attitude is consistently related to lack of success at outcome" (Woods and Melnick, 1979, p. 159).

Premature termination studies, discussed in more detail in a later section of this chapter, indicated that the following characteristics existed relative to early terminators "The use of denial as a primary defense mechanism, low motivation, low felt discomfort, excessive hostility or passivity, lack of psychological sophistication and somatization of conflict" (Woods and Melnick, 1979, p. 164). In their concluding remarks, Woods and Melnick identified three major groups of selection criteria: (1) intrapersonal contraindications such as a dread of self disclosure or excessive use of denial, (2) motivational contraindications including tendencies to focus on external events and (3)
traditional diagnostic contraindications including acute psychosis and schizoid withdrawal.

**Premature Termination Studies**

The results of several premature termination studies underscore the need for adequate screening of group clients. The studies also offer some suggestions for selection criteria.

Yalom (1966) studied nine groups with a total of 97 members during the first six months of the groups' meetings. The data indicated that 35 of the 97 clients or about 36% of the group members dropped out by the twelfth meeting. Although the study revealed that "Rarely was there a single cause for any patient's termination and often it was difficult to determine the major reason for the dropout" (Yalom, 1966, p. 397), a number of variables related to termination did appear.

Eight patients who had been labeled as schizoid personalities withdrew because they were having difficulty relating and communicating with other group members. Other dropouts professed a constant dread of having to self-discose in the group. Two patients both feared intimacy and "appeared to respond counterphobically be demanding so much so quickly that the others, fearing engulfment, withdrew and rejected the patients" (Yalom, 1966, p. 402).

Dropouts had a significant effect on the remainder
of the group whose members often became "preoccupied with the possibility of group dissolution" (Yalom, 1966, p. 408). The anxiety of the group leader who is faced with a high dropout rate may also have an adverse effect on the attitudes of the remaining group members.

Kotkov and Meadow (1952) investigated the "factors of personality related to the continuing or noncontinuing of treatment by a patient in a series of approximately sixteen group psychotherapy sessions" (Kotkov and Meadow, 1952, p. 324). Their research was stimulated by the results of a survey of 624 group clients, 50% of whom terminated counseling before the completion of a group series. A total of 86 group clients in three group settings were administered the Rorschach Test to identify characteristics common to early terminators. "A significant probability value was found between the noncontinuing and the continuing groups of patients for the FC greater than the CF variable alone" (Kotkov and Meadow, 1952, p. 327). Results of the study also indicated that patients who stayed in their groups had a greater capacity for establishing relations, tolerating group induced anxiety and ability to free associate.

Another study by Kotkov (1958) used clinical data on 213 group clients in order to examine the relationship between nosology and continuing and noncontinuing patients. The population consisted entirely of white adult males. A number of significant variables emerged from the data.
Kotkov determined that "Continuing patients in group psychotherapy were spontaneous in speech and friendly in their approach at the initial interview" (Kotkov, 1958, p. 424). They also appeared to be cooperative, anxious to present problems and quick to establish relationships. The continuers often complained of tension and fatigue but their expenditure of energy was directed toward problem resolution. They were also more receptive to being in therapy.

Noncontinuing patients were either extremely hostile or so docile that they required continuous prodding. "The hostile patient was variously described as antagonistic, irritable, explosive, annoyed, suspicious, unsmiling and sullen" (Kotkov, 1958, p. 425). The noncontinuers had a higher percentage of physical symptoms such as complaints of headaches and insomnia, making them restless and irritable.

Yalom, Houts, Zimerberg, and Rand (1967), searching for variables related to success in therapy, studied five outpatient therapy groups over the course of one year of therapy. "Of the 40 original group patients, 20 patients dropped out during the first year; of these, eleven were early dropouts, i.e., they left by the twelfth group meeting" (Yalom, et al, 1967, p. 161). The early dropouts were interviewed and all expressed dissatisfaction with the group experience. They reported stress from the group as their main reason for termination.

The group members were administered the FIRO-B,
Jourard Self-Disclosure Questionnaire, Psychological Mindedness Test and a cohesiveness questionnaire. The correlation of several variables indicated that "popular patients want and express behavior which blends well with the expressed and wanted behavior of others in the group" (Yalom, et al, 1967, p. 166). There was a correlation between sociometric popularity and outcome measures. Kraupel-Taylor (1950) noted that popularity was related to continuation in groups and that unpopular members were emotionally isolated from the rest of the group.

Perhaps the most important finding of the study was that

The premature dropout rate (12 or fewer meetings) of 27.5% is less than the rate (36%) reported in a previous study of group therapy dropouts in a previous year in this clinic. Implementation of more refined selection criteria outlined in that study may have been responsible for the reduction of premature terminators (Yalom, et al, 1967, p. 164).

Melnick and Rose (1979) investigated social risk taking propensity and client expectancy as predictors of group member performance. "Social risk taking propensity involves the willingness to take interpersonal risks in situations in which appropriate behaviors and responses are ambiguous or not consensually agreed upon" (Melnick and Rose, 1979, p. 389). Initiating self-disclosure involves a great deal of risk. Low risk takers have a high potential for early termination from groups because of the anxiety associated with the group situation.
The sample was composed of 45 college students from an encounter group course at the University of Kentucky. They were administered the social risk taking scale of the Jackson Risk Taking inventory, the HIM-B, the Perceived Depth of Involvement Scale, the cohesiveness scale of the Group Environment Scale and a sociometric assessment questionnaire. The 45 students were formed into five encounter groups that met for six sessions lasting two hours each.

Results of the study indicated that "The participant who contributes little and is minimally involved is most likely to become an encounter group casualty or dropout. Members with low risk taking propensity, in combination with either high anxiety or, as the current study advocates, low expectations for intimacy, are prime candidates for a negative group experience" (Melnick and Rose, 1979, p. 399). They also suggest that some type of pretherapy training would help increase the potential group member's expectations about the group experience.

Techniques for Screening of Group Clients

Pretherapy screening procedures that have been employed for predicting future behavior in group therapy include; the intake interview, membership in waiting list groups and standard psychological testing. The most commonly used procedure for selection of group clients is the standard initial intake or screening interview.
When you consider the high premature dropout rate for group therapy patients as reported by Kotkov and Meadow (1952), Nash (1957), Yalom (1966), Grotjahn (1972) and Koran and Costell (1973), it becomes apparent that the diagnostic interview, used for screening in those studies, is not a good indicator of appropriate group behavior. "This is not surprising in view of the fact that the formal diagnostic categories were not designed as indicators of interpersonal behavior" (Woods and Melnick, 1979, p. 159).

Contributing to the confusion is the inability of many psychotherapists to agree upon which behaviors are characteristic of which disorders. "Increasingly, group therapists have come to consider formal diagnostic categories of limited value in the group selection procedure" (Yalom, 1966, p. 394). The diagnostic categories were developed from a disease oriented approach and are not intended for use in identification of interpersonal behavior. Ash (1949) and Beck (1962) have both reported the poor ability of the diagnostic categories for predicting group behavior.

Bach (1954) and Foulkes (1957) suggest that interpersonal behavior is stable enough across groups that observation of a client's behavior in one group is indicative of his or her behavior in a future group. Some therapists allow the group client to join a group on a trial basis and observe his or her interaction with the members and also observe their level of acceptance for the new member.
Unfortunately, this procedure presents a number of problems for both the group and the new member. The group is disrupted by the intrusion of a new member who may or may not be a permanent addition to the group. The group's progress is temporarily halted and the group may return to an earlier stage of development. The new member may feel that he is on trial and develop a great deal of anxiety which manifests itself in the creation of defense mechanisms, i.e., excessive irrelevant talking, withdrawal or inappropriate hostility. Since the member may be aware that he is on trial, he may also manifest non-representative behavior in an effort to receive the acceptance of the group and the therapist.

A similar development relative to the group experience mentioned above is the waiting list group. Potential group clients are all placed in a group prior to their introduction into a permanent, ongoing group. Although studies by Stone, Parloff and Frank (1954) and Abrahams and Enright (1965) indicate that waiting list groups seem to predict future group behavior well, the method has some drawbacks.

Another group meeting time and place has to be arranged by the therapist and the group has to be monitored to insure the safety of the members. This places a logistical strain on the therapist or agency. Once again, knowing that the waiting list group is only temporary and that another group experience awaits them, the group members may
develop the feeling of being on their best behavior again. It is up to the individual therapist or agency to decide whether or not the positive results of the studies involving waiting list groups offsets the drawbacks.

Another common method for the screening of potential group members is the use of standard diagnostic tests. Most commonly used by virtue of literature references are the Rorschach, Porteus Mazes, Mirror Tracing Tests, MMPI, Thematic Apperception Test, Sentence Completion Test and Draw a Person Test. Studies indicate that "All of these tests failed to yield valid predictions, with the single trivial exception, Zimet (1960), that individuals using denial as evidenced by the Rorschach and Thematic Apperception Test more often made positive agreeing statements in group therapy" (Yalom, 1975, p. 250).

Peters and Jones (1951) concluded that the Porteus Maze and Mirror Tracing Tests were not adequate predictors of group behavior. Fitts (1946), Kotkov and Meadow (1952) and Kotkov (1958) used the Rorschach to examine group behavior. Results indicated that "the discriminating power of the Rorschach in the task was modest, scarcely better than the crudest interview screening" (Yalom, 1975, p. 224).

Data from a factor analysis prompted the statement that "Since the Rorschach scores had little or no common variation with a number of significant external variables, extreme caution should be exercised in using these scores
in the prediction of interaction behavior" (Borgatta and Esclenbach, 1955, p. 136).

The use of these diagnostic tests in predicting outcome in groups has typically yielded correlations that are too small to be useful because "many pre-post psychometric tests, of value in individual therapy outcome studies, do not accurately reflect the changes undergone by group therapy patients" (Yalom, 1967, p. 159). The lack of success of these tests for predicting and/or identifying interpersonal behavior indicates a need for tests which focus primarily on group relevant behavior.

Tests of Interpersonal Behavior

"Concepts which will more closely correlate with actual group behavior—for example, interpersonal style, methods of communication, and relatedness—may prove more useful in predicting group suitability" (Yalom, 1966, p. 394). Although they are in a relatively primitive stage of development compared to tests of intelligence or personality, tests are available which examine interpersonal behavior. They include the Bales Interaction Process Analysis (Bales, 1950), the Fundamental Interpersonal Relations Orientation—Behavior (Schutz, 1958), the Interpersonal Circular Grid (Freedman, et al, 1951) and the Hill Interaction Matrix Form-B (Hill, 1965). Flaws in the first three tests limit their applicability for screening.
The Bales Interaction Process Analysis (IPA) was designed primarily for use in charting the ongoing process interactions of problem solving groups. Bales perceived problem solving as a three phase sequence that continually repeats itself during group sessions. The sequence involves an initial act, a medial act and a terminal act which signals either the end of the group session or the beginning of a new three phase sequence.

The initial act signals that some type of problem exists. "Such an act is sometimes primarily expressive such as a startled or bewildered expression . . . but often is a question, a disagreement" (Bales, 1950, p. 55). The second act of the sequence or the medial act can be an answer to the proposed question or a request for clarification. The third or terminal act can be positive or negative and could be either recognition of or disagreement with the answer. The terminal act is terminal only in the sense that it signals the end of a communicative act or the beginning of a new communication.

Bales developed a system of twelve types of interactions with which to observe the problem solving sequence. "The problem solving sequence is visualized as a system of interaction distributed in time and between members" (Bales, 1950, p. 60). The twelve categories can be used to chart the group's movement through the problem solving sequence or to examine the nature of the interactions characteristic of
each group member. Scoring is initiated by judges who identify the category of each interaction from videotapes or audiotapes.

Talland (1955) and Psathas (1960) have discussed the test's unsuitability for use with counseling and therapy groups. In a study comparing the interactions of psychotherapy groups with those of problem solving groups, Psathas (1960) observed that counseling groups were distinct from problem solving groups due to an "absence of pressures for immediate decisions concerning problems confronting the group" (Psathas, 1960, p. 445). Talland, in a similar study, observed that problem solving groups meet to solve problems while therapy groups meet to discover them. The major difference between the two types of groups was that "discussing a hypothetical or didactic case with transient acquaintances does not lead to the deep emotional involvement that occurs when patients grapple with their own and each other's personal problems, baring their innermost thoughts and experiences week after week in intimate fellowship" (Talland, 1955, p. 105).

Talland (1955) concluded that "Analysis of quantified records confirms the prediction that in therapy groups there is no consistent progress from orientation through evaluation to control within single meetings and that there is a tendency to keep disturbances at a certain level" (Talland, 1955, p. 109). The results of these two studies indicate
that counseling and therapy groups violate some of the major assumptions of the Bales IPA which limits its applicability for the study of interactions in counseling groups.

The Interpersonal Circular Grid, a system for describing personality based on the theories of Harry Stack Sullivan, was created by Timothy Leary. Leary theorizes that personality manifests itself on three levels; the public, the private and the conscious. Information concerning the public level is "derived from objective ratings of the person's behavior (e.g., his statements during group therapy sessions about himself and others)" (Yalom, 1975, p. 251).

Information about a client's public level is broken down into components that represent sixteen interpersonal mechanisms. These mechanisms are then plotted on a circular grid with two major axes; love/hate and dominance/submission. When interactions are scored for level of intensity, a client's behavior can be plotted as a point on the circular grid.

The initial study by Freedman, Leary, Ossorio and Coffey (1951) reported that the inter-rater reliability was 74% for the grid. Coffey later commented that "Although there were some early attempts to use this system for prediction of group behavior . . . these have remained rudimentary" (Coffey in Yalom, 1975, p. 253). No studies using the Interpersonal Circular Grid could be found in a review of group research by Woods and Melnick (1979). This could be
due to the observation that "The system, perhaps because it is so complex and cumbersome, has not been widely used by other workers" (Yalom, 1975, p. 253).

Based on the assumption that people need people to receive from and give to, William Schutz (1966) developed what he has labeled Fundamental Interpersonal Relations Orientation (FIRO) Theory. FIRO Theory states that every individual has three interpersonal needs: the need for inclusion, the need for control and the need for affection. He also suggests that groups pass through stages that deal with those three needs. The need for inclusion is defined as "the need to establish and maintain a satisfactory relation with people with respect to interaction and association" (Schutz, 1966, p. 18). The element of control is the "desire for power, authority and control over others . . . at the other end is the need to be controlled, to have responsibility taken away" (Schutz, 1966, p. 22). The element of affection is the desire for close, personal, emotional feelings.

The Fundamental Interpersonal Relations Orientation-Behavior (Schutz, 1966) is a 54 item test derived from Schutz's theory of interpersonal needs. The test utilizes a forced choice format which allows the client to choose one of six possible responses for each question which range from 'usually' to 'never' and 'most people' to 'nobody.' The questions deal with the client's interpersonal behavior.
This Guttman scaling response format is common for psychological testing (Guttman, 1950).

In terms of the three interpersonal needs proposed by Schutz (1966), the FIRO-B produces six scores; behavior expressed toward others and behavior wanted from others for each of the three needs. Nine test items provide data for each of the six subscores and each test item contributes data to only one subscore. The Social Interaction Index is the sum of the six subscores and is designed to measure the client's willingness to get involved with others. The sum of the expressed behavior and wanted behavior scores for each of the three needs provides yet another set of subscores related to interpersonal behavior.

The FIRO-B has stimulated a great deal of group related research. The test has a number of positive features. It measures three areas of interpersonal relations, it distinguishes what people supposedly want to get from what they are willing to give and it can be used to study aspects of group process related to the group development theory proposed by Schutz (1966).

There are, however, a number of criticisms of the test. Response style, the tendency for people to select moderate responses, will affect a person's scores according to Pfeiffer, Heslin and Jones (1976). Since it is a self report scale, clients may tend to give responses that they think are socially acceptable. Face validity, a concept
that influences the test taker's attitude toward the test, seems to be low because "The questions are so superficial and repetitious that it is not uncommon for sophisticated patients to be irritated and insulted by the questionnaire" (Yalom, 1975, p. 253).

Schutz's validity claims for the FIRO-B are vague and he presents no empirical data for interpretation. His claim of adequate content validity is justified by questionable logic. His justification is that, if Guttman scaling is accepted, then content validity is a property of all legitimate scales and thus, since the FIRO-B uses Guttman scaling, it is a valid test. His claim for acceptable concurrent validity is equally as obtuse. Although he adequately describes the concept of concurrent validity, he never delineates the criterion nor does he provide any empirical data. Schutz (1966) does, in terms of reliability, report a coefficient of stability of .76 (p. 78).

Mcgrath (1963) commented that it wasn't clear from empirical data whether or not Schutz's three basic needs were in fact statistically independent of each other or that they were conceptually distinct. He also stated that their use in groups was limited because the test seemed to be describing feelings rather than behavior. This is an interesting observation since Schutz has also created the FIRO-F which is described as dealing with feelings instead of behavior.
A review of studies using the FIRO-B by Yalom (1975) indicated that there were "no direct attempts to assess its ability to predict interpersonal behavior in small groups" (p. 254). These findings suggest that caution should be used in selecting the FIRO-B as a tool for use in screening of group participants.

The Hill Interaction Matrix Form-B (HIM-B) is a psychometric test based on the Hill Interaction Matrix. The HIM-B provides "an indication of the extent to which a patient's self described behavior is either consistent with or would tend to impede the process of group therapy and gives an indication of the individual's level of preferred activity in the group" (Koran and Costell, 1973, p. 351).

The Hill Interaction Matrix is a device used to chart interactions in groups and was first formulated by Hill and Coppolino in 1954, emerging in its present form in 1962. The matrix has two interacting scales or dimensions; content style which occupies the X-axis or horizontal scale and work style which occupies the Y-axis or vertical scale. Content style deals with the types of subjects that the group discusses. The work style concerns the ways that the group members talk about those subjects. The matrix consists of twenty cells representative of particular types of group interactions derived from the observation of a number of different types of psychotherapy groups.

Four content style categories were formulated,
judged to be in ascending order of therapeutic potential. The first, General Interest Topic, has the least therapeutic potential. In this mode, group members talk about current events and other matters external to the group. In the second content category, Group style, the interactions center around group process and dynamics. The third category, Personal style, involves "focusing on one's own or another's personal problems or growth concerns" (Pfeiffer, Heslin and Jones, 1976, p. 203). The last category and also the one with the most therapeutic potential is Relationship style which "can be characterized by talking about the here and now relationships and reactions of members to each other" (Hill, 1977, p. 252).

Hill created five work style categories, also in ascending order of therapeutic potential, in order to adequately describe the group interactions that had been observed. "Work, a term borrowed from Bion, is a meaningful concept, but elusive of definition. In HIM terms it is characterized by someone in the group playing the helping role and someone playing the patient role and attempting to find self-understanding" (Hill, 1977, p. 253).

Bion (1961) claims that groups fall into two types; basic assumption groups whose aims are fight or flight, pairing or dependency, and work groups. He describes basic assumption groups as being hostile, attacking, failing in the development of group cohesiveness and overly dependent
Work groups on the other hand are characterized as realistic, task oriented, flexible and willing to learn from the past. Hill separated the work style dimension into two categories, pre-work and work.

"In Pre-Work, no one is attempting to gain self understanding" (Hill, 1971, p. 619). The Responsive category has the least therapeutic potential and involves monosyllabic answers to questions posed by the group leader. This category was derived from observations of groups in mental hospitals. The Conventional category "equates treatment groups with other every day groups relying on social amenities, stylized transactions and chit-chat" (Hill, 1971, p. 619).

The last of the Pre-Work categories is the Assertive category. It is considered a Pre-Work category because "the individual talks about a problem but is unwilling to get help with it" (Dinkmeyer and Muro, 1979, p. 88). This category also represents acting out and social protest behavior. The intent of the word "Assertive" is not the same as the manner in which it is used in assertiveness training, a concept defined by Alberti and Emmons (1974), Smith (1975) and Fensterheim and Baer (1975). This Assertive category represents "the asserting of independence from group pressure and thereby, not accepting or soliciting help from group members" (Hill, 1977, p. 254). Any discussion, if the inter-
action can be called that, is of a dominating or challenging nature.

The Speculative category is the first of the two actual Work dimensions. Although mainly intellectual in nature, this category deals with the asking of questions about behavior and the forming of hypotheses about the nature of interactions. The last Work category and the one that Hill assigns the highest therapeutic potential is the Confrontive category. In this type of interaction "A person gives his personal reaction regarding some topic: the group, someone else, himself or a relationship. The intent is to make someone, himself included, pause and reconsider his behavior. (Pfeiffer, Heslin and Jones, 1976, p. 203).

The five Pre-Work/Work style categories and the four content style categories interface to form the twenty cell grid known as the Hill Interaction Matrix (HIM) (Fig. 1, p. 41). The HIM cells are weighted with values from one (1) to sixteen (16) based on their perceived therapeutic potential (see Fig. 1, p. 41). The therapeutic value increases from the cells in the upper left-hand corner of the matrix to the cells in the lower right-hand corner of the matrix. This increase in the therapeutic value across cells seems to imply a linear relationship between the amount of risk of self-disclosure inherent in interactions and the values assigned to the cells. As the amount of self-disclosure increases, the therapeutic value assigned to those cells also increases.
Figure 1

Diagram of the Hill Interaction Matrix

<table>
<thead>
<tr>
<th>Work/Style Categories</th>
<th>Non-Member Centered</th>
<th>Member Centered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Topic I</td>
<td>Group II</td>
</tr>
<tr>
<td>Responsive A</td>
<td>IA</td>
<td>IIA</td>
</tr>
<tr>
<td>Conventional B</td>
<td>IB (1)*</td>
<td>IIB (2)</td>
</tr>
<tr>
<td>Assertive C</td>
<td>IC (3)</td>
<td>IIC (4)</td>
</tr>
<tr>
<td>Speculative D</td>
<td>ID (5)</td>
<td>IID (6)</td>
</tr>
<tr>
<td>Confrontive E</td>
<td>IE (7)</td>
<td>IIE (8)</td>
</tr>
</tbody>
</table>

*The numbers in parentheses denote the therapeutic value assigned to each quadrant by Wm. F. Hill. Quadrants IA through IVA have no therapeutic value because they are a social chit-chat interaction level.
The therapeutic values were assigned on the basis of three factors; member-centeredness, interpersonal threat and patient-therapist role taking. According to Hill (1965), the responsive category has no therapeutic value because it is characteristic of severely regressed, institutionalized individuals.

The procedure for applying the HIM to research in group process and group dynamics is relatively simple though time consuming. Judges rate group interactions by listening to audiotapes or videotapes of group sessions and then tabulating the number of interactions that are characteristic of each cell of the matrix. The suitability of electronic media for research applications has been discussed by Miller (1951). The ratings can be done over time or for each group member. Hill (1966) hypothesized that interactions during the progress of a group move from the upper left-hand corner of the matrix to the lower right-hand corner.

A study by Lewis and Mider (1973) used the HIM to examine the effects of leadership style on content and work styles in therapy groups. Their observation that "comparisons between conditions with respect to each of the remaining sixteen cells were considered overly tedious and diffuse" (Lewis and Mider, 1973, p. 138) resulted in their reducing the HIM cells into four quadrants.

Quadrant A is the Topic centered Pre-Work quadrant and includes cells IB, IC, IIB, and IIC (see Fig. 2, p. 43).
Quadrant B is the Member centered Pre-Work quadrant which includes cells IIIB, IIIC, IVB and IVC. Quadrant C, the Topic centered Work quadrant, includes cells ID, IE, IID and IIE. Finally, Quadrant D is the Member centered Work quadrant which includes cells IIID, IIE, IVD and IVE.

Figure 2

Hill Interaction Matrix
Divided into Quadrants

<table>
<thead>
<tr>
<th></th>
<th>IB</th>
<th>IIB</th>
<th>IIIB</th>
<th>IVB</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUADRANT A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IC</td>
<td></td>
<td>IIC</td>
<td>IIIC</td>
<td></td>
</tr>
<tr>
<td>QUADRANT B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td></td>
<td>IID</td>
<td>IIID</td>
<td></td>
</tr>
<tr>
<td>QUADRANT C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IE</td>
<td></td>
<td>IIE</td>
<td>IIIE</td>
<td></td>
</tr>
<tr>
<td>QUADRANT D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIE</td>
<td></td>
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</tbody>
</table>
Group interactions that are placed in Quadrant A of the matrix include "a preponderance of member behavior characterized by an exchange of social amenities, gossip and passive social protest behavior that was likewise lowest on Hill's scale of work potential" (Lewis and Mider, 1973, p. 140). Quadrant B contains interactions that involve therapeutic topics, i.e. Personal and Relationship content styles, but they are discussed in a non-therapeutic way.

Quadrant C contains interactions centered around non-therapeutic topics, i.e. Topic and Group content styles but they are discussed in a meaningful way through Speculative and Confrontive work styles. This limits their potential for stimulating positive growth in the group members. Interactions associated with Quadrant D are the highest in therapeutic potential in terms of both work style and content style. Their dynamics are related to "member behaviors of seeking help, discussion of feelings and in-group behavior, and member treatment of the group as a source of help" (Lewis and Mider, 1973, p. 140).

If a relationship exists between quadrant subscores and the HIM-B's Total Acceptance Score (TAS), that data could contribute significantly to the group leader's ability to effectively screen potential group members. Clients with high Quadrant A scores might block or hinder group progress while clients with high Quadrant D scores might benefit from group involvement and enhance group interactions due to
their possible receptiveness to dealing with therapeutic topics in a growth inducing way.

Bach (1954), Gazda (1975), Luft (1970), Rogers (1970) and Yalom (1975) have all proposed models of group development in which the therapeutic potential of interactions increases over time during the group's existence.

The results of a number of group process studies using the Hill Interaction Matrix support Hill's claim that group interactions move from Quadrant A to Quadrant D over the course of the group's meetings. Garner (1960) in a study of group interactions of juvenile delinquents concluded that "The indication was quite clear that the groups moved to better or higher levels of interaction over time. That is to say, there was to a significant extent movement from Pre-Work to Work and away from the Non-Member-Centered interaction" (Garner in Hill, 1965, p. 86).

Rabow (1962), in a study similar to Garner's, achieved the same results in relation to movement of the group interactions from Quadrant A to Quadrant D. Anderson (1964), in a study of the use of role playing in groups, found an upward shift in the interactions from the upper left of the matrix to the lower right quadrant.

In a study of group interactions of an assertiveness training group using the Hill Interaction Matrix, Shaver (1977) concluded that "Although the group did not follow the group stages suggested, there was a decrease in the prework
category transactions and a gradual movement toward more relevant categories of transactions as the group progressed" (Shaver, 1977, p. 20).

The Hill Interaction Matrix Form-B (HIM-B) is a sixty-four item psychometric test constructed from the matrix variables. "The test is designed to determine the amount of acceptance that a subject has for operating in the various HIM cells and categories" (Hill, 1965, p. 88). The test items use Guttman scaling and possible answers range from either 'usually' to 'never' or 'most people' to 'nobody' on a six choice scale in response to questions concerning interpersonal behavior.

The HIM-B provides "an indication of the extent to which a patient's self described behavior is either consistent with or would tend to impede the process of group therapy and gives an indication of the individual's level of preferred activity in a group" (Koran and Costell, 1973, p. 351).

There appear to be some difficulties with Hill's scoring method matching the test to the matrix. Hill (1965) suggested using a system of scoring which uses weighted scores derived by assigning each test item a cutoff score. If the response chosen for a certain test item is to the left of the cutoff score, a weight is assigned to that item based on that item's level of acceptance in the standardization sample.
In scoring the test for any individual subject each item is inspected to determine whether it has been accepted or not. If a response to the left of the cutoff point is circled, then the item is counted. . . . the four items in each cell were accepted in varying degrees by the standardization sample. Weighted scores are assigned to the items: the item accepted by less than 25% has a weighted score of four, the item accepted by more than 25% but less than 50% has a weighted score of three, the item accepted by more than 50% but less than 75% has a weighted score of two, the item accepted by more than 75% has a weighted score of one (Hill, 1965, p. 90).

This weighting scheme creates a relationship in which test items from the less therapeutic cells may make a greater contribution to the total score than the therapeutic cells due to their standardization sample level of acceptance. For example, HIM-B test item #48, (I like to exchange gossip) is representative of the HIM-B general interest topic content, conventional pre-work style cell which Hill (1965) assigns a therapeutic potential of one (1) on the Hill Interaction Matrix. However, the cutoff point for that question on the HIM-B is two (often) and a respondent answering that item to the left of the cutoff point would receive a weighted score of four (4) for that item. HIM-B item #62, (I try to find out how people actually see me and see my problems), is an item representative of the personal content, confrontive work style cell of the matrix which Hill (1965) has assigned a therapeutic value of fifteen (15). However, if the test respondent scores that item to the left of the cutoff point of three (3) for that item, he only receives a weighted score of one (1) for that item on the HIM-B.
With Hill's scoring format the respondent could receive a cell score of four (4) by answering only one test item to the left of the cutoff score for that cell, the item with the highest cell weight. He could also answer two test items to the left of the cutoff point in another cell with item weightings of one (1) and two (2) and receive a lower score for that cell even though he answered more items to the left of the cutoff point than in the other cell.

Using Hill's concept of degree of acceptance for weighting the test items, it seems that a person who answers a cell item weighted four (4) to the left of the cutoff point would also answer the test items weighted three (3), two (2) and one (1) in the same direction, i.e., to the left of the cutoff score, because they have less difficult degrees of acceptance. In other words, a respondent who is comfortable with a cell item with the highest degree of difficulty of acceptance should logically be comfortable with the other three cell items of lesser difficulty in that cell also. This however, does not seem to be the case. Visual observation of the HIM-B test scores of 191 respondents in a study of HIM-B internal consistency indicates that this does not always occur. Many respondents answer items with a high degree of difficulty of acceptance to the left of the cutoff point but answer the less difficult questions in the opposite direction, to the right of the cutoff point, achieving an item score of zero (0) for those items. For example, one
respondent answered the items with a weighting of two (2) and four (4) respectively to the left of the cutoff point but answered the items weighted one (1) and three (3) to the right of the cutoff point for those items for that cell.

These potential inconsistencies with Hill's scoring method suggest some possible alternative scoring methods. One such alternative to Hill's scoring method is to dispense with the weighted scores and utilize the raw scores from each item's continuum. For example, HIM-B test item #31, (I try to help people with their personal problems), is a test item in the personal content, speculative work style cell of the matrix. If the test respondent should choose the response "sometimes" which is coded as a three (3), on the answer sheet, the score assigned to that item would then be (3). Since the continuum for each item is set up with 1 = "usually" and 6 = "never," a low total score would indicate a high degree of acceptance for operating in the cells of the matrix and a high score would indicate a low degree of acceptance for operating in the cells of the matrix. This procedure would also simplify scoring because it would eliminate the cutoff points for each item.

Another alternative scoring method would be to retain the cutoff scores for each item assigned by Hill (1965) but remove the variable item weights. Each test item for which the respondent chooses a point on the continuum to the left of the cutoff point would receive a weighted score of
one (1). A score of zero (0) would be assigned to those test items scored to the right of the cutoff score. This scoring method would give each item scored to the left of the cutoff point an equal weight regardless of its cell position and would alter the possible cell score range from zero (0) to ten (10) to zero (0) to four (4).

The level of acceptance for operating in the corresponding HIM cell would be based on the number of cell items answered to the left of the cutoff point rather than being based on which of the cell items was answered as is the case with the present scoring system. With the equal weighting of one (1) for each item scored to the left of the cutoff point, the respondent would achieve a higher cell score for the cell in which he answered three items to the left of the cutoff point than for the cell in which he only answered one item to the left of the cutoff point.

Item scores can be combined in a number of ways. In addition to the sixteen individual cell scores, the scoring sheet provides for the examination of subscores for each of the content and work style categories (Fig. 3).

The sum of the cell scores is the Total Acceptance Score and is an indicator of the "overall mode of group operations by a prospective member" (Dinkmeyer and Muro, 1979, p. 206). The Total Acceptance Score also serves as an indication of a client's suitability for inclusion in groups.
**Figure 3**

**HIM-B Score Sheet**

<table>
<thead>
<tr>
<th>I General Interest</th>
<th>II Group</th>
<th>III Personal</th>
<th>IV Relationship</th>
<th>Raw Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. ___ (1)</td>
<td>9. ___ (2)</td>
<td>1. ___ (4)</td>
<td>11. ___ (3)</td>
<td></td>
</tr>
<tr>
<td>26. ___ (3)</td>
<td>19. ___ (1)</td>
<td>15. ___ (3)</td>
<td>38. ___ (1)</td>
<td></td>
</tr>
<tr>
<td>48. ___ (4)</td>
<td>25. ___ (3)</td>
<td>41. ___ (1)</td>
<td>49. ___ (2)</td>
<td></td>
</tr>
<tr>
<td>63. ___ (2)</td>
<td>37. ___ (4)</td>
<td>64. ___ (2)</td>
<td>58. ___ (4)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>14 to 26</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. ___ (1)</td>
<td>14. ___ (3)</td>
<td>4. ___ (1)</td>
<td>7. ___ (3)</td>
<td></td>
</tr>
<tr>
<td>27. ___ (4)</td>
<td>20. ___ (1)</td>
<td>32. ___ (4)</td>
<td>10. ___ (2)</td>
<td></td>
</tr>
<tr>
<td>51. ___ (3)</td>
<td>22. ___ (2)</td>
<td>55. ___ (3)</td>
<td>16. ___ (1)</td>
<td></td>
</tr>
<tr>
<td>57. ___ (2)</td>
<td>39. ___ (4)</td>
<td>59. ___ (2)</td>
<td>40. ___ (4)</td>
<td></td>
</tr>
<tr>
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<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>10 to 22</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ___ (3)</td>
<td>17. ___ (2)</td>
<td>18. ___ (4)</td>
<td>5. ___ (4)</td>
<td></td>
</tr>
<tr>
<td>6. ___ (1)</td>
<td>30. ___ (1)</td>
<td>31. ___ (3)</td>
<td>44. ___ (1)</td>
<td></td>
</tr>
<tr>
<td>29. ___ (4)</td>
<td>52. ___ (4)</td>
<td>36. ___ (1)</td>
<td>53. ___ (2)</td>
<td></td>
</tr>
<tr>
<td>54. ___ (2)</td>
<td>60. ___ (3)</td>
<td>43. ___ (2)</td>
<td>61. ___ (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>11 to 23</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. ___ (1)</td>
<td>8. ___ (4)</td>
<td>12. ___ (2)</td>
<td>2. ___ (1)</td>
<td></td>
</tr>
<tr>
<td>33. ___ (2)</td>
<td>21. ___ (2)</td>
<td>35. ___ (3)</td>
<td>23. ___ (2)</td>
<td></td>
</tr>
<tr>
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<td>34. ___ (1)</td>
<td>56. ___ (4)</td>
<td>42. ___ (3)</td>
<td></td>
</tr>
<tr>
<td>50. ___ (4)</td>
<td>46. ___ (3)</td>
<td>62. ___ (1)</td>
<td>47. ___ (4)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>[ ]</strong></td>
<td><strong>11 to 23</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>I Tot.</strong> [ ]</td>
<td><strong>II Tot.</strong> [ ]</td>
<td><strong>III Tot.</strong> [ ]</td>
<td><strong>IV Tot.</strong> [ ]</td>
<td><strong>Overall Tot.</strong> [ ]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ 9 to 21]</td>
<td>[ 11 to 23]</td>
<td>[ 13 to 25]</td>
<td>[ 13 to 25]</td>
<td>[ 46 to 126]</td>
</tr>
</tbody>
</table>
The possible range of scores for the HIM-B is zero (0) to 160 for the Total Acceptance Score (TAS) and 0 to 10 for the sixteen cell scores. Studies by Hill (1965) of seven different samples ranging from institutionalized patients to group therapists indicated that TAS scores below 43 or above 102 should not be considered as being within the normal range. Hill arrived at the lower limit of 43 by subtracting the standard deviation 20.23 from the mean TAS of all the seven samples 62.77 and derived the upper limit 102 by adding the standard deviation 25.76 of the group therapists TAS to their mean score 76.93.

This procedure for defining the upper and lower limits for the TAS produces somewhat of an inconsistency. While the lower limit was derived from scores representative of the entire sample, the upper limit was derived from the scores of the sample subgroup of group therapists.

By using the group therapist scores to establish the upper limit, the acceptable score limit for the TAS may have been artificially inflated. Since the highest mean score of the subgroups was obtained by group therapists, Hill stated that "the total score obtained by a subject is an important indicator of his psychological state" (Hill, 1965, p. 92). The high scores for group therapists may be more a result of their intensive training in helping skills than in their actual psychological state. A more statistically valid set of upper and lower limits for the TAS could possibly be
derived by using the total sample mean of 62.77 ± the total sample's standard deviation of 20.23 which would change the upper and lower limits from 102 and 43 to 83 and 43.

The HIM-B was initially designed to perform three tasks; selection of group members, categorizing of group therapists and the analysis of problems related to group composition. "The HIM-B has been used as a screening device to exclude people whose Total Acceptance Score is below 50 or 40 as being likely to hurt the group process much more than they would help it" (Pfeiffer, Heslin and Jones, 1976, p. 204). Hill (1965) stated that "Scores below 43 indicate a deficit in spontaneity and available ego strength, or negativism in group" (p. 92).

Less agreement exists concerning TAS scores above 102 and two possible interpretations for these scores have been suggested. "High HIM-B scores could mean either high involvement with people, the tendency to agree with statements (acquiescent response) or position response set (always checking left hand column)" (Pfeiffer, Heslin and Jones, 1976, p. 205). Hill (1965) interprets scores above 102 as indicating either a "potentially manic temperament or at least one which does not show much discrimination amongst the various modes of interaction" (p. 92). This interpretation of the TAS implies a curvilinear relationship between TAS and actual group behavior whereby an increase in TAS up to a point represents an ability to contribute to the group,
after which an increasing TAS represents a decrease in the respondent's ability to function productively in the group.

Another problem with the TAS is that the lumping together of data from different cells that represent the work style and content style categories may limit the ability of the test for the prediction of characteristic interpersonal behavior. What this means is that a TAS score of 70 for example, which is in the acceptable range, could very possibly have a majority of its score attributed to cells in the Pre-Work categories rather than the Work categories. A low TAS score of 45, on the other hand, could be indicative of a person who is relatively withdrawn and quiet in a group but can benefit from the group interaction without hindering the process of the group. When that person does interact, he or she interacts in a meaningful way with responses that fall into the Work style categories.

A major criticism of the HIM-B as a whole is that, since its inception in 1965, there have been no studies performed that lend support to the test's validity. Validity is "the degree to which a test measures what it purports to measure" (Anastasi, 1968, p. 28). In its use for screening the HIM-B is purported to be able to measure a potential client's suitability for inclusion in groups. The TAS is the HIM-B score grouping considered most appropriate for this task (Hill, 1965). Unfortunately, there are no validity studies cited in the literature or anywhere else that
attest to the HIM-B's ability to identify behavior that a group leader might be interested in examining relative to screening for group attendance.

Although the validity of the HIM-B has never been completely investigated, a number of studies lend credibility to the use of the test. An item analysis was performed on the HIM-B and Hill (1965) commented that "The results of this study were for the most part very satisfactory, as the items for each cell were found to hang together as they should, i.e., all four items for each cell were positively intercorrelated" (Hill, 1965, p. 100).

Anderson (1964) reported a test-retest reliability coefficient of .82 for a sample of college students. The test has also been intercorrelated with the FIRO-B (Schutz, 1966) and the modified Bion Q-Test (Bion, 1961). Hill (1965) stated that the HIM-B has been used at two state hospitals and a prison and further stated that "the groups so selected have been far more productive, therapeutically speaking, than any heretofore in the experience of the practitioners" (Hill, 1965, p. 100).

The type of validity most appropriate for the HIM-B's use in screening is that of criterion related predictive validity. Criterion related validity offers an indication of "the effectiveness of a test in predicting an individual's behavior in specified situations" (Anastasi, 1968, p. 105). Predictive validity is simply "the degree to which a test
can predict how well an individual will do in a future situation" (Gay, 1976, p. 90).

An acceptable level or degree of predictive validity, the ability to anticipate performance in a future situation, would be an important characteristic of the HIM-B for its use as a screening device. Predictive validity can be examined by administering the test to be validated, measuring the behavior that the test is supposed to predict and then examining the relationship between the two sets of data. Should there be no correlation between test scores and the actual behavior that the test is attempting to predict, the appropriateness of that test for screening purposes becomes highly suspect.

**Summary of the Review of the Literature**

Counselors have long been aware of the therapeutic factors unique to the group setting. Unfortunately, the climate of trust so important to group progress is a fragile entity and is easily disrupted by group members who manifest non-productive behaviors. Those clients whose interpersonal behaviors may be harmful to the group process could possibly be identified by some type of pre-group screening procedure.

The issue of screening, however, is a controversial one. Although the APGA Ethical Standards mandate that group leaders protect their group members from psychological harm, it does not require that they screen their members. Many
encounter group leaders including Gibb and Jourard feel that screening is at cross purposes with the goals of counseling. Gazda and Ellis however consider group membership a privilege, not a right, and favor screening.

Equally controversial is the subject of selection criteria. General consensus seems to exist in the literature that clients who manifest certain types of potentially maladaptive behavior should not be allowed in groups. Clients who should not be offered group membership include those who monopolize the group, are excessively anxious, overly hostile, sociopathic, have low levels of self disclosure, self disclose prematurely or have a negative attitude toward the group process.

Premature termination studies cited in the literature reinforce the need for adequate screening in order to prevent excessively high dropout rates. The characteristics of the premature terminators were similar to the characteristics of clients not recommended for inclusion in groups.

Techniques used for screening include the intake interview, membership in waiting list groups and psychological testing. The results of research studies indicate that these methods have had little or no success in screening out clients whose behavior might be disruptive in groups. On the positive side, tests of interpersonal behavior have recently been developed and show promise for screening purposes. Flaws in the Bales IPA, Interpersonal Circular Grid
and FIRO-B unfortunately limit their usefulness for screening.

The HIM-B, however, was designed specifically for the screening of potential group members. It examines a client's amount of acceptance of group relevant behavior and is based on the same principles used in the construction of the Hill Interaction Matrix. At this time, group leaders who use the HIM-B for screening are doing so with no evidence other than their own experience and the test author's claim that it is a good screening device. The test's ability to predict group relevant behavior and the scoring combinations suggested for that purpose have never been tested. Before the test can be endorsed as the solution to the screening dilemma, its predictive validity must be examined. Problems with the scoring method for the test and the interpretation of those scores raise some interesting research questions concerning: (1) the shape of the relationship between HIM-B total test scores and quality of group behavior and, (2) the ability of HIM-B total score variations to predict quality of group behavior.
CHAPTER III

PROCEDURES

Re-statement of Purpose

The high premature termination rate for clients in counseling groups reported in the literature suggests a need for the screening of potential group members to eliminate those clients who are potentially disruptive to the group process. Traditional methods of screening, such as the intake interview, waiting list groups, and standard psychological testing seem inadequate for the task (Woods and Melnick, 1979; Yalom, 1975; Peters and Jones, 1951; Kotkov and Meadow, 1958; Pitts, 1946).

Tests of interpersonal behavior may be appropriate for screening purposes if it can be shown that they are predictive of behaviors related to group interactions on dimensions of therapeutic quality. The HIM-B may have potential as a predictor of interpersonal behavior in groups. The HIM-B's Total Acceptance Score (TAS) has been interpreted by Hill (1965) as being useful for screening purposes. Even though the test has been in use for more than fifteen years, a search of the literature and a telephone conversation with the test's author, William
F. Hill, indicate that the HIM-B's predictive validity for screening purposes has never been examined.

The purpose of this study was to examine the predictive validity of the HIM-B for screening purposes by comparing pre-group HIM-B test scores with actual group behavior as charted on the Hill Interaction Matrix. The results of the study will contribute to the presently small body of empirical evidence available on HIM-B test validity.

**Research Questions**

Based on the concerns identified in the review of the literature, the following research questions were generated:

1a. What is the shape of the relationship between the HIM-B's TAS and quality of group behavior as charted on the Hill Interaction Matrix?

1b. What is the shape of the relationship between HIM-B total raw scores and quality of group behavior as charted on the Hill Interaction Matrix?

1c. What is the shape of the relationship between HIM-B total scores weighted one for answers to the left of the cutoff point and quality of group behavior as charted on the Hill Interaction Matrix?

2a. To what degree does the HIM-B TAS predict
quality of group behavior as charted on the Hill Interaction Matrix?

2b. To what degree does the HIM-B raw total score predict quality of group behavior as charted on the Hill Interaction Matrix?

2c. To what degree does the HIM-B total score weighted one for answers scored to the left of the cutoff point predict quality of group behavior as charted on the Hill Interaction Matrix?

Sampling

The population for this study was comprised of three groups. The first group was composed of 22 graduate students, 17 women and five men, all of whom were enrolled in a group dynamics class which had an experiential component requiring their attendance and participation in a group. The mean age of the group members was 37. A college student sample was chosen for two reasons: its availability and the fact that the majority of the studies cited in the literature used college student samples.

A second group was composed of two drug and alcohol awareness groups conducted with inpatients from a drug and alcohol rehabilitation program. The group members had been detoxified and group discussions centered around adjustment to life situations without having to rely on substance abuse,
future goals and the anxiety inherent in returning to work and home environments. Attendance in the group was mandatory as a condition of successful completion of the rehabilitation program. This group had eight male and eight female members with a mean age of 45.

The third group was composed of six emergency room nurses from a county hospital who were attending a stress management group. All six of the nurses were female and their mean age was 33.

The total sample size was 44 with 31 females and 13 male members. The mean age for the total sample was 39. Since the sample is not limited to one specific group of people, the generalizability of the results is enhanced.

Procedure

The study was designed to examine the predictive validity of a test of interpersonal behavior, the HIM-B. The normal and accepted procedure for determining levels of predictive validity is to administer the test being examined, measure the behavior that it is supposed to predict, and then compare the test scores with the actual behavior. That was the procedure that this study followed.

The HIM-B was administered to the members of each group prior to the beginning of the actual group sessions. The purpose of the test and also the purpose of the study was explained to the group members. It was stressed that
participation in the study was strictly voluntary and that neither the test results nor the audiotapes would be released to anyone except the experimenter.

The HIM-B data was then scored three different ways: (1) the scoring method used by Hill (1965) to obtain the Total Acceptance Score, (2) a raw score total was obtained and, (3) a total score in which all test items scored to the left of the cutoff point were weighted one was used.

The group composed of graduate students met for eight sessions and the first, fourth and seventh sessions were audiotaped. The drug and alcohol awareness groups met for eight sessions and first, fourth and seventh sessions were audiotaped. The stress management group for nurses met for six sessions and the first, third and fifth sessions were audiotaped.

The interactions of each member of the groups for the three taped sessions were analyzed and charted on the Hill Interaction Matrix. The tapes were each listened to a number of times in order for the experimenter to familiarize himself with the accents, pitch and voice tone of each of the group members. In order to allow referring back to interactions that clearly identified one member, a tape recorder with a tape counter was used.

The total number of interactions in each cell of the matrix were summed and then multiplied by the therapeutic value assigned to each cell by Hill (1965). A total matrix
score was then determined by dividing the sum of the cell scores by the individual's total number of interactions.

Statistical Treatment of the Data

The statistical treatment of the data relative to research question la, b and c involved the examination of the shape of the relationship between HIM-B total score variations and quality of group behavior. A statistic useful for the treatment of that data is the test for linearity (Hays, 1973). The test for linearity examines how much of a relationship is due to a linear trend and how much is attributable to a departure from linearity.

The test for linearity provides two separate F statistics for analysis. The F statistic that tests for the existence of a linear trend is derived by dividing the mean square departure from linearity by the mean square error. A significant F statistic would indicate the existence of a curvilinear relationship between HIM-B total score variations and quality of group behavior. The groups referred to in the between groups sum of squares represent the number of different HIM-B scores for that particular HIM-B total score variation.

The test for linearity also generates the eta squared statistic. Eta squared represents the total variance in the dependent variable which is explained by the independent variable. It is a measure of correlation or
strength of relationship when much of the relationship cannot be explained by linearity.

The statistical treatment of the data related to research question 2a, b and c involved examining the ability of HIM-B total score variations to predict quality of group behavior. Should the linear component be significant, the Pearson \( r \) would be an appropriate measure of correlation between HIM-B total score variations and quality of group behavior. "Besides providing a direct measure of the degree of association existing between two variables, Pearson \( r \) occurs in equations which are used in predicting one score (success on a job) from another (such as an aptitude test score)" (Kurtz and Mayo, 1979, p. 194). The correlation coefficient simply indicates the degree that variation or change in one variable is related to variation or change in another variable. Should the curvilinear component be significant, the Pearson \( r \) would still be appropriate although "when the correlation is other than zero and the relationship is nonlinear, Pearson \( r \) will underestimate the degree of association" (Minium, 1970, p. 156).
CHAPTER IV

RESULTS AND DISCUSSION

Results

In order to enhance clarity, the following format will be used: the results for research questions 1a, b and c will be presented followed by the discussion of those results, and; the results for research questions 2a, b and c will then be presented and subsequently discussed. The tables presented in this chapter will be numbered to correspond to the research questions whenever possible.

Research Question 1--Results

Table la represents the results of the test for linearity for the shape of the relationship between HIM-B TAS and quality of group behavior. The data indicate that F(linear) is 2.934, (p less than .05). The F(nonlinear) is .5670, (p less than .05). Eta squared is .7352.
Table 1a

TEST FOR LINEARITY FOR THE SHAPE OF THE RELATIONSHIP BETWEEN HIM-B TAS AND QUALITY OF GROUP BEHAVIOR

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
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<tbody>
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<td>.9023</td>
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<tr>
<td>Linear</td>
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<td>4.1715</td>
<td>2.934</td>
<td>.15</td>
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<td>.8062</td>
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<td>.88</td>
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<td>1.4217</td>
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<td></td>
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<td></td>
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<tr>
<td>eta squared</td>
<td>.7352</td>
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<td></td>
</tr>
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</table>

Table 1b represents the results of the test for linearity for the shape of the relationship between HIM-B raw total scores and quality of group behavior. The data indicate that F(linear) is 3.058, (p less than .05). The F(nonlinear) is 1.3087, (p less than .05). Eta squared is .7791.

Table 1b

TEST FOR LINEARITY FOR THE SHAPE OF THE RELATIONSHIP BETWEEN HIM-B TOTAL RAW SCORES AND QUALITY OF GROUP BEHAVIOR

<table>
<thead>
<tr>
<th>Source of Variation</th>
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<th>df</th>
<th>MS</th>
<th>F</th>
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<tr>
<td>Linear</td>
<td>2.4183</td>
<td>1</td>
<td>2.4183</td>
<td>3.058</td>
<td>.12</td>
</tr>
<tr>
<td>Departure from</td>
<td>31.0465</td>
<td>30</td>
<td>1.0349</td>
<td>1.3087</td>
<td>32</td>
</tr>
<tr>
<td>Linearity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>9.4895</td>
<td>12</td>
<td>.7908</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>42.9543</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eta squared</td>
<td>.7791</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table lc represents the results of the test for linearity for the shape of the relationship between HIM-B total scores weighted one for each correct answer and quality of group behavior. The data indicate that $F(\text{linear})$ is 4.863, ($p$ greater than .05). The $F(\text{nonlinear})$ is 1.1954, ($p$ less than .05). Eta squared is .6091.

Table lc

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>26.1626</td>
<td>23</td>
<td>1.1375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear</td>
<td>4.0829</td>
<td>1</td>
<td>4.0829</td>
<td>4.863</td>
<td>.04</td>
</tr>
<tr>
<td>Departure from Linearity</td>
<td>22.0798</td>
<td>22</td>
<td>1.0036</td>
<td>1.1954</td>
<td>.35</td>
</tr>
<tr>
<td>Within</td>
<td>16.7919</td>
<td>20</td>
<td>.8396</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>42.9543</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\text{eta squared} = .6091$

The between groups sum of squares degrees of freedom is different in each scoring variation because, with each scoring variation different subjects achieved the same score. The degrees of freedom represents the number of different scores for that particular scoring variation.

Research Question 1—Discussion

Although neither the $F(\text{linear})$ nor the $F(\text{nonlinear})$ was significant at the .05 level, the significance levels
indicate that the shape of the relationship between HIM-B TAS and quality of group behavior more closely approaches linearity than curvilinearity. Visual examination of scattergram 1a (Appendix B) indicates a weak linear relationship. The eta squared which represents the variance in the dependent variable explained by the independent variable is .7352 and indicates a strong relationship between the two variables.

Neither the F(Linear) nor the F(nonlinear) was significant at the .05 level for the shape of the relationship between HIM-B raw total scores and quality of group behavior. Once again, the significance levels indicate that the shape more closely approaches linearity. Visual examination of scattergram 1b (Appendix B) indicates a weak linear relationship. The eta squared which represents the variance in the dependent variable explained by the independent variable is .7791 and indicates a strong relationship between the two variables.

The F(linear) was significant at the .05 level for the shape of the relationship between HIM-B total scores weighted one for correct answers and quality of group behavior. This indicates that a linear relationship exists between the two variables. Eta squared which represents the variance in the dependent variable explained by the independent variable is .6091 and indicates that the relationship between HIM-B total scores weighted one for correct answers
and quality of group behavior is a strong relationship.

The results of the data analysis for research question 1 do not support Hill's interpretation of HIM-B total scores. Hill stated that low total scores (below 43) and high total scores (above 102) contraindicate including people scoring at those extremes in groups, while scores in between those two values indicate suitability for inclusion in groups. This interpretation implies a curvilinear relationship where, as total scores increase so does the quality of group behavior, up to a point after which, as test scores increase the quality of group behavior decreases. The data do not support the assumption of curvilinearity for the relationship between HIM-B total score variations and quality of group behavior.

Research Question 2--Results

Table 2 represents the Pearson r data for the relationship between the three HIM-B total score variations and quality of group behavior. The data indicate that r is -.3116, (p greater than .05) for the relationship between HIM-B TAS and quality of group behavior. For the relationship between HIM-B raw total scores and quality of group behavior, r is .2373, (p less than .05). For the relationship between HIM-B total scores weighted one for each correct answer and quality of group behavior, r is -.3083, (p greater than .05).
### Table 2
PEARSON r DATA FOR THE RELATIONSHIP BETWEEN HIM-B TOTAL SCORE VARIATIONS AND QUALITY OF GROUP BEHAVIOR

<table>
<thead>
<tr>
<th>quality of group behavior</th>
<th>scores</th>
<th>weighted one</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TAS</td>
<td>raw scores</td>
</tr>
<tr>
<td>-.3116</td>
<td>.2373</td>
<td>-.3083</td>
</tr>
</tbody>
</table>

n = 44, r = .251, less than .05

**Research Question 2—Discussion**

Although the correlation between two of the HIM-B total score combinations and quality of group behavior was significant at the .05 level, the relationship between the variables is in a direction not anticipated from the review of the literature. Since the tests for linearity suggest a linear trend, we would anticipate from the literature a positive correlation in which quality of group behavior increases as HIM-B total scores increase. Contrary to expectations, the data from this study indicate that a negative relationship exists in which quality of group behavior decreases as HIM-B total scores increase. Although the correlation between HIM-B total raw scores and quality of group behavior was positive, since high raw item scores indicate less therapeutic responses, the total raw scores indicate an inverse relationship as do the other two total score variations.
Various approaches to the interpretation of the data for research question 2a, b and c exist. The inverse relationship may be attributable to an acquiescent response set, that is, a tendency to always agree with statements, which is to say, some of the group members may have wanted to make themselves look good and thus exaggerated their degree of acceptance for operating in the cells of the matrix. High scores may also indicate individuals who view themselves in an ideal way within the group.

Interactions from the audiotapes reinforce this interpretation. Many group members in each of the groups indicated that they were attending their first group session and were unsure of how to conduct themselves. Since for many of them this was their first exposure to group counseling, their scores could also reflect their conception of how a group operates. Subjects who answered the test items more conservatively had low test scores but their lower test scores more accurately reflect the quality of their group behavior.

The negative relationship between each of the HIM-B total score variations and quality of group behavior may also be attributed to position response set which is a tendency to check items in the left hand column (Pfeiffer, Heslin and Jones, 1976, p. 205). Since the left-hand choices indicate a higher degree of acceptance for operating in the cells of the matrix than the right-hand choices, a subject
consistently choosing responses on the left-hand side of the continuum would acquire an artificially inflated total score. This score would also not accurately reflect the quality of the subject's group behavior.

The negative correlation between HIM-B total scores and quality of group behavior may also be interpreted in comparison to scores from Hill's normative sample. The mean TAS for this study was 76.206 with a standard deviation of 22.703. The mean TAS for Hill's normative sample was 62.77 with a standard deviation of 20.23. The mean TAS of the group therapists subgroup of Hill's normative sample was 76.93 with a standard deviation of 25.76. Since the study sample mean TAS more closely resembles mean TAS for the group therapists subgroup of Hill's normative sample than the mean TAS for the whole normative sample, the two mean TAS will be compared in the following discussion.

The distribution of HIM-B scores for each content and work style category for the study sample varies from the scores for the normative sample. The difference in proportion of interactions represented in each category between the study sample and normative sample is greatest when study sample scores are compared to the scores for the group therapists subgroup of the normative sample.

While the study sample's proportion of pre-work style categories, i.e., conventional and assertive, was 34% and 19% respectively, (Table 4), the proportion for the
Table 3

HIM-B CONTENT AND WORK STYLE MARGINAL SCORES FROM HILL'S NORMATIVE SAMPLE EXPRESSED AS SCORES AND AS A PROPORTION OF THE MEAN TOTAL ACCEPTANCE SCORE

<table>
<thead>
<tr>
<th></th>
<th>content style</th>
<th>work style</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>top</td>
<td>gp</td>
<td>pers</td>
</tr>
<tr>
<td>therapists</td>
<td>14.29</td>
<td>19.00</td>
<td>20.78</td>
</tr>
<tr>
<td>proportion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>expressed as %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total sample</td>
<td>14.03</td>
<td>14.71</td>
<td>17.21</td>
</tr>
<tr>
<td>proportion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>expressed as %</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Hill, 1965, pp. 93, 94)

Table 4

HIM-B CONTENT AND WORK STYLE MARGINAL SCORES FROM THE STUDY SAMPLE EXPRESSED AS SCORES AND AS A PROPORTION OF THE MEAN TOTAL ACCEPTANCE SCORE

<table>
<thead>
<tr>
<th></th>
<th>content style</th>
<th>work style</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>top</td>
<td>gp</td>
<td>pers</td>
</tr>
<tr>
<td>score</td>
<td>15.00</td>
<td>19.23</td>
<td>21.80</td>
</tr>
<tr>
<td>proportion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>expressed as %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
group therapists subgroup in Hill's normative sample for those two categories was 27% and 17%. The study sample's proportion of pre-work style interactions was 53% of the total number of interactions while the group therapists subgroup of Hill's normative sample's proportion of pre-work style interactions was only 44% of the total number of interactions (Table 3). This represents a 9% difference between the proportions for the two groups. For two groups with approximately the same mean TAS, the distribution of interactions within the matrix is considerably different.

Since the same TAS can result from different patterns of marginal subtotals, suspicion is created concerning the interpretation of HIM-B total scores. A greater proportion of pre-work style interactions which have the lower therapeutic values could cause a decrease in the quality of group behavior, especially when compared to scores that reflect a greater proportion of work style interactions as is the case with the group therapist sample. Higher pre-work style cell scores than work style cell scores indicate a greater level of acceptance for operating in less therapeutic cells, hence a tendency for quality of group behavior to decrease as HIM-B total scores increase. This interpretation of the study data clouds the interpretation of the HIM-B total score. The same score for two different people could represent two entirely different attitudes toward groups. A high total score could represent a high incidence
of acceptance of non-therapeutic behaviors and a low incidence of acceptance of therapeutic behaviors or the opposite, a low incidence of acceptance of non-therapeutic behaviors and a high incidence of acceptance of therapeutic behaviors.

Finally, HIM-B cell scores and marginal scores were compared with quality of group behavior (Appendix C) in an attempt to explain the negative relationship between HIM-B total score variations and quality of group behavior. When the HIM-B raw score marginals were correlated with quality of group behavior marginals, only the assertive pre-work style marginals correlated at the .05 level of significance and in the expected direction. When the raw HIM-B cell scores were correlated with quality of group behavior, six cells had correlations significant at the .05 level: the group conventional, group assertive, topic speculative, topic confrontive, personal assertive and relationship assertive cells. For these cells, since low raw scores are an indication of increasing therapeutic potential, as the scores increase in therapeutic potential or degree of acceptance for operating in the matrix cells, quality of group behavior also increases.

The results of this investigation fail to support Hill's recommended interpretation of the TAS and further, do not support the use of HIM-B total scores for screening purposes.
CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

This study was designed to provide information regarding the predictive validity of the Hill Interaction Matrix Form-B Total Acceptance Score and two other total score variations for use in screening potential group members.

Three groups were selected for inclusion in the study. The first group was composed of graduate students taking a course in group dynamics with an experiential component. The second group was composed of patients in a drug and alcohol rehabilitation program who were attending a drug awareness group. The third group was composed of nurses from a county hospital enrolled in a stress awareness group.

Pretest data was gathered by administering the HIM-B to the group members prior to the beginning of the first group session. The group sessions were audiotaped and the interactions from three of the sessions for each of the three groups were analyzed and charted on the Hill Interaction Matrix.

The raw data obtained consisted of the HIM-B raw
scores and the number of interactions for each group member representative of the cells of the matrix. The shape of the relationship between the three HIM-B total score variations and quality of group behavior was analyzed by a test for linearity and the correlations between the three HIM-B total test scores and quality of group behavior was examined.

The results of the test for linearity indicated that the shape of the relationship between variables tended toward linearity, although the results were significant at the .05 level for only one of the three HIM-B total score variations. The Pearson r predictive validity coefficients indicated that the correlation between the three HIM-B total score variations and quality of group behavior was negative, with two of the three correlations significant at the .05 level.

Conclusions

The results of the present study provide the following conclusions about the use of the HIM-B total score as a screening tool for potential group members:

1. no support for Hill's interpretation of Total Acceptance Scores where scores below 43 or above 102 indicate a client whose behavior is unsuitable for group membership.

2. no support for the use of the HIM-B's Total Acceptance Score for screening purposes.
Recommendations

The recommendations in this section are derived from the present study in relation to past research efforts reviewed in Chapter II. A replication of this study with a number of modifications is recommended. The first modification would be an increase in sample size. The increase in sample size could allow for greater precision and stability of the estimate of the relationship between HIM-B total score variations and quality of group behavior.

A second modification, although time consuming, would be to record all of the group sessions instead of only three for each group as was done in this study. This procedure would allow for a greater number of interactions to be charted for each group member and increase reliability. The use of videotape instead of audiotape whenever logistically possible is also recommended. This change in recording procedure would greatly reduce the time necessary for identifying each of the group members and also increase the accuracy of the recording of group behavior.

The possibility of high HIM-B total scores being attributed to position response set could be examined by reversing the order of the possible responses on the test's answer sheet. The responses "never" and "rarely" could be moved to the left side of the continuum and the response choices "usually" and "often" could be moved to the right of the continuum. The two different answer sheets could be
used for two separate administrations of the test and the scores could be compared to see if score differences could be attributed to the organization of the possible responses.

The possibility of high HIM-B total scores being attributed to acquiescent response set could be examined by administering the HIM-B along with a psychological test that measures a subject's need for acceptance from others. The Sixteen Personality Factors Test (Cattell in Pfeiffer, Heslin and Jones, 1976), for example, has three scales: (1) shy versus venturesome, (2) trusting versus suspicious, and (3) group dependent versus self-sufficient that could contribute data relative to a subject's psychological state as it effects HIM-B item responses. The Personal Orientation Inventory (Shostrom in Pfeiffer, Heslin and Jones, 1976) also has a scale that measures inner directed versus other directed behavior that might contribute knowledge about a test taker's need to appear facilitative. The subject's need for acceptance or desire to appear to be a facilitative person could effect the subject's scores in a positive direction. If this phenomenon does exist, the HIM-B total score would then represent an ideal self or ideal attitude toward group counseling rather than serve as a predictor of quality of group behavior.

The results of this study also suggest future research designed to examine the ability of HIM-B cell scores and marginal scores to predict quality of group behavior.
The interaction between HIM-B total scores and cell scores as they contribute to the total score also warrants further study.

Since the advent of assertiveness training has altered the common usage of the word assertive, it is suggested that the name of the assertive pre-work style category be changed to aggressive to more accurately describe the nature of the interactions in that category.

In terms of the results of this study, the HIM-B total score variations do not seem to be adequate for the prediction of quality of group behavior. They may however be appropriate for the examination of a potential group member's attitude toward or level of acceptance for operating in different modes of group behavior as represented by the interface between the content style and work style categories of the matrix. Further research related to the HIM-B's predictive validity is indicated before the HIM-B can be endorsed as a solution to the screening dilemma.
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These consist of pages:

82-86, Appendix A: "Hill Interaction Matrix Form B"
APPENDIX B

SCATTERGRAM 1a

RELATIONSHIP BETWEEN HM-B TOTAL ACCEPTANCE SCORE AND QUALITY OF GROUP BEHAVIOR

FREE PREDIAL

SCATTERGRAM OF

HM-B TOTAL ACCEPTANCE SCORE

0.90

0.80

0.70

0.60

0.50

0.40

0.30

0.20

0.10

0.00

-0.10

-0.20

-0.30

-0.40

-0.50

-0.60

-0.70

-0.80

-0.90

-1.00

0.00

0.20

0.40

0.60

0.80

1.00

0.00

0.20

0.40

0.60

0.80

1.00

PLOTTED VALUES: 4 INFLATED VALUES; 6 RESIDUAL VALUES
SCATTERGRAM 1b

RELATIONSHIP BETWEEN HIM-B TOTAL RAW SCORES AND QUALITY OF GROUP BEHAVIOR
SCATTERGRAM 1c

RELATIONSHIP BETWEEN HIM-B TOTAL SCORES WEIGHTED ONE FOR EACH CORRECT ANSWER AND QUALITY OF GROUP BEHAVIOR
APPENDIX C

PEARSON r FOR THE RELATIONSHIP BETWEEN HIM-B RAW CELL SCORES, MARGINAL SCORES AND QUALITY OF GROUP BEHAVIOR

Table 5

PEARSON r FOR THE RELATIONSHIP BETWEEN HIM-B RAW CELL SCORES AND QUALITY OF GROUP BEHAVIOR

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<th>topic</th>
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<th>personal</th>
<th>relationship</th>
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</thead>
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<tr>
<td>conventional</td>
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<td>-.2111</td>
<td>-.0625</td>
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<td>assertive</td>
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<td>-.4571</td>
<td>-.2718</td>
<td>-.5183</td>
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<td>-.0170</td>
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<td>confrontive</td>
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<td>-.1007</td>
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</table>

n = 44, r = .251, less than .05

Table 6

PEARSON r FOR THE RELATIONSHIP BETWEEN HIM-B RAW CONTENT MARGINAL SCORES AND QUALITY OF GROUP BEHAVIOR

<table>
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<th>quality of group behavior</th>
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<th>personal</th>
<th>relationship</th>
</tr>
</thead>
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<td></td>
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<td>.1924</td>
<td>-.1956</td>
</tr>
</tbody>
</table>

n = 44, r = .251, less than .05
Table 7

PEARSON r FOR THE RELATIONSHIP BETWEEN HIM-B RAW WORK STYLE MARGINAL SCORES AND QUALITY OF GROUP BEHAVIOR

<table>
<thead>
<tr>
<th>work style marginal scores</th>
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<th>speculative</th>
<th>confrontive</th>
</tr>
</thead>
<tbody>
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<td>quality of group behavior</td>
<td>-.1044</td>
<td>-.6011</td>
<td>-.2228</td>
<td>-.0906</td>
</tr>
</tbody>
</table>

n = 44, r = .251, less than .05
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