Volume 51, No. 3 Fall 1998

Perceived Cohesiveness and Sociometric Choice in Ongoing Groups

DORIS WOOD
V. K. KUMAR
THOMAS W. TREADWELL
EVAN LEACH

ABSTRACT. The authors evaluated the relationship between sociometric choice and group cohesiveness in 6 ongoing learning groups and examined the reliability of the Group Cohesiveness Scale (V. Veeraraghavan, H. Kellar, M. Gawlick, & N. Morein, 1996). The Group Cohesiveness Scale and a sociometric instrument were administered to students during the 3rd and final weeks of classes. The reliability values of the Group Cohesiveness Scale were acceptable for use in research. The hypothesis that more popular students perceive the group to be more cohesive received only limited support on either the attraction or task-related dimensions. The authors, however, deem the Group Cohesiveness Scale to be sensitive to idiosyncratic group dynamics in the different learning groups.

THE MAIN PURPOSE OF OUR STUDY was to examine whether sociometric choices are related to cohesiveness within the context of an ongoing learning group. Furthermore, because the cohesiveness scale used in the study is a relatively new one, another purpose of the study was to examine the scale's reliability and its sensitivity to detect changes in group cohesiveness as a function of group maturity.

Although a number of studies exist on group cohesiveness, very few researchers have examined whether sociometric choices are related to a group's cohesiveness at various points of maturity within the context of an ongoing group. That is surprising because many investigators allude to sociometric concepts while evaluating the concept of cohesiveness.

One of the earlier definitions of *cohesiveness* came from Moreno and Jennings (1937), who defined the concept as "the forces holding the individu

within the groupings in which they are" (p. 30). In the most often quoted d
inition, Festinger, Schacter, and Back (1950) stated that *cohesion* is "the tc
field of forces that act on members to remain in the group" (p. 164). Acco
ing to Festinger et al., the various putative field of forces for members
remain in the group are (a) member attraction to the group goals and (b)
group's ability to mediate important goals for its members—what Festin
has termed as "needs control." Although Festinger et al.'s definition has of
been criticized as vague, particularly the notion "total field of forces," it h
served as a guide for many investigators looking for ways to refine the cc
cept (see Murdack, 1989).

Commenting on Festinger et al.'s (1950) definition, N. Gross and Mar
(1952) stated that "[h]euristically, it is highly improbable that an investiga
could ever define adequately the multitudinous and heterogeneous field
forces as perceived consciously and unconsciously by all members" (p. 55
Gross and Martin noted that even in Festinger et al.'s study, only three soci
metric indices were used to examine cohesiveness: (a) an in-out group ratio
intimate friends, (b) a dislike ratio, and (c) an isolate ratio. It was assumed th
although a greater proportion of in-group choices reflects greater cohesiv
ness, greater proportions of members disliking each other and isolated fro
the group reflect less cohesiveness. Implicit to all three indices, however,
the concept of members' attractiveness to each other, although that was n
directly measured in the Festinger et al. study.

According to Murdack (1989), a number of prominent researchers (e.g
Libo, 1953; Pepitone & Kleiner, 1957; Van Bergen & Koekebeakker, 195
have simply defined *cohesiveness* in terms of "attraction-to-group" (Murdac
1989, pp. 41–42). Reviewing other definitions, Murdack noted that investig
tors have equated cohesiveness with other concepts such as "group spiri
"bonds of interpersonal attraction," "affective bonds," "sense of belongin
ness," "sticking together," and "sense of we-ness" (pp. 39–43). Evans an
Dion (1991) interpreted *cohesiveness* to imply "an individual's desire to r
main a member in the group" (p. 175) and his or her motivation to "advan
the group's objectives and participate in its activities" (p. 173).

Bollen and Hoyle (1990) expressed reservations about defining cohesiv
ness in terms of "attraction to the group" in the sense that attraction may b
seen as a cause of cohesiveness, rather than an effect of membership. That i
it is an antecedent, rather than a consequent, condition for cohesiveness. The
defined *cohesion* in phenomenological terms as perceived belongingne
(feeling part of a group) and perceived morale (feelings of morale, enthusias
to be part of a group). Consistent with their definition, they developed a Pe
ceived Cohesion Scale to measure the two aspects of belongingness an
morale. Interestingly, the two dimensions correlated at .90 in their study, lea

ing them to argue that although the two dimensions are measuring similar phenomena empirically, they in fact are different conceptually, much in the sense that height and weight tend to be correlated but reflect different measurement concepts. The authors noted that although "belongingness emphasizes cognition, . . . morale captures affect" (p. 497). For example, in some situations, such as an earthquake, people may have a high sense of belongingness but a low morale.

More contemporary views of cohesiveness recognize cohesiveness as a multidimensional concept in which attraction is just one factor (N. Gross & Martin, 1952; Murdack, 1989; Stokes, 1983). Members may be attracted to a group for a variety of reasons, only one of which may be the attractiveness of the group goals. Also, it cannot be assumed that in cohesive groups, members always like each other. It is entirely possible that the group goals may be sufficiently strong to hold the group together to act as one, even in the absence of mutual attraction (Frank, 1957). On the other hand, members may act cohesively, even though they may not generally agree on the group goals. In that regard, Johnson and Fortman's (1988) differentiation between *task cohesion* and *social cohesion* makes good sense. They used E. F. Gross's (1957) 8-item Group Cohesiveness Scale, subjected it to a principal component analysis, and found evidence for two components: affective or social cohesion and cognitive cohesion.

Stokes (1983) differentiated between three components of group cohesion: (a) interpersonal attraction, (b) instrumental value (meeting of needs, or in Festinger et al.'s, 1950, terms "means control"), and (c) risk taking (as evidenced by higher self-disclosure, open expression of hostility, and conflicts). Carron, Widmayer, and Brawley (1985) differentiated between the *task-social* and *individual-group dimensions.* The former refers to the idea that members may be interested in group goals or social relationships, and the latter to commitment to other members or the group itself. Griffith (1988) differentiated between horizontal (peer relation) and vertical dimensions (superior–subordinate relations) of cohesion.

Piper, Marrache, Lacroix, Richardson, and Jones (1983) delineated three group concepts in their discussion of cohesion: (a) mutual stimulation and effect—the extent to which a "group stimulates, excites, and arouses the participant and the degree to which he perceives that he has a potent reciprocal influence;" (b) commitment to the group—participant's "allegiance to the group" as "reflected in preserving and strengthening the basic structure of the group;" and (c) compatibility of the group—"perceived fit of participants in terms of suitability" for the group (p. 103). Piper et al. observed that of the above three concepts, commitment (both subjective and behavioral) is most basic to their view of cohesiveness because it describes the "bond between the participant and his/her conception of the group as a whole" (p. 104). In a

cohesive group, according to Piper et al., "the various bonds in the group a strong, e.g., where a majority of the participants possess a commitment to tl group, to each other, to the leader" (p. 106). An earlier study by Yalom a Rand (1966) observed that compatibility (as measured by FIRO-B questio naire) was related positively to cohesiveness in five outpatient therapy grou (p. 268). The other findings of interest were as follows: (a) members wl were extremely incompatible with at least one other member tended to be le satisfied with their groups (p. 272) and (b) members who dropped out prem turely were less compatible with the rest of the group (p. 271).

Evaluating both unidimensional and multidimensional models of cohesiv ness, Cota, Evans, Dion, Kilik, and Longman (1995) identified a new heuri tic for cohesion. They described cohesion in terms of primary and secondar dimensions. Primary dimensions apply in all or most types of groups to d scribe cohesiveness, whereas secondary dimensions are only applicable i specific groups. Examples of primary dimensions include Carron et al. (1985) individual–group and task–social dimensions, group values and beha ioral rules, and resistance to disruptive forces. Examples of secondary dime sions include risk taking (Stokes, 1983), vertical dimension (Griffith, 1988 and valued roles (Yukelson, Weinberg, & Jackson, 1984). These dimensio may be applicable in some groups but not in others. For example, risk takin may be more relevant in clinical groups, vertical dimensions in hierarchic organizational settings, and valued roles in sports in which roles are not eas ly interchangeable (Cota et al., 1995).

Cohesiveness may be thought of as an outcome of an intervention or as process by which the group comes to "stick together" and "resist disruptiv forces," to use N. Gross and Martin's (1952) terms. Separating process fro outcome might be extremely difficult in any study. In fact, Carron (1982) de fined *group cohesiveness* as "a dynamic process which is reflected in the te dency for a group to stick together and remain united in the pursuit of its goal and objectives" (p. 124).

Difficulties in defining the concept have not hindered researchers fro investigating the importance of cohesiveness in group work. Yalom and Ra (1966) defined *cohesiveness* very broadly as "solidarity or esprit de corps a group" (p. 267) and noted that it is very influential in a group's outcom After reviewing studies, they stated in a summary that in highly cohesiv groups, productivity tends to be better and that members tend to participat readily, defend the group norms, express hostility, feel a sense of securit influence others and be influenced, and stay with the group.

Evans and Dion (1991) conducted a meta-analysis of studies on grou cohesion and performance and located 27 published and unpublished studie that related group cohesion with performance. However, they could onl include 16 studies done in a variety of contexts (sports teams, experimenta

groups, and military units) in their meta-analysis. Cohesiveness measures also varied from questionnaires (attitude scales) to sociometric questions to behavioral observations. A variety of performance measures were used in those studies, such as the percentage of time members engaged in work activities, the win-or-lose record of ice hockey and basketball teams, the number of original ideas generated, gains in stock prices, and ratings of bombing crews by a supervisor.

In each of the studies, Evans and Dion (1991) found cohesion was related to performance or productivity. They described that relationship as "moderately strong and in a positive direction (r = +.419)" (p. 179). However, although they did not look for evidence in their meta-analysis, they noted that there may be an optimum level of cohesiveness, in the sense of the Yerkes Dodson Law of an inverted U function between cohesiveness and performance. They cited Kelly and Duran (1985), who found that "very high cohesiveness was associated with poor performance" (Evans & Dion, 1989, p. 181). More recently, Smith et al. (1994) found a positive correlation between a cohesiveness-like measure of top management teams in small technology firms and its financial performance. In a study with military groups, Zaccaro, Gualtieri, and Minionis (1995) reported that group cohesiveness can improve decision making under time pressure.

Yalom (1985) declared group cohesiveness to be an important "curative factor in therapy" (p. 36) and a "necessary precondition for effective group therapy" (p. 50). After reviewing several studies, Yalom (1975) noted that group cohesion is related to important therapeutic outcomes. He observed that perceived cohesiveness is related to contact with other members (Dickoff & Larkin, 1963) and in itself has therapeutic value for promoting personality change. Yalom, Houts, Zimbergerg, and Rand (1967) found a positive significant correlation between self-rated improvement and cohesion data collected on two different occasions but did not find correlations between cohesion and ratings of improvement on the basis of those interviews to be significant. Stokes (1983), however, observed that Yalom et al.'s results may be of dubious value. Stokes noted that although Yalom's study contained 140 correlations, only 7 of them were significant, making the probability of Type 1 error very high. In another study, Kapp et al. (1964) found a significant positive correlation between self-reported measures of personality change and cohesion scores. Clark and Culbert (1965) found that improvement as measured by rating speech samples from group members on the Problem Expression Scale (PES; van der Veen & Tomlinson, 1962) correlated significantly with the number of mutually therapeutic relationships (measured by the Barrett–Lennard Relationship Inventory) formed with the group members.

Yalom (1985) considered cohesiveness in group therapy as the "analogue of 'relationship' in individual therapy" (p. 36). One might assume that Yalom

was referring not only to the group leader's relationship with the group mei bers but also, and perhaps more importantly, to the intermember relationshi in the group. Roark and Sharah (1989) found evidence for the interdepe dence of cohesiveness with empathy, self-disclosure, acceptance, and tru They also hypothesized that increases in empathy, self-disclosure, acceptanc and trust lead to an increase in cohesiveness.

Given the significance of interpersonal relations among group members determining cohesiveness in groups, it is surprising that not many studies ha examined the relationship between sociometric choices and cohesivenes Festinger et al.'s (1950) study, as noted before, contained three sociometrica ly based indices of cohesion: in–out group ratio of intimate friends, dislil ratio, and an isolate ratio. These indices were based on the assumption th they reflected the attractiveness of the group to its members, a major comp nent of Festinger et al.'s definition of cohesiveness. Deep, Bass, and Vaugl (1967) asked group members to pick five individuals with whom they wou like to form a company, and Hemphill and Sechrest (1952) asked group mem bers to list those with whom they preferred to work.

In the studies in which sociometric indices were used, the indices we measures of cohesion. In other studies (e.g., Back, 1951), level of cohesiv ness was manipulated by creating dyads that differed on high and low attrac tiveness. However, there appear to be no studies that have correlated socic metric data with perceived cohesiveness in groups. For example, it might b hypothesized that the more popular members in a group are likely to perceiv their group as more cohesive than do the less popular members. This hypotl esis arises from the assumption that a group member's popularity may reflec the extent to which the popular member meets the social needs or perhaps th task needs of other members of the group.

In the present study, we examined the relationships between perceive group cohesiveness and various sociometric indices. By using separate mea sures of cohesiveness and sociometry, we avoided the circumvention of con founding that tends to occur when one defines cohesiveness in terms of socio metric indices (see N. Gross & Martin, 1952). Specifically, in the presen study, we examined (a) the reliability of the Group Cohesiveness Scale, (b) th differences in cohesion as a function of class activities, (c) the correlation be tween cohesion and sociometric status (popularity), and (d) correlations be tween the pre- and postcohesion scores and pre- and postpopularity scores Another purpose of this study was to determine whether the number of iso lates correlated with group cohesiveness across the groups. Because of th small number of groups included in the study, that type of analysis was no feasible.

Given the lack of previous studies, no specific hypotheses were advanced However, one might reasonably expect that students perceive greater cohe

siveness toward the end of the course than at the beginning and that more popular students are more likely to see their groups as more cohesive. It is not easy to determine the extent to which precohesion scores predict postcohesion scores because the idiosyncratic nature of group dynamics is likely to be quite influential in bringing about dramatic changes in cohesiveness. Furthermore, for the same reasons, it is not easy to predict the correlation between initial sociometric status and the final cohesion scores.

Method

Participants

Participants in the study were students enrolled in six experiential training classes in the use of psychodramatic and other group methods taught by two different instructors who are licensed psychologists and trained in psychodrama. Four classes (PD1, PD2, PD3, and PD4) were specifically concerned with learning psychodrama techniques, and two others (IN1 and IN2) applied psychodrama and other group techniques in the exploration of interpersonal issues relating to intimacy. PD1 (n = 19) and PD2 (n = 16) were taught during a regular semester (14-week course, spring). PD3 (n = 11) and PD4 (n = 11) were taught for 8 hr each day over a 1-week period.

The intimacy classes were taught as regular semester-long courses (spring). The psychodrama classes were experiential in the sense that students, with the assistance of the instructor, worked on real-life issues experienced by the students in an effort to demonstrate a variety of sociometric and psychodramatic techniques. In the intimacy classes (IN1, n = 15; IN2, n = 17), a broad range of group techniques were used, including sociometry, psychodrama, group discussion, problem-solving activities (e.g., for promoting team work), and group exercises (e.g., related to trust, exploring attitudes based on questionnaires).

The psychodrama and intimacy classes met once a week during the evening hours. A majority of the students in those classes were majoring in psychology. Others were majoring in nursing, education, business, and communication. Students responded to the questionnaires voluntarily after they had signed informed consent forms.

Materials

Perceived group cohesiveness was measured by using the Group Cohesiveness Scale devised by Veeraraghvan, Kellar, Gawlick, and Morein (1996). The instrument consists of 26 items for assessing various dimensions of cohesion, such as member retention, interaction among group members, and compatibility of individual and group goals. The items are rated on a 4-point Li type scale (1 = *low*, 2 = *moderately low*, 3 = *moderately high*, and 4 = *h* along with a not-applicable category. According to Veeraraghvan et al. scale had shown acceptable reliability for use in research.

A 6-item sociometric instrument was designed to assess students' pr ences on attraction and task-related dimensions. The sociometric statem which were general enough to be used in all groups, are as follows:

1. The group member that I think is most like me is _____.
2. The person to whom I was initially attracted in this class is _____
3. My first choice for a person who can express thoughts and feelin have but cannot articulate is _____.
4. The class size has exceeded its limit. The person I would choose t transferred to another group is_____.
5. The person I would most like to see do some psychodramatic wor this class is _____.
6. The class member who could most comfortably encourage me t some meaningful work in this class is_____.

For each statement, participants were asked to supply the names of t members from their group in the order of their preference.

Procedure

The questionnaires were administered twice during the semester—c during the 3rd week of classes and then once during the final week of cl es. In the remainder of this article, the assessments are referred to as pret and posttests. After the participants completed informed consent forms, researchers administered the cohesion scale and the sociometric instrum To assure anonymity of their responses after the data were collected, the ticipants received a list of the names of the students in the class with an ic tifying number that they used when completing the sociometric instrume

Results and Discussion

Reliability

Cronbach alpha coefficients for the Group Cohesiveness Scale for both pretests and posttest assessments were computed for the five classes and o all for the 89 students in the five classes. The alpha coefficients are show Table 1.

The internal consistency reliability values are consistent with those tained by Veeraraghvan et al. (1996). Those values are also consistent

TABLE 1
Coefficient Alphas for Cohesiveness Test for Different Classes

Class	*n*	α Pre	α Post
PD1	19	.85	.81
PD2	16	.86	.90
PD3	11	.60	.77
PD4	11	.76	.90
IN1	15	.74	.51
IN2	17	.84	.86
Overall	89	.80	.86

Note: Classes focused either on psychodrama (PD) techniques or interpersonal (IN) issues. Pre = pretest assessment; post = posttest assessment.

those generally found for self-report type instruments used in personality research. The variability in the internal consistency values between different groups was expected, given that the cohesiveness instrument is a state, and not a trait, instrument. Thus, the instrument seemed to have adequate reliability for use in research.

Change in Cohesiveness as a Function of Participation in Class

As we noted previously, class attendance itself can be construed as an intervention, although at no point during the classes was there a specific intervention intended to increase the level of cohesiveness. Table 2 contains the mean scores for the pretest and posttest scores, along with *t* values and their significance.

Given the small sample sizes, the results of each of the *t* tests were evaluated at the .05 level of significance. As can be seen in Table 2, there was a significant increase in group cohesiveness in two classes (PD3 and PD4), and cohesiveness decreased significantly in one class (PD1).

The results are interesting, in the sense that they suggest that the group cohesiveness instrument was sensitive to the emergent group dynamics in the various classes. The two classes that showed an increase in group cohesiveness were the summer classes that met daily for a whole week for approximately 8 hr. The intense group interactions in the two summer classes may have facilitated the greater feeling of cohesiveness, compared to the regular

TABLE 2
Pretest and Posttest Cohesiveness Scores and Results of *t* Tests

Class	*n*	Pre *M*	Pre *SD*	Post *M*	Post *SD*	*t*	*p*
PD1	19	3.96	.42	3.65	.42	2.44	.025
PD2	16	3.97	.38	3.79	.50	1.81	.090
PD3	11	3.49	.37	4.18	.37	−4.01	.002
PD4	11	3.64	.47	4.41	.43	−3.39	.007
IN1	15	3.95	.38	4.00	.27	−0.47	.642
IN2	17	3.84	.42	4.00	.42	−1.51	.150
Overall	89	3.84	.43	3.96	.47	1.78	.078

Note: Classes focused either on psychodrama (PD) techniques or interpersonal (IN) issues.

semester classes. In the other three (PD2, IN1, and IN2) semester-long co es, class sessions were 1 week apart, and consequently, the lack of interac during the interim period may not have been conducive to sustaining co siveness. It is difficult to explain the decrease in cohesiveness scores in P but the large size of the class may have been a factor.

Cohesiveness and Sociometric Status

A purpose of the study was to examine whether the perceived cohesiven was related to a person's sociometric status. It was hypothesized that the m popular individuals would perceive their groups as more cohesive. The soc metric status or popularity score for each individual was computed by add the number of choices (regardless of rank) received across all questions. exploratory reasons, all correlations among the precohesiveness, postco siveness, prepopularity, and postpopularity scores were also examined. Ta 3 contains those correlations.

Because of low sample sizes, an alpha of .10 was used to establish sign cance. Table 3 shows that (a) precohesiveness scores significantly predic postcohesiveness in two of the five classes (PD2 and IN2), (b) precohesi ness and prepopularity correlated significantly in two of the five classes, postcohesion was correlated with both pre- and postpopularity in only one the five classes, and (d) pre- and postpopularity were significantly correla in all five classes. In terms of all classes combined, only the pre- and pc popularity scores were significantly correlated. Thus, the hypothesis that m popular individuals perceive their groups to be more cohesive was suppor

TABLE 3
Correlations Among Pretest and Posttest Cohesiveness and Popularity Scores

Class	1	2	3	4
PD1 (n = 19)				
1. Precohesion	—	.121	.083	−.376
2. Postcohesion		—	−.001	.021
3. Prepopularity			—	.698****
4. Postpopularity				—
PD2 (n = 16)				
1. Precohesion	—	.611**	−.148	−.185
2. Postcohesion		—	.075	−.200
3. Prepopularity			—	.665***
4. Postpopularity				—
PD3 (n = 11)				
1. Precohesion	—	−.179	−.163	−.192
2. Postcohesion		—	.230	−.192
3. Prepopularity			—	.861****
4. Postpopularity				—
PD4 (n = 11)				
1. Precohesion	—	−.414	−.569*	−.350
2. Postcohesion		—	.181	.246
3. Prepopularity			—	.564*
4. Postpopularity				—
IN1 (n = 15)				
1. Precohesion	—	.370	.577**	.517*
2. Postcohesion		—	.610**	.629**
3. Prepopularity			—	.938****
4. Postpularity				—
IN2 (n = 17)				
1. Precohesion	—	.443*	.051	−.022
2. Postcohesion		—	−.311	.192
3. Prepopularity			—	.491*
4. Postpopularity				—
Overall (N = 89)				
1. Precohesion	—	.003	−.053	−.062
2. Postcohesion		—	.154	.037
3. Prepopularity			—	.666****
4. Postpopularity				—

Note: Classes focused either on psychodrama (PD) techniques or interpersonal (IN) issues.
*p < .10; **p < .05; ***p < .01; ****p < .001.

in only one class (IN1). What is interesting, however, is that the popularity tus remained stable across the two instances of testing in all classes, sugg ing that the leaders emerged early in the group's development and once t had emerged, retained their status, regardless of any group dynamics idios cratic to each class.

The present study related sociometric choices to group cohesiveness w in the context of an ongoing learning group. A further purpose was to exa ine the reliability of the cohesiveness scale because that is a relatively r instrument. In this section, we discuss the reliability of the cohesiveness sc and then consider the results with regard to the relationship between soc metric choices and cohesion.

For each of the classes, coefficient alphas were assessed separately for pretests and posttests and also overall across all classes. As shown in Table the combined alpha values ranged between .60 and .85 for the pretest a between .51 and .90 for the posttest. The median reliability value was .80 the pretest and .84 for the posttest. These reliability values seem accepta for research purposes because they are in the range of what is typically fou for self-report questionnaires (Borg & Gall, 1973). The reliability values particularly impressive, given that the cohesiveness scale is a state, and nc trait, instrument.

Some revisions, however, might be considered for the cohesion scale to i prove its reliability and perhaps its validity. The rating scale includes the sponse categories *low, medium low, medium high, high,* and *not applicab* We suggest eliminating the catch-all category *not applicable* and replacing with the category of *nonexistent* or *extremely low* at the lower end of the co tinuum. It is possible that some students used the not-applicable response avoid making a choice.

Some items on the cohesiveness instrument were judged not applicable many students. For example, statement 9 on the posttest, "I personally do r like to go to group meetings," was rated not applicable by 36.8% of the st dents. Likewise, statement 26, "If a group with the same goals were forme I would prefer to be a member of that group," was rated not applicable 26.3%. It is unclear what the not-applicable response means on those tv questions.

The results of the present study do support the usefulness of the cohesi instrument in detecting changes in cohesiveness as a function of group mat rity. In two classes, group cohesion increased; in one class, it decreased; a in three classes, the changes were not significant. That type of variation results probably reflects the sensitivity of the cohesiveness scale to the idi syncratic group dynamics in the different classes.

An interesting question was what contributed to the variation in cohesion the different classes. The two classes in which cohesion increased were sur

mer classes that spent 8 consecutive hr together for 5 successive days. Group members spent all their time as an assembly, even having lunch as a group. No concurrent classes interfered with the intensity of the focus. The majority of the limited time outside the group meetings was probably spent preparing for the next day's activities. It is conceivable that the elevated intensity of experience contributed to the feelings of increased cohesion in the two summer groups.

In contrast to the summer sessions, the classes offered during the regular semester met once a week for approximately 3 hr each week. There were probably few or no interactions between classmates during the intervening days. According to Cartwright and Zander (1968), close and frequent interaction with group members results in greater attraction to membership in the group. If the frequent interaction and elevated intensity of the two summer classes were possible reasons for increased cohesiveness in those groups, then the lack of close and intensive interaction may have contributed to the lack of change in cohesion in the two regular semester classes and to a decrease in cohesion in one class.

From the above results, we can articulate several questions. Do long sessions on successive days affect the group's cohesion? Did having lunch together make a difference in feelings of cohesion? A future study could isolate the lunch-together variable to see whether that alteration alone in a normal class schedule can make a difference in the cohesion ratings.

In the late 1960s and early 1970s, there was much interest in "marathon" groups. The extravagant claims made in the news media about their value were based largely on anecdotal records. The fad appeared and disappeared quickly, but the results of this study suggest that some elements of time-extended groups can be useful, especially in a learning-by-doing format of teaching. Yalom (1985) reported that the timing of the introduction of a marathon session may be a factor in the development of cohesiveness. Yalom explored the effects of a 6-hr meeting on the development of cohesiveness in six newly formed groups in a psychiatric outpatient department over a 16-week period. Three groups held a 6-hr initial meeting and 15 subsequent 90-min sessions. Three other groups had their regular 90-min meetings for the first 10 meetings; then at the 11th meeting, the three groups met for the extended 6 hr. In the three groups that held a 6-hr meeting initially, the trend was toward decreased cohesiveness in subsequent meetings. However, the use of the 6-hr group in the 11th session resulted in an increase in cohesiveness in the subsequent meetings that resumed the 90-min format. Thus, it appears that it is not the continuous time itself that affects cohesion, but rather the timing of the introduction of extended session that is important.

Moreover, in addition to the frequency and intensity of interactions, other possibilities could be related to the increased cohesion in summer classes.

Among students, summer psychodrama classes have a reputation for b more intense than those that meet weekly during regular session. That c ty may well attract a special type of student who enjoys the group exper and the feeling of togetherness engendered by the group experiences. In words, the students joined the group to be close to others in a group situ and to take the opportunity provided by various experiences and techniqu become closer to other members while they were also exploring the niques used in psychodrama. Such students may evaluate both positive negative experiences within a group as a formative type of experience consequently feel less vulnerable to isolation.

The one class (PD1) in which the scale measured a decrease in coh was quite large. Because risk taking and cohesion affect each other in ex ential groups (Yalom, 1985), it is possible that the large size of PD1 (n = may have contributed to the lowered risk-taking effort (e.g., not taking i tive) to become acquainted with each other. The effect of group size is an that merits further investigation.

Another purpose of the study was to examine perceived cohesion in rel to a person's sociometric status. It was hypothesized that the more popula dents perceive their groups to be more cohesive. That hypothesis received limited support; in only one class was the correlation between sociometric tus and perceived cohesion significant. Interestingly, the researchers in study observed that popularity status remained stable from the pretest t posttest periods across all classes, suggesting that the leaders emerged and retained their status through the two periods of assessment.

In one of the few systematic outcome studies demonstrating a relatior between patient trait and subsequent outcome in group therapy, Yalom (1967) found that the only variables predicting success in group therapy the patients' attraction to the group and the patients' general popularity i group (both measured at the 6th and 12th meetings). Given those findings, might expect a positive correlation between sociometric ratings of popul and group cohesion. Thus, it is surprising that this study found so little c lation between the two. We suggest a follow-up study with the additions test of popularity that has been tested for reliability and more pointed so metric questions.

REFERENCES

Back, K. W. (1951). Influence through social communication. *Journal of Abno Social Psychology, 46,* 398–405.

Bollen, K. A., & Hoyle, R. H. (1990). Perceived cohesion: A conceptual and empi examination. *Social Forces, 69,* 479–504.

Borg, W. R., & Gall, M. D. (1973). *Educational research* (2nd ed.). New York: D McKay.

The International Journal of Action Methods

Psychodrama, Skill Training, and Role Playing

The American Society of Group Psychotherapy & Psychodrama is dedicated to the development of the fields of group psychotherapy, psychodrama, sociodrama, and sociometry, their spread and fruitful application.

Aims: to establish standards for specialists in group psychotherapy, psychodrama, sociometry, and allied methods; to increase knowledge about them; and to aid and support the exploration of new areas of endeavor in research, practice, teaching, and training.

The pioneering membership organization in group psychotherapy, the American Society of Group Psychotherapy and Psychodrama, founded by J. L. Moreno, MD, in April 1942, has been the source and inspiration of the later developments in this field. It sponsored and made possible the organization of the International Association on Group Psychotherapy. It also made possible a number of international congresses of group psychotherapy. Membership includes subscription to *The International Journal of Action Methods: Psychodrama, Skill Training, and Role Playing*, founded in 1947 by J. L. Moreno as the first journal devoted to group psychotherapy in all its forms.

A S G P P

FOUNDED IN 1942

For more information, call or write:

ASGPP
301 N. Harrison, #508
Princeton, NJ 08540
(609) 452-1339

VOLUME 51, NO. 3 FALL 1998

The International Journal of Action Metho

Psychodrama, Skill Training, and Role Pl

Published in Cooperation With the Americ
of Group Psychotherapy and Psyc

Perceived Cohesiveness and Sociometric Choice in Ongoing Groups

DORIS WOOD
V. K. KUMAR
THOMAS W. TREADWELL
EVAN LEACH

ABSTRACT. The authors evaluated the relationship between sociometric choice and group cohesiveness in 6 ongoing learning groups and examined the reliability of the Group Cohesiveness Scale (V. Veeraraghavan, H. Kellar, M. Gawlick, & N. Morein, 1996). The Group Cohesiveness Scale and a sociometric instrument were administered to students during the 3rd and final weeks of classes. The reliability values of the Group Cohesiveness Scale were acceptable for use in research. The hypothesis that more popular students perceive the group to be more cohesive received only limited support on either the attraction or task-related dimensions. The authors, however, deem the Group Cohesiveness Scale to be sensitive to idiosyncratic group dynamics in the different learning groups.

THE MAIN PURPOSE OF OUR STUDY was to examine whether sociometric choices are related to cohesiveness within the context of an ongoing learning group. Furthermore, because the cohesiveness scale used in the study is a relatively new one, another purpose of the study was to examine the scale's reliability and its sensitivity to detect changes in group cohesiveness as a function of group maturity.

Although a number of studies exist on group cohesiveness, very few researchers have examined whether sociometric choices are related to a group's cohesiveness at various points of maturity within the context of an ongoing group. That is surprising because many investigators allude to sociometric concepts while evaluating the concept of cohesiveness.

One of the earlier definitions of *cohesiveness* came from Moreno and Jennings (1937), who defined the concept as "the forces holding the individu

within the groupings in which they are" (p. 30). In the most often quoted d
inition, Festinger, Schacter, and Back (1950) stated that *cohesion* is "the tc
field of forces that act on members to remain in the group" (p. 164). Acco
ing to Festinger et al., the various putative field of forces for members
remain in the group are (a) member attraction to the group goals and (b)
group's ability to mediate important goals for its members—what Festin
has termed as "needs control." Although Festinger et al.'s definition has of
been criticized as vague, particularly the notion "total field of forces," it l
served as a guide for many investigators looking for ways to refine the cc
cept (see Murdack, 1989).

Commenting on Festinger et al.'s (1950) definition, N. Gross and Mar
(1952) stated that "[h]euristically, it is highly improbable that an investiga
could ever define adequately the multitudinous and heterogeneous field
forces as perceived consciously and unconsciously by all members" (p. 55
Gross and Martin noted that even in Festinger et al.'s study, only three soci
metric indices were used to examine cohesiveness: (a) an in-out group ratio
intimate friends, (b) a dislike ratio, and (c) an isolate ratio. It was assumed th
although a greater proportion of in-group choices reflects greater cohesiv
ness, greater proportions of members disliking each other and isolated frc
the group reflect less cohesiveness. Implicit to all three indices, however,
the concept of members' attractiveness to each other, although that was n
directly measured in the Festinger et al. study.

According to Murdack (1989), a number of prominent researchers (e.g
Libo, 1953; Pepitone & Kleiner, 1957; Van Bergen & Koekebeakker, 195
have simply defined *cohesiveness* in terms of "attraction-to-group" (Murdac
1989, pp. 41–42). Reviewing other definitions, Murdack noted that investig
tors have equated cohesiveness with other concepts such as "group spirit
"bonds of interpersonal attraction," "affective bonds," "sense of belongin
ness," "sticking together," and "sense of we-ness" (pp. 39–43). Evans an
Dion (1991) interpreted *cohesiveness* to imply "an individual's desire to r
main a member in the group" (p. 175) and his or her motivation to "advanc
the group's objectives and participate in its activities" (p. 173).

Bollen and Hoyle (1990) expressed reservations about defining cohesiv
ness in terms of "attraction to the group" in the sense that attraction may b
seen as a cause of cohesiveness, rather than an effect of membership. That i
it is an antecedent, rather than a consequent, condition for cohesiveness. The
defined *cohesion* in phenomenological terms as perceived belongingnes
(feeling part of a group) and perceived morale (feelings of morale, enthusias
to be part of a group). Consistent with their definition, they developed a Pe
ceived Cohesion Scale to measure the two aspects of belongingness an
morale. Interestingly, the two dimensions correlated at .90 in their study, lea

ing them to argue that although the two dimensions are measuring similar phenomena empirically, they in fact are different conceptually, much in the sense that height and weight tend to be correlated but reflect different measurement concepts. The authors noted that although "belongingness emphasizes cognition, . . . morale captures affect" (p. 497). For example, in some situations, such as an earthquake, people may have a high sense of belongingness but a low morale.

More contemporary views of cohesiveness recognize cohesiveness as a multidimensional concept in which attraction is just one factor (N. Gross & Martin, 1952; Murdack, 1989; Stokes, 1983). Members may be attracted to a group for a variety of reasons, only one of which may be the attractiveness of the group goals. Also, it cannot be assumed that in cohesive groups, members always like each other. It is entirely possible that the group goals may be sufficiently strong to hold the group together to act as one, even in the absence of mutual attraction (Frank, 1957). On the other hand, members may act cohesively, even though they may not generally agree on the group goals. In that regard, Johnson and Fortman's (1988) differentiation between *task cohesion* and *social cohesion* makes good sense. They used E. F. Gross's (1957) 8-item Group Cohesiveness Scale, subjected it to a principal component analysis, and found evidence for two components: affective or social cohesion and cognitive cohesion.

Stokes (1983) differentiated between three components of group cohesion: (a) interpersonal attraction, (b) instrumental value (meeting of needs, or in Festinger et al.'s, 1950, terms "means control"), and (c) risk taking (as evidenced by higher self-disclosure, open expression of hostility, and conflicts). Carron, Widmayer, and Brawley (1985) differentiated between the *task-social* and *individual-group dimensions*. The former refers to the idea that members may be interested in group goals or social relationships, and the latter to commitment to other members or the group itself. Griffith (1988) differentiated between horizontal (peer relation) and vertical dimensions (superior–subordinate relations) of cohesion.

Piper, Marrache, Lacroix, Richardson, and Jones (1983) delineated three group concepts in their discussion of cohesion: (a) mutual stimulation and effect—the extent to which a "group stimulates, excites, and arouses the participant and the degree to which he perceives that he has a potent reciprocal influence;" (b) commitment to the group—participant's "allegiance to the group" as "reflected in preserving and strengthening the basic structure of the group;" and (c) compatibility of the group—"perceived fit of participants in terms of suitability" for the group (p. 103). Piper et al. observed that of the above three concepts, commitment (both subjective and behavioral) is most basic to their view of cohesiveness because it describes the "bond between the participant and his/her conception of the group as a whole" (p. 104). In a

cohesive group, according to Piper et al., "the various bonds in the group a strong, e.g., where a majority of the participants possess a commitment to t group, to each other, to the leader" (p. 106). An earlier study by Yalom a Rand (1966) observed that compatibility (as measured by FIRO-B questio naire) was related positively to cohesiveness in five outpatient therapy grou (p. 268). The other findings of interest were as follows: (a) members w were extremely incompatible with at least one other member tended to be le satisfied with their groups (p. 272) and (b) members who dropped out prem turely were less compatible with the rest of the group (p. 271).

Evaluating both unidimensional and multidimensional models of cohesiv ness, Cota, Evans, Dion, Kilik, and Longman (1995) identified a new heuri tic for cohesion. They described cohesion in terms of primary and secondar dimensions. Primary dimensions apply in all or most types of groups to d scribe cohesiveness, whereas secondary dimensions are only applicable specific groups. Examples of primary dimensions include Carron et al. (1985) individual–group and task–social dimensions, group values and beha ioral rules, and resistance to disruptive forces. Examples of secondary dime sions include risk taking (Stokes, 1983), vertical dimension (Griffith, 1988 and valued roles (Yukelson, Weinberg, & Jackson, 1984). These dimensio may be applicable in some groups but not in others. For example, risk takin may be more relevant in clinical groups, vertical dimensions in hierarchic organizational settings, and valued roles in sports in which roles are not eas ly interchangeable (Cota et al., 1995).

Cohesiveness may be thought of as an outcome of an intervention or as process by which the group comes to "stick together" and "resist disruptiv forces," to use N. Gross and Martin's (1952) terms. Separating process fro outcome might be extremely difficult in any study. In fact, Carron (1982) de fined *group cohesiveness* as "a dynamic process which is reflected in the ten dency for a group to stick together and remain united in the pursuit of its goal and objectives" (p. 124).

Difficulties in defining the concept have not hindered researchers fro investigating the importance of cohesiveness in group work. Yalom and Ran (1966) defined *cohesiveness* very broadly as "solidarity or esprit de corps o a group" (p. 267) and noted that it is very influential in a group's outcom After reviewing studies, they stated in a summary that in highly cohesiv groups, productivity tends to be better and that members tend to participat readily, defend the group norms, express hostility, feel a sense of security influence others and be influenced, and stay with the group.

Evans and Dion (1991) conducted a meta-analysis of studies on grou cohesion and performance and located 27 published and unpublished studie that related group cohesion with performance. However, they could onl include 16 studies done in a variety of contexts (sports teams, experimenta

groups, and military units) in their meta-analysis. Cohesiveness measures also varied from questionnaires (attitude scales) to sociometric questions to behavioral observations. A variety of performance measures were used in those studies, such as the percentage of time members engaged in work activities, the win-or-lose record of ice hockey and basketball teams, the number of original ideas generated, gains in stock prices, and ratings of bombing crews by a supervisor.

In each of the studies, Evans and Dion (1991) found cohesion was related to performance or productivity. They described that relationship as "moderately strong and in a positive direction (r = +.419)" (p. 179). However, although they did not look for evidence in their meta-analysis, they noted that there may be an optimum level of cohesiveness, in the sense of the Yerkes Dodson Law of an inverted U function between cohesiveness and performance. They cited Kelly and Duran (1985), who found that "very high cohesiveness was associated with poor performance" (Evans & Dion, 1989, p. 181). More recently, Smith et al. (1994) found a positive correlation between a cohesiveness-like measure of top management teams in small technology firms and its financial performance. In a study with military groups, Zaccaro, Gualtieri, and Minionis (1995) reported that group cohesiveness can improve decision making under time pressure.

Yalom (1985) declared group cohesiveness to be an important "curative factor in therapy" (p. 36) and a "necessary precondition for effective group therapy" (p. 50). After reviewing several studies, Yalom (1975) noted that group cohesion is related to important therapeutic outcomes. He observed that perceived cohesiveness is related to contact with other members (Dickoff & Larkin, 1963) and in itself has therapeutic value for promoting personality change. Yalom, Houts, Zimbergerg, and Rand (1967) found a positive significant correlation between self-rated improvement and cohesion data collected on two different occasions but did not find correlations between cohesion and ratings of improvement on the basis of those interviews to be significant. Stokes (1983), however, observed that Yalom et al.'s results may be of dubious value. Stokes noted that although Yalom's study contained 140 correlations, only 7 of them were significant, making the probability of Type I error very high. In another study, Kapp et al. (1964) found a significant positive correlation between self-reported measures of personality change and cohesion scores. Clark and Culbert (1965) found that improvement as measured by rating speech samples from group members on the Problem Expression Scale (PES; van der Veen & Tomlinson, 1962) correlated significantly with the number of mutually therapeutic relationships (measured by the Barrett–Lennard Relationship Inventory) formed with the group members.

Yalom (1985) considered cohesiveness in group therapy as the "analogue of 'relationship' in individual therapy" (p. 36). One might assume that Yalom

was referring not only to the group leader's relationship with the group mer bers but also, and perhaps more importantly, to the intermember relationshi in the group. Roark and Sharah (1989) found evidence for the interdepe dence of cohesiveness with empathy, self-disclosure, acceptance, and tru They also hypothesized that increases in empathy, self-disclosure, acceptanc and trust lead to an increase in cohesiveness.

Given the significance of interpersonal relations among group members determining cohesiveness in groups, it is surprising that not many studies ha examined the relationship between sociometric choices and cohesivenes Festinger et al.'s (1950) study, as noted before, contained three sociometrica ly based indices of cohesion: in–out group ratio of intimate friends, dislil ratio, and an isolate ratio. These indices were based on the assumption th they reflected the attractiveness of the group to its members, a major compo nent of Festinger et al.'s definition of cohesiveness. Deep, Bass, and Vaugh (1967) asked group members to pick five individuals with whom they wou like to form a company, and Hemphill and Sechrest (1952) asked group mem bers to list those with whom they preferred to work.

In the studies in which sociometric indices were used, the indices wer measures of cohesion. In other studies (e.g., Back, 1951), level of cohesiv ness was manipulated by creating dyads that differed on high and low attrac tiveness. However, there appear to be no studies that have correlated socio metric data with perceived cohesiveness in groups. For example, it might b hypothesized that the more popular members in a group are likely to perceiv their group as more cohesive than do the less popular members. This hypoth esis arises from the assumption that a group member's popularity may reflec the extent to which the popular member meets the social needs or perhaps th task needs of other members of the group.

In the present study, we examined the relationships between perceive group cohesiveness and various sociometric indices. By using separate mea sures of cohesiveness and sociometry, we avoided the circumvention of con founding that tends to occur when one defines cohesiveness in terms of socio metric indices (see N. Gross & Martin, 1952). Specifically, in the presen study, we examined (a) the reliability of the Group Cohesiveness Scale, (b) th differences in cohesion as a function of class activities, (c) the correlation be tween cohesion and sociometric status (popularity), and (d) correlations be tween the pre- and postcohesion scores and pre- and postpopularity scores Another purpose of this study was to determine whether the number of iso lates correlated with group cohesiveness across the groups. Because of th small number of groups included in the study, that type of analysis was no feasible.

Given the lack of previous studies, no specific hypotheses were advanced However, one might reasonably expect that students perceive greater cohe-

siveness toward the end of the course than at the beginning and that more popular students are more likely to see their groups as more cohesive. It is not easy to determine the extent to which precohesion scores predict postcohesion scores because the idiosyncratic nature of group dynamics is likely to be quite influential in bringing about dramatic changes in cohesiveness. Furthermore, for the same reasons, it is not easy to predict the correlation between initial sociometric status and the final cohesion scores.

Method

Participants

Participants in the study were students enrolled in six experiential training classes in the use of psychodramatic and other group methods taught by two different instructors who are licensed psychologists and trained in psychodrama. Four classes (PD1, PD2, PD3, and PD4) were specifically concerned with learning psychodrama techniques, and two others (IN1 and IN2) applied psychodrama and other group techniques in the exploration of interpersonal issues relating to intimacy. PD1 (n = 19) and PD2 (n = 16) were taught during a regular semester (14-week course, spring). PD3 (n = 11) and PD4 (n = 11) were taught for 8 hr each day over a 1-week period.

The intimacy classes were taught as regular semester-long courses (spring). The psychodrama classes were experiential in the sense that students, with the assistance of the instructor, worked on real-life issues experienced by the students in an effort to demonstrate a variety of sociometric and psychodramatic techniques. In the intimacy classes (IN1, n = 15; IN2, n = 17), a broad range of group techniques were used, including sociometry, psychodrama, group discussion, problem-solving activities (e.g., for promoting team work), and group exercises (e.g., related to trust, exploring attitudes based on questionnaires).

The psychodrama and intimacy classes met once a week during the evening hours. A majority of the students in those classes were majoring in psychology. Others were majoring in nursing, education, business, and communication. Students responded to the questionnaires voluntarily after they had signed informed consent forms.

Materials

Perceived group cohesiveness was measured by using the Group Cohesiveness Scale devised by Veeraraghvan, Kellar, Gawlick, and Morein (1996). The instrument consists of 26 items for assessing various dimensions of cohesion, such as member retention, interaction among group members, and compatibility of individual and group goals. The items are rated on a 4-point Li type scale (1 = *low*, 2 = *moderately low*, 3 = *moderately high*, and 4 = *h* along with a not-applicable category. According to Veeraraghvan et al. scale had shown acceptable reliability for use in research.

A 6-item sociometric instrument was designed to assess students' pr ences on attraction and task-related dimensions. The sociometric statem which were general enough to be used in all groups, are as follows:

1. The group member that I think is most like me is _____.
2. The person to whom I was initially attracted in this class is _____
3. My first choice for a person who can express thoughts and feelin have but cannot articulate is _____.
4. The class size has exceeded its limit. The person I would choose t transferred to another group is_____.
5. The person I would most like to see do some psychodramatic wor this class is _____.
6. The class member who could most comfortably encourage me t some meaningful work in this class is_____.

For each statement, participants were asked to supply the names of t members from their group in the order of their preference.

Procedure

The questionnaires were administered twice during the semester—o during the 3rd week of classes and then once during the final week of cl es. In the remainder of this article, the assessments are referred to as pret and posttests. After the participants completed informed consent forms, researchers administered the cohesion scale and the sociometric instrum To assure anonymity of their responses after the data were collected, the p ticipants received a list of the names of the students in the class with an id tifying number that they used when completing the sociometric instrumer

Results and Discussion

Reliability

Cronbach alpha coefficients for the Group Cohesiveness Scale for both pretests and posttest assessments were computed for the five classes and ov all for the 89 students in the five classes. The alpha coefficients are show Table 1.

The internal consistency reliability values are consistent with those tained by Veeraraghvan et al. (1996). Those values are also consistent w

TABLE 1
Coefficient Alphas for Cohesiveness Test for Different Classes

Class	*n*	α Pre	α Post
PD1	19	.85	.81
PD2	16	.86	.90
PD3	11	.60	.77
PD4	11	.76	.90
IN1	15	.74	.51
IN2	17	.84	.86
Overall	89	.80	.86

Note: Classes focused either on psychodrama (PD) techniques or interpersonal (IN) issues. Pre = pretest assessment; post = posttest assessment.

those generally found for self-report type instruments used in personality research. The variability in the internal consistency values between different groups was expected, given that the cohesiveness instrument is a state, and not a trait, instrument. Thus, the instrument seemed to have adequate reliability for use in research.

Change in Cohesiveness as a Function of Participation in Class

As we noted previously, class attendance itself can be construed as an intervention, although at no point during the classes was there a specific intervention intended to increase the level of cohesiveness. Table 2 contains the mean scores for the pretest and posttest scores, along with *t* values and their significance.

Given the small sample sizes, the results of each of the *t* tests were evaluated at the .05 level of significance. As can be seen in Table 2, there was a significant increase in group cohesiveness in two classes (PD3 and PD4), and cohesiveness decreased significantly in one class (PD1).

The results are interesting, in the sense that they suggest that the group cohesiveness instrument was sensitive to the emergent group dynamics in the various classes. The two classes that showed an increase in group cohesiveness were the summer classes that met daily for a whole week for approximately 8 hr. The intense group interactions in the two summer classes may have facilitated the greater feeling of cohesiveness, compared to the regular

TABLE 2
Pretest and Posttest Cohesiveness Scores and Results of *t* Tests

Class	*n*	Pre *M*	Pre *SD*	Post *M*	Post *SD*	*t*	*p*
PD1	19	3.96	.42	3.65	.42	2.44	.025
PD2	16	3.97	.38	3.79	.50	1.81	.090
PD3	11	3.49	.37	4.18	.37	–4.01	.002
PD4	11	3.64	.47	4.41	.43	–3.39	.007
IN1	15	3.95	.38	4.00	.27	–0.47	.642
IN2	17	3.84	.42	4.00	.42	–1.51	.150
Overall	89	3.84	.43	3.96	.47	1.78	.078

Note: Classes focused either on psychodrama (PD) techniques or interpersonal (IN) issues.

semester classes. In the other three (PD2, IN1, and IN2) semester-long cou es, class sessions were 1 week apart, and consequently, the lack of interact during the interim period may not have been conducive to sustaining co siveness. It is difficult to explain the decrease in cohesiveness scores in PI but the large size of the class may have been a factor.

Cohesiveness and Sociometric Status

A purpose of the study was to examine whether the perceived cohesiven was related to a person's sociometric status. It was hypothesized that the m popular individuals would perceive their groups as more cohesive. The soc metric status or popularity score for each individual was computed by addi the number of choices (regardless of rank) received across all questions. I exploratory reasons, all correlations among the precohesiveness, postcol siveness, prepopularity, and postpopularity scores were also examined. Tal 3 contains those correlations.

Because of low sample sizes, an alpha of .10 was used to establish signi cance. Table 3 shows that (a) precohesiveness scores significantly predict postcohesiveness in two of the five classes (PD2 and IN2), (b) precohesi ness and prepopularity correlated significantly in two of the five classes, postcohesion was correlated with both pre- and postpopularity in only one the five classes, and (d) pre- and postpopularity were significantly correlat in all five classes. In terms of all classes combined, only the pre- and po popularity scores were significantly correlated. Thus, the hypothesis that mo popular individuals perceive their groups to be more cohesive was support

TABLE 3
Correlations Among Pretest and Posttest Cohesiveness and Popularity Scores

Class	1	2	3	4
PD1 (n = 19)				
1. Precohesion	—	.121	.083	−.376
2. Postcohesion		—	−.001	.021
3. Prepopularity			—	.698****
4. Postpopularity				—
PD2 (n = 16)				
1. Precohesion	—	.611**	−.148	−.185
2. Postcohesion		—	.075	−.200
3. Prepopularity			—	.665***
4. Postpopularity				—
PD3 (n = 11)				
1. Precohesion	—	−.179	−.163	−.192
2. Postcohesion		—	.230	−.192
3. Prepopularity			—	.861****
4. Postpopularity				—
PD4 (n = 11)				
1. Precohesion	—	−.414	−.569*	−.350
2. Postcohesion		—	.181	.246
3. Prepopularity			—	.564*
4. Postpopularity				—
IN1 (n = 15)				
1. Precohesion	—	.370	.577**	.517*
2. Postcohesion		—	.610**	.629**
3. Prepopularity			—	.938****
4. Postpularity				—
IN2 (n = 17)				
1. Precohesion	—	.443*	.051	−.022
2. Postcohesion		—	−.311	.192
3. Prepopularity			—	.491*
4. Postpopularity				—
Overall (N = 89)				
1. Precohesion	—	.003	−.053	−.062
2. Postcohesion		—	.154	.037
3. Prepopularity			—	.666****
4. Postpopularity				—

Note: Classes focused either on psychodrama (PD) techniques or interpersonal (IN) issues.
*p < .10; **p < .05; ***p < .01; ****p < .001.

in only one class (IN1). What is interesting, however, is that the popularity tus remained stable across the two instances of testing in all classes, sugg ing that the leaders emerged early in the group's development and once t had emerged, retained their status, regardless of any group dynamics idios cratic to each class.

The present study related sociometric choices to group cohesiveness w in the context of an ongoing learning group. A further purpose was to exa ine the reliability of the cohesiveness scale because that is a relatively r instrument. In this section, we discuss the reliability of the cohesiveness sc and then consider the results with regard to the relationship between soc metric choices and cohesion.

For each of the classes, coefficient alphas were assessed separately for pretests and posttests and also overall across all classes. As shown in Table the combined alpha values ranged between .60 and .85 for the pretest a between .51 and .90 for the posttest. The median reliability value was .80 the pretest and .84 for the posttest. These reliability values seem accepta for research purposes because they are in the range of what is typically fou for self-report questionnaires (Borg & Gall, 1973). The reliability values particularly impressive, given that the cohesiveness scale is a state, and no trait, instrument.

Some revisions, however, might be considered for the cohesion scale to i prove its reliability and perhaps its validity. The rating scale includes the sponse categories *low, medium low, medium high, high,* and *not applicab* We suggest eliminating the catch-all category *not applicable* and replacing with the category of *nonexistent* or *extremely low* at the lower end of the co tinuum. It is possible that some students used the not-applicable response avoid making a choice.

Some items on the cohesiveness instrument were judged not applicable many students. For example, statement 9 on the posttest, "I personally do n like to go to group meetings," was rated not applicable by 36.8% of the st dents. Likewise, statement 26, "If a group with the same goals were forme I would prefer to be a member of that group," was rated not applicable b 26.3%. It is unclear what the not-applicable response means on those tv questions.

The results of the present study do support the usefulness of the cohesi instrument in detecting changes in cohesiveness as a function of group mat rity. In two classes, group cohesion increased; in one class, it decreased; an in three classes, the changes were not significant. That type of variation results probably reflects the sensitivity of the cohesiveness scale to the idi syncratic group dynamics in the different classes.

An interesting question was what contributed to the variation in cohesion the different classes. The two classes in which cohesion increased were sur

mer classes that spent 8 consecutive hr together for 5 successive days. Group members spent all their time as an assembly, even having lunch as a group. No concurrent classes interfered with the intensity of the focus. The majority of the limited time outside the group meetings was probably spent preparing for the next day's activities. It is conceivable that the elevated intensity of experience contributed to the feelings of increased cohesion in the two summer groups.

In contrast to the summer sessions, the classes offered during the regular semester met once a week for approximately 3 hr each week. There were probably few or no interactions between classmates during the intervening days. According to Cartwright and Zander (1968), close and frequent interaction with group members results in greater attraction to membership in the group. If the frequent interaction and elevated intensity of the two summer classes were possible reasons for increased cohesiveness in those groups, then the lack of close and intensive interaction may have contributed to the lack of change in cohesion in the two regular semester classes and to a decrease in cohesion in one class.

From the above results, we can articulate several questions. Do long sessions on successive days affect the group's cohesion? Did having lunch together make a difference in feelings of cohesion? A future study could isolate the lunch-together variable to see whether that alteration alone in a normal class schedule can make a difference in the cohesion ratings.

In the late 1960s and early 1970s, there was much interest in "marathon" groups. The extravagant claims made in the news media about their value were based largely on anecdotal records. The fad appeared and disappeared quickly, but the results of this study suggest that some elements of time-extended groups can be useful, especially in a learning-by-doing format of teaching. Yalom (1985) reported that the timing of the introduction of a marathon session may be a factor in the development of cohesiveness. Yalom explored the effects of a 6-hr meeting on the development of cohesiveness in six newly formed groups in a psychiatric outpatient department over a 16-week period. Three groups held a 6-hr initial meeting and 15 subsequent 90-min sessions. Three other groups had their regular 90-min meetings for the first 10 meetings; then at the 11th meeting, the three groups met for the extended 6 hr. In the three groups that held a 6-hr meeting initially, the trend was toward decreased cohesiveness in subsequent meetings. However, the use of the 6-hr group in the 11th session resulted in an increase in cohesiveness in the subsequent meetings that resumed the 90-min format. Thus, it appears that it is not the continuous time itself that affects cohesion, but rather the timing of the introduction of extended session that is important.

Moreover, in addition to the frequency and intensity of interactions, other possibilities could be related to the increased cohesion in summer classes.

Among students, summer psychodrama classes have a reputation for b more intense than those that meet weekly during regular session. That q ty may well attract a special type of student who enjoys the group experi and the feeling of togetherness engendered by the group experiences. In words, the students joined the group to be close to others in a group situ and to take the opportunity provided by various experiences and techniqu become closer to other members while they were also exploring the niques used in psychodrama. Such students may evaluate both positive negative experiences within a group as a formative type of experience consequently feel less vulnerable to isolation.

The one class (PD1) in which the scale measured a decrease in cohe was quite large. Because risk taking and cohesion affect each other in ex ential groups (Yalom, 1985), it is possible that the large size of PD1 (n = may have contributed to the lowered risk-taking effort (e.g., not taking ir tive) to become acquainted with each other. The effect of group size is an that merits further investigation.

Another purpose of the study was to examine perceived cohesion in rel to a person's sociometric status. It was hypothesized that the more popular dents perceive their groups to be more cohesive. That hypothesis received limited support; in only one class was the correlation between sociometric tus and perceived cohesion significant. Interestingly, the researchers in study observed that popularity status remained stable from the pretest to posttest periods across all classes, suggesting that the leaders emerged e and retained their status through the two periods of assessment.

In one of the few systematic outcome studies demonstrating a relation between patient trait and subsequent outcome in group therapy, Yalom e (1967) found that the only variables predicting success in group therapy the patients' attraction to the group and the patients' general popularity ir group (both measured at the 6th and 12th meetings). Given those findings, might expect a positive correlation between sociometric ratings of popul and group cohesion. Thus, it is surprising that this study found so little co lation between the two. We suggest a follow-up study with the additions test of popularity that has been tested for reliability and more pointed so metric questions.

REFERENCES

Back, K. W. (1951). Influence through social communication. *Journal of Abno Social Psychology, 46,* 398–405.

Bollen, K. A., & Hoyle, R. H. (1990). Perceived cohesion: A conceptual and empi examination. *Social Forces, 69,* 479–504.

Borg, W. R., & Gall, M. D. (1973). *Educational research* (2nd ed.). New York: D McKay.