

The Group Cohesion Scale-Revised: Reliability and Validity

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ABSTRACT. The authors revised the Group Cohesion Scale (V. Veeraraghavan, H. Kellar, T. W. Treadwell, & V. K. Kumar, 1996) by dropping 1 item, rewording one item; reducing the number of anchor points from 5 to 4 by dropping the *not applicable* response category; and changing the anchor points from *low*, *moderately low*, *moderately high*, and *not applicable* to the more familiar *strongly disagree*, *disagree*, *agree*, and *strongly agree* response categories. They tested the revised scale, consisting of 25 items, in 8 psychodrama group classes. The Group Cohesion Scale-Revised (V. Veeraraghavan et al., 1999) showed acceptably high reliability for use in research and seemed to be sensitive to detecting changes in cohesiveness as a function of group development. Consistent with their previous investigation, the authors found that summer classes were more likely to show increases in cohesiveness than regular semester classes, probably because of the increased frequency and sustained interactions demanded by a 1-week course that met for 8 hr each day.

Key words: cohesiveness, group cohesion, group process

BECAUSE OF THE WORK OF MORENO AND JENNINGS (1937), Newcomb (1943), Thibaut (1950), Festinger and Kelly (1951), and Cartwright and Zanders (1960), the concept of group cohesion has become a key notion in many theories of group processes (see Forsyth, 1999). The concept of group cohesion, which has been around for decades and has been investigated by many researchers, has many definitions.

Langfred (1998) defined *cohesiveness* as how much members of a group like each other or as the amount of friendship between group members.

Nevertheless, although mutual liking tends to be a strong source of cohesion, members of a group do not have to like each other to form a cohesive group. Rempel and Fisher (1997) explained group cohesion as the primary motivation to remain in a group. Frank (1997) described it in terms of a member's sense of belongingness to a group or the attractiveness of a group for its members. Frank suggested that "the greater the cohesion of a group, the more influence its standards exert on its members" (p. 63).

Forsyth (1999) regarded cohesion as analogous to the "glue" that holds a group together or as the strength of the bonds linking group members to the group. He observed that cohesive groups share some common characteristics: (a) enjoyment and satisfaction, (b) a cooperative and friendly atmosphere (see also Secord & Blackman, 1964), (c) exchange of praise for accomplishments, (d) higher self-esteem and less anxiety among group members, and (e) greater member retention. Additionally, Secord and Backman (1964) stated that members of highly cohesive groups mutually accept each other's ideas, contribute equally to problem solving, and are not likely to be adversely affected by the power and status structures within the group.

Group cohesion usually has salubrious effects on group behavior and functioning. Those effects include reduction of, or even elimination of, social loafing (Karau & Hart, 1998; Karau & Williams, 1997), drop out rate (Robinson & Carron, 1982), and absenteeism (Carron, Widmeyer, & Brawley, 1988); improvement in communication among group members (Wech, Mossholder, Steel, & Bennett, 1998); greater conformity to group norms among sports team members (Prapavessis & Carron, 1997b); enhanced problem solving (Rempel & Fisher, 1997); and increased work output (Langfred, 1998; Prapavessis & Carron, 1997a). Frank (1997) claimed that group cohesion is important in therapy groups because it enables members not only to risk change but also to maintain the change.

On the negative side, Janis (1972) pointed out that when groups become too cohesive, they isolate themselves, resist outside influences, and engage in "groupthink." Mondy, Sharplin, and Premeaux (1991) argued that a highly cohesive group whose goals are incongruous with the organizational objectives is likely to sabotage management efforts toward increased productivity. In view of this possibility, many managers deliberately reduce cohesiveness to maintain control.

Group cohesion has been assessed by observations (Homans, 1950), sociometry, and self-report questionnaires (Festinger, Schacter, & Back, 1950; see also Wood, Kumar, Treadwell, & Leach, 1998). Several questionnaires for assessing cohesion in specific types of groups exist. Carron, Widmeyer, and Brawley (1985) designed the Group Environment Questionnaire to assess attraction of sports team members to their groups. Podsakoff, Mackenzie, and Ahearne (1997) designed a scale to measure drive, cohesiveness, and produc-

tivity in work groups. Hurley (1989) developed a scale to measure “affiliativeness” (the interpersonal behavior within groups that promotes helpfulness and emotional support) in psychotherapy groups. Hurley regarded cohesion and affiliativeness as overlapping concepts.

Budman et al. (1987) made a significant development in the area of measuring cohesion as a single construct with the construction of the Harvard Community Health Plan Group Cohesion Scale. It is an observer-rating scale; its use, however, is limited to measuring cohesion in psychotherapy groups. Additional measures of cohesion exist in the form of self-report scales, such as the Group Atmosphere Scale (Silbergeld, Koenig, Manderscheid, Meeker, & Hornung, 1975), the Group Climate Scale (Mackenzie, 1981), and the Group Environment Scale (Moos & Humphrey, 1973). The latter three instruments were designed to assess the overall psychological environment of psychotherapy groups with cohesion as one of the deciding components.

Veeraraghavan, Kellar, Treadwell, and Kumar (1996) created the Group Cohesion Scale (GCS) to assess cohesion among group members in terms of the diverse dimensions usually noted in the literature as interaction and communication (including domination and subordination), member retention, decision making, vulnerability among group members, and consistency between group and individual goals. The following are examples of the items included in the assessment:

- Group members usually feel free to share information.
- There are feelings of unity and togetherness among the group members.
- Group members are receptive to feedback and criticism.
- Many members engage in “back-biting” in this group.

In two previous studies, Veeraraghavan, Kellar, Gawlick, and Morein (1996) and Wood et al. (1998) found the GCS to be reliable for research purposes. In the latter study, the researchers also found that the GCS was sensitive to the idiosyncratic group dynamics in different classes inasmuch as some classes showed a decrease, others showed an increase, and still others showed no change as a result of group development. Specifically, the two classes that showed significant increases in cohesiveness were the summer classes that met for an entire week for approximately 8 hr each day. Wood et al. attributed the increases in cohesiveness to the sustained interactions demanded by being together for 8 hr each day (the group members were also together during lunch). Although the GCS showed adequate reliability and validity, Wood et al. suggested that the GCS might be improved by dropping the response category *not applicable* because it made scoring the items difficult. (The original GCS used a 4-point scale: *low*, *moderately low*, *moderately high*, and *high*, along with a *not applicable* response.) Specifically, they noted that the *not*

applicable response had no clear meaning in reference to two particular items: “I personally do not like to go to group meetings” and “If a group with the same goals were formed, I would prefer to be a member of that group.” Furthermore, it was felt that the more general anchor points—*strongly disagree*, *disagree*, *agree*, and *strongly agree*—might fit better with the items than the ordinal wording used before (i.e., *low* to *high*). The above two changes were implemented in developing a revision of the instrument, along with two other changes. The item “I do not like to go to group meeting” was simplified to “I dislike going to group meetings,” and 1 item that appeared ambiguous was dropped.

Hereafter, we refer to the revised 25-item GSC as the GCS-R (Veeraraghavan, Kellar, Treadwell, & Kumar, 1999). The main purpose of this study was to test the GCS-R for its reliability and validity in terms of its ability to be sensitive to particular group dynamics in ongoing groups.

Method

Participants

Participants in the study were students enrolled in eight experiential training courses in the use of cognitive and psychodramatic techniques. The classes, being taught in different semesters, were experiential inasmuch as students, with the assistance of the instructor, worked on real-life issues experienced by the students in an effort to learn about various cognitive, psychodrama, and sociometry techniques. One instructor taught seven of the classes (see Table 1; PD1, PD2, PD3, PD4, PD6, PD7, and PD8), and a different instructor taught one class (PD5). There were two spring, three fall, and

TABLE 1
Coefficient Alphas for the Group Cohesion Scale-Revised

Group	N	Coefficient alpha	
		Pretest	Posttest
PD1 (Summer)	19	.67	.90
PD2 (Spring)	15	.48	.82
PD3 (Spring)	9	.75	.79
PD4 (Fall)	17	.78	.85
PD5 (Summer)	8	.89	.77
PD6 (Summer)	15	.79	.81
PD7 (Fall)	14	.85	.89
PD8 (Fall)	13	.83	.87

three summer classes. The fall and spring classes met once per week for 2 hr and 30 min for 14 weeks, and the summer classes met for 8 hr each day over a 1-week period.

Most of the students in those classes were undergraduates, majoring in psychology. In each class, there were one or two graduate students, majoring in clinical psychology. A few students were majoring in nursing, education, or business.

Procedures

On the first day of class, the students received course outlines and signed informed consent forms to allow continuous videotaping of the classes and the administration of the GCS-R for research purposes. The instructor assured the students that the data were being gathered for research purposes and that once the data were coded, all identifying information would be removed. The informed consent form also required students to maintain confidentiality concerning all group activities and discussions. The instructors administered the questionnaire twice during the semester—once during the third week of classes and then again in the final week of classes for the regular semester classes. For the summer sessions, the questionnaire was administered during the afternoon session on the first day of classes and then again in the afternoon of the last day of classes.

Results and Discussion

Reliability of the GSC-R

Internal consistency reliability estimates, using Cronbach alpha coefficients, were computed for both pre- and posttest assessments for the eight classes. The Cronbach alpha estimates for the instrument were acceptably high for use in research (Table 1). Those results replicate our earlier work (Veerarghavan, Kellar, Gawlick, & Morein, 1996; Wood et al., 1998), and the estimated reliability values are similar to those generally found for self-report type rating instruments (see Borg & Gall, 1973).

Validity: Change in Cohesiveness as a Function of Group Experiences

The two naturally occurring interventions in the study were (a) attendance and participation in class and (b) regular semester or summer session classes. As in the previous study (Wood et al., 1998), there was no specific intervention to increase cohesiveness. Furthermore, even though we used the same psychodramatic (e.g., warm-up, doubling, auxiliary egos, role playing) and

sociometric techniques in all classes, the dynamics in each class were idiosyncratic (see Table 2). Paired t tests were used to evaluate the differences between means. Given the small sample sizes, we used $\alpha = .10$ to establish significance. Additionally, we computed d —a measure of effect size (Cohen, 1988).

The results show that in three of the eight classes, the group cohesiveness scores increased significantly with effect sizes of .46 (PD1), 1.10 (PD2), and 0.84 (PD4). Cohen's (1988) criteria suggest a low effect size (0.2 to 0.5) in PD1 and high effect sizes (0.8 and above) in PD4 and PD6. In one other class (PD5), the results were marginally significant ($p = .117$) with a medium effect size of 0.63. It is worth noting that the three summer classes showed significant increases (including PD5 with a marginal significance), whereas only one of the five regular semester classes showed a significant increase. Those results support our earlier observation (Wood et al., 1998) that it was the sustained interactions among group members (almost 8 hr each day) in the summer class that probably promoted cohesiveness. During the regular semester, classes meet only once per week, making it difficult for group members to see each other during the week.

How then does one account for the one regular semester class (PD4) that showed a significant increase in cohesion, with the largest effect size of 1.10? That finding is not easy to explain in view of the previous comment about the greater possibility of sustained interactions in summer sessions promoting cohesiveness. The finding suggests, however, that increases in cohesiveness may be a function of several factors, including how much time students spend

TABLE 2
Mean Pre- and Posttest Group Cohesion Scores and Results of t Tests

Group	N	Group Cohesion Mean Scores		t	$p <$	d
		Pretest	Posttest			
PD1 (Summer)	19	73.16	78.00	2.00	.060	0.46
PD 2 (Spring)	15	72.17	68.33	-1.95	.311	0.27
PD3 (Spring)	9	75.00	78.56	0.68	.519	0.22
PD4 (Fall)	17	69.47	78.18	4.54	.000	1.10
PD5 (Summer)	8	72.75	83.25	1.79	.117	0.63
PD6 (Summer)	15	75.75	83.25	3.24	.006	0.84
PD7 (Fall)	14	73.71	72.14	-0.74	.472	0.20
PD8 (Fall)	13	75.46	79.00	1.37	.197	0.38

Note. d = effect size.

with each other during the day. Other potential factors that affect the extent of cohesiveness include the unique interactions that develop in a class, the personality types of students, their prior experience with group classes, and friendships possibly begun before enrolling in class.

Conclusions

The results of this study suggest that the GCS-R has acceptably high reliability for use in research, at least with interactive classroom groups. Because the items are stated quite generally, we question its use with therapy groups, industrial organizations, or management training groups and suggest that its usefulness with those groups needs to be empirically evaluated.

The instrument's validity is supported by its ability to detect changes in cohesion. The GCS-R should be regarded as a state, as opposed to a trait, instrument, and thus, it can be appropriately used to assess fluctuations in cohesion within a group's development. As the instrument is currently designed, however, it can be used to measure group cohesiveness at a given point.

As Wood et al. (1998) found, summer classes that met 8 hr each day were more likely than the regular semester classes to show an increase in cohesion, suggesting that sustained interactions in the former may have promoted cohesiveness. That a large effect size was associated with a regular semester class suggests that several factors may influence a group's development.

Although cohesiveness is generally regarded as beneficial to group functioning, it is sometimes desirable to decrease cohesiveness in order to promote productivity. In a highly cohesive group, members may avoid conflict or promote overwhelming social pressure, contributing to a decrease in productivity (see Mondy, Sharplin, & Premeaux, 1991). Therapists can use the GCS-R as a barometer to assess cohesiveness at different stages of group development. That information can be used to bring about changes in the way the group members interact with each other, with a view to improving team work and morale.

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