

# Effective Supervision in Groups

**MARK L. SAVICKAS**

**CHRIS D. MARQUART**

**CHARLES R. SUPINSKI**

In this study, the authors organized group supervision behaviors into categories that represent requirements of effective group supervision. To determine the requirements for effective supervision in groups, the authors collected reports of behaviors exhibited by a physician and a behavioral scientist acting as co-supervisors. These reports were gathered from 84 2nd-year medical students participating in a practicum designed to improve their patient interviewing skills. The 84 reports of effective supervisory behavior by physicians were categorized by 11 judges. The judges' categories were pooled, and principal component analysis was used to extract a single list of hypothetical latent categories. This procedure was repeated with three other sets of reports: ineffective behavior of physicians, effective behavior of behavioral scientists, and ineffective behavior of behavioral scientists. The results yielded an empirical account of group supervision to augment the conceptual and anecdotal descriptions prevalent in group supervision literature.

After reviewing the literature on group supervision, Holloway and Johnston (1985) concluded that supervision in groups is widely practiced but poorly understood. Group supervision seems to be based on theoretical assumptions that lack empirical support. Holloway and Johnston recommended more research on the case presentation approach to group supervision and outlined specific topics to be investigated. In this study we addressed one of the recommended research topics: What roles should supervisors adopt to achieve the goals of group supervision?

In addition to recommending research topics, Holloway and Johnston (1985) recommended a research approach. They pointed out that there are neither adequate models of the case presentation approach to group supervision nor detailed descriptions of the actual process of group supervision. Therefore, they recommended exploratory studies that empirically describe group supervision practices. Following this recommendation, we sought in this study to identify group supervision behaviors and to empirically organize these behaviors into categories representing the requirements of effective group supervision.

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*Mark L. Savickas is an associate professor in the Behavioral Sciences Department, Chris D. Marquart is a professor in the Family Medicine Department, and Charles R. Supinski is an instructor of counseling and personnel in the Family Medicine Department, Northeastern Ohio Universities College of Medicine, Rootstown.*

## **METHOD**

### **Participants**

The sample consisted of 84 second-year medical students participating in a required 360-hour course on physical diagnosis, interviewing, and ambulatory care. The course included a 36-hour practicum on interviewing and interpersonal skills. Groups of four students each met for 12 sessions (3 hours each) over a 9-month period to have their supervisors review their case presentations and videotapes. The supervisors also reviewed the students' written records about each patient. During the preceding year each student had completed a course on interviewing procedures based on the Carkhuff model, (Carkhuff, 1969) including practice in attending, listening, empathic responding, questioning, information giving, self-exploration, and problem solving.

Each group of four students was jointly supervised over a 9-month period by a family physician and a behavioral scientist. The behavioral scientists included 14 counselor educators and counseling psychologists, 4 social workers, 2 educational psychologists, and 1 nurse.

The patients in this study were people recruited from the community who were paid to simulate patients with anxiety disorders. Each person was given an extensive script and trained both by a physician and a behavioral scientist to simulate the scripted case during videotaped interviews conducted by the medical students. Ten pairs of the physicians and behavioral scientists who supervised the practicum provided the training.

### **Procedures**

We used the critical incident technique, developed by Flanagan (1954) to collect reports of supervisory behavior and designed a report form using Flanagan's guidelines. Flanagan concluded that outstanding incidents are easier to identify than those more average in character. Accordingly, in the form used in this study students were instructed to report in detail two outstanding supervisory behaviors—the most and the least effective—for each supervisor. Thus, each student was asked to report four incidents: an effective and an ineffective behavior by the physician supervisor and an effective and an ineffective behavior by the behavioral scientist supervisor. A personnel psychologist with experience in using the critical incident technique edited the form used to collect the four incident reports from each student.

The students' understanding of and willingness to report critical incidents could influence the reliability and validity of their reports. To increase the objectivity and accuracy of student reports, 1 week before data collection we told the students about the study, explained the critical

incident technique, and familiarized the students with the data collection procedures. To gain the students' cooperation, we discussed the methods used in the study to protect student and supervisor anonymity and made clear that the supervisors supported the study.

The types of critical incidents that students report may vary according to how long they have been supervised. Because this was an exploratory study, we investigated students' experience of supervision in a beginning practicum and collected data during the fourth meeting of each practicum group. We thought that by the fourth meeting the students would have had sufficient experience in reviewing cases to become aware of their own deficiencies or difficulties in a specific area and of how their supervisors were helping or hindering them.

At the beginning of the session a secretary distributed to students a one-page description of the study and the report form. The secretary reentered the room 20 minutes before the end of the session to remind the supervisors of the study. The supervisors and the secretary then left the room so that the students could complete the report form. Each student returned the form, without identifying information, to the secretary.

### **Data Analyses**

Four different types of critical incidents in supervision were collected: effective supervision by physicians, ineffective supervision by physicians, effective supervision by behavioral scientists, and ineffective supervision by behavioral scientists. Identical data analysis procedures were applied to each set of incident reports. The following are the procedures used to analyze the reports of effective supervision by physicians.

Each student report of effective supervision by a physician was typed on a separate index card. Working independently, 11 judges were instructed to sort these index cards into mutually exclusive, jointly exhaustive categories on the basis of the supervisory behavior. The instructions were carefully worded to avoid suggesting a particular number or type of categories. After categorizing the effective behaviors, each judge reexamined his or her categories and refined them so that all the items in each category were homogeneous. Finally, each judge assigned titles to his or her categories of effective supervision by physicians.

Statistical analyses were used to extract a single group of latent categories from the 11 groups of manifest categories independently produced by the judges (Hartke, 1979; Wiley, 1967). The first step in the analysis was to construct the matrix of proportions of joint occurrence for all possible pairs of the 84 effective behaviors reported for physician supervisors. The elements in this  $84 \times 84$  matrix represented the proportion of judges who put a particular pair of behaviors together in one category. The number and types of categories could vary among sorters.

Consequently, each joint proportion indicated only the percentage of judges who placed that pair of behaviors into one of their categories. It did not indicate similarity among the categories themselves.

To derive latent categories from the joint proportion matrix, the matrix was analyzed with the principal component analysis subprogram PA1 of the *Statistical Package for the Social Sciences* (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). Because of the large matrix ( $84 \times 84$ ), we anticipated that using latent roots greater than 1 as the criterion for number of components would result in numerous small, trivial components. Accordingly, the scree test (Kattell, 1966) was used to determine the effective number of large, substantive components accounting for most of the variance while minimizing the number of components. To enhance interpretation, we rotated the components to simple structure using varimax criterion.

The item correlations with the rotated components were treated as latent category membership coefficients. Each latent category was named, and the role requirement it defined was interpreted by examining the titles of the judges' manifest categories for each behavior that had a latent category membership coefficient exceeding .30. The same sorting and statistical analysis procedures were then repeated separately with the other three sets of reports: ineffective supervision by physicians, effective supervision by behavioral scientists, and ineffective supervision by behavioral scientists.

## RESULTS

The 11 judges used from 5 to 17 categories ( $\bar{X} = 10.4$ ;  $SD = 2.4$ ) to group the 84 critical behaviors students reported as effective acts by their physician supervisors. Principal component analysis of the joint proportion matrix constructed from these 11 sets of manifest categories extracted seven components that accounted for 56.6% of the variance. With regard to ineffective supervision, 30 of the 84 students reported that their physician supervisor had not displayed an ineffective behavior during the practicum session. Of these 30 students, 16 did report an ineffective behavior by the behavioral scientist co-supervisor. Therefore, it was assumed that lack of a report did not reflect an uncritical observer.

The 11 judges used from 4 to 14 categories ( $\bar{X} = 9.36$ ;  $SD = 1.69$ ) to group the 54 ineffective behaviors. In the analysis of the matrix seven components were extracted that accounted for 61.3% of the variance. Table 1 presents the titles, number of included behaviors, and percentage of explained variance for each of the seven categories of effective behaviors and seven categories of ineffective behaviors along with an interpretation of the supervisor role requirement defined by each latent category.

**TABLE 1**  
**Latent Category Titles, Requirements, Variance Accounted For,**  
**and Number of Items**

| Category title                        | Supervisor role requirement   | Variance accounted for (%) | Number of behaviors in category |
|---------------------------------------|---|----------------------------|---------------------------------|
| <i>Physician Effective</i>            |   |                            |                                 |
| Model                                 | Serve as a role model and share clinical experiences  | 19.7                       | 14                              |
| Teach problem solving                 | Teach problem solving and case management skills  | 14.2                       | 23                              |
| Provide balanced feedback             | Recognize what has been learned as well as what still needs to be learned                         | 8.8                        | 17                              |
| Suggest alternatives                  | Offer specific words, actions, or questions for students to try                                   | 4.3                        | 9                               |
| Identify essentials                   | Emphasize what is important   | 3.6                        | 6                               |
| Prod critical thinking                | Demand clinical problem solving and challenge thinking  | 3.2                        | 7                               |
| Confront                              | Point out incongruities and help students take responsibility for their own feelings and failures | 2.8                        | 6                               |
| <i>Physician Ineffective</i>          |   |                            |                                 |
| Wordy                                 | Do not belabor introduction and comments or repeat mini-lectures                                  | 16.3                       | 10                              |
| Inattentive                           | Be on time and do not talk or write while viewing videotapes                                      | 12.8                       | 13                              |
| Expect too much                       | Remember students' level of training and experience   | 10.2                       | 7                               |
| Harsh                                 | Do not overlook successes   | 8.7                        | 5                               |
| Uncritical                            | Do not overlook errors or shortcomings  | 5.0                        | 6                               |
| Ignore reports                        | Do not neglect written reports  | 4.3                        | 5                               |
| Misplace emphasis                     | Do not concentrate on minor details   | 4.0                        | 6                               |
| <i>Behavioral Scientist Effective</i> |   |                            |                                 |
| Teach interpersonal skills            | Teach how to understand and relate to patients  | 23.3                       | 19                              |
| Provide encouraging feedback          | Recognize improvement and positive points   | 11.6                       | 15                              |
| Teach interviewing skills             | Teach interviewing skills by explaining and modeling  | 6.9                        | 15                              |

*(table continued on next page)*

TABLE 1 (continued)

| Category title                          | Supervisor role requirement  | Variance accounted for (%) | Number of behaviors in category |
|---|--|----------------------------|---------------------------------|
| Promote change                          | Encourage and reinforce experimentation                              | 5.8                        | 10                              |
| Openness                                | Model openness and teach how to help patients self-disclose          | 5.0                        | 5                               |
| Encourage and support                   | Support students as persons and facilitate self-exploration          | 3.7                        | 11                              |
| Facilitate group                        | Elicit affective and open communication among students               | 3.6                        | 9                               |
| <i>Behavioral Scientist Ineffective</i> |  |                            |                                 |
| Inattentive                             | Be on time and do not talk or write while viewing videotapes         | 16.3                       | 11                              |
| Inappropriate feedback                  | Do not misquote, prematurely criticize, or feel compelled to comment | 13.3                       | 14                              |
| Reserved                                | Do not be apprehensive in offering criticisms                        | 7.5                        | 14                              |
| Vague                                   | Do not be vague or abstract  | 5.9                        | 11                              |
| Preoccupied                             | Do not be preoccupied or easily distracted                           | 5.4                        | 7                               |
| Stereotyped thinking                    | Do not overanalyze or stereotype patients                            | 4.8                        | 3                               |

The 11 judges used from 6 to 13 categories ( $\bar{X}=9.6$ ;  $SD=1.25$ ) to group the 84 critical behaviors students reported as effective acts by their behavioral scientist supervisors. In a principal component analysis of the joint proportion matrix seven components were extracted that accounted for 59.9% of the variance. With regard to ineffective supervision, 31 of the 84 students reported that their behavioral scientist supervisor had not displayed an ineffective behavior during the practicum session. Of these 31 students, 17 reported an ineffective behavior by the physician co-supervisor. The judges used from 4 to 14 categories ( $\bar{X}=10.6$ ;  $SD=2.3$ ) to group the 53 ineffective behaviors. In the analysis of the matrix six components were extracted that accounted for 53.2% of the variance. The seven effective and six ineffective categories for behavioral scientist supervisors are listed in Table 1.

## DISCUSSION

The medical students' perceptions of supervisor behavior indicate several clearly identifiable role requirements for effective group supervision



in a practicum designed to improve patient interviewing skills. The primary requirements seem to be modeling, instructing, evaluating, and facilitating. Modeling was important to students in beginning practicums because they were struggling to learn their role. They were having their first experience with simulated patients in a clinical setting. The students perceived supervisors talking about pertinent experiences from their own practice as an effective manner of expanding students' interviewing skills. Yet, storytelling or discussing irrelevant experiences was judged to be an ineffective behavior. The students also valued didactic instruction in problem solving, interviewing techniques, and interpersonal skills. They wanted to learn cognitive schemes as well as specific behaviors that increased their competence.

Regarding evaluation, the students wanted balanced feedback about both their strengths and weaknesses relative to their level of training and experience. They wanted their supervisors to attend closely to their tapes and to assess their written reports thoroughly. In their view, effective feedback was accurate, specific, and reinforcing. They wanted encouragement in developing skills and support for themselves as growing individuals. They also valued confrontation that helped them to recognize mistakes and to take responsibility for errors and shortcomings. Even so, students did not wish to be dependent on supervision. Accordingly, they prized behaviors that facilitated critical thinking, self-evaluation, self-exploration, and experimentation with new behaviors. Thus, the role requirements students judged important for group supervision included modeling target behaviors; teaching skills, techniques, and strategies; evaluating performance; and facilitating self-exploration, critical thought, and experimentation.

Although the role requirements for both types of supervisors included modeling, teaching, evaluating, and facilitating, the profiles of requirements for physicians and behavioral scientists revealed some style and content differences. The clearest difference between the two types of supervisors was in modeling. Physicians aided students by serving as role models and by talking about their own experiences. Behavioral scientists modeled certain interviewing behaviors but not the physician's role. Instead, they supported students who were having difficulty adopting the physician's role by facilitating group discussions about the medical profession as well as by mobilizing social support from group members.

Both kinds of supervisors provided instruction, yet physicians dealt more with the content of clinical problem solving and case management, whereas behavioral scientists dealt more with the process of interviewing and building relationships. Both kinds of supervisors evaluated students, yet physicians were more likely to identify deficiencies, demand excellence, and confront excuses, whereas behavioral scientists were more likely to offer reinforcement and encouragement. In cases of unbalanced feedback, students perceived physician feedback as harsh and behavioral

scientist feedback as kind. Both kinds of supervisors facilitated student development. Physicians were more likely to urge self-evaluation and critical thinking, whereas behavioral scientists were more likely to encourage self-exploration and experimentation with different behaviors.

In considering the results of this study, one should remember that these requirements for effective supervision evolved from student perceptions. Although student perceptions of supervision are important, they should not be interpreted without considering the type of students, the practicum setting, and the students' level of training. Although medical and counseling students differ in many ways, in our experience their behavior in practicums is very similar, possibly because the practicums in which we observe students involve generic skill training. Level of training may be a more important variable in research on effective group supervision than is type of student.

The students in this study tended to report as effective those supervisory behaviors that responded to their needs for structure and reassurance. These behaviors are examples of effective supervision, yet they may relate more to student satisfaction than to student performance. Moreover, the specific behaviors that students reported were very concrete and dealt with substantive content and technique more than with dynamic process and self-discovery. Supervisors viewing these same practicum sessions might have reported more supervisory behaviors that dealt with process issues and student performance than this sample of students reported. Further study is needed to investigate the link between student-perceived requirements for effective supervision and student performance, as well as the relationship between student- and supervisor-perceived requirements for effective supervision.

The approach in this study to formulating requirements for effective supervision is important. Statistical pooling of subjective categorizations of several judges produced an objective or intersubjective (Berger & Luckmann, 1966) set of underlying dimensions that organized the diverse supervisory behaviors into distinct, homogeneous categories. Interpretation of these categories was straightforward and produced a credible set of important requirements for effective supervision of medical students in a beginning practicum.

## **CONCLUSION**

The findings of this study led to conclusions that might be considered self-evident. Nevertheless, these findings are useful for four reasons. First, they support Holloway and Johnston's (1985) assertion that the current practice of group supervision is based on intuition and common sense. Second, and more important, the findings provide an empirical report of effective group supervision in one setting. Third, the findings have some practical uses in medical education. The results clarify the



requirements for effective supervision of medical students in a beginning practicum. For this reason, we have used them to familiarize new medical and counselor educators with medical student perceptions of effective supervision. We have also used the results to generate program topics for faculty development. Fourth, the data analysis method devised for this study worked well. It revealed credible role requirements for group supervision of medical students in a beginning practicum. If the methodology is used in other settings with different types of practicum students, the cumulative results may be helpful in devising an empirical, descriptive model of group supervision for use in research.

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