The Effects of Activity-Elicited Humor and Group Structure on Group Cohesion and Affective Responses

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Key Words: activity analysis • activity groups • affect • group structure

The ability to analyze the therapeutic components of an activity is an important skill for occupational therapists. This study examined two potentially significant factors in activity analysis: the use of humor and the effect of group structure. Four groups (two with a parallel structure and two with a project structure) participated in a hat-making activity designed to elicit humor. Four groups (two with a parallel structure and two with a project structure) participated in a bookmark-making activity. The 28 female subjects' affective responses were measured by Osgood's short form semantic differential, and the cohesion among group members was assessed by the Group Environment Scale. Results indicated that subjects who participated in groups which included humor rated their activity significantly higher on two factors of affective meaning (evaluation and action) and significantly higher in terms of cohesion. There was a significant interaction between the two activities and group structure in terms of the action factor and cohesion. In both cases the parallel groups making bookmarks received particularly low scores. The findings have implications for conceptualizing occupational therapy group activities.

A fundamental assumption of the occupational therapy profession is that "activities of many kinds are characteristic of and define a human existence" (Cynkin, 1979, p. 11). Early occupational therapists defined occupational therapy as therapeutic use of activities to encourage a patient's recovery from disease or injury. Thus, occupational therapists are concerned with those activities "that help to promote competence and achievement in the client's ability to function in his or her world" (Hopkins & Tiffany, 1983, p. 95).

Occupational therapists assist clients in improving their functional capabilities by matching activities to the client's current abilities, proclivities, and needs. An essential tool of the profession is activity analysis, the breaking down of an activity into its component parts. Fidler and Fidler (1978) stated, "Planning therefore requires that activities be understood and analyzed in terms of the level and kind of motor skill requirements, sensory integrative components, psychologic meaning, cognitive requisites, interpersonal and social elements, and cultural relevance and significance" (p. 310).

This study examined the effects of two factors important in activity analysis. These variables were (a) activity structured to encourage humor as opposed to activity not so structured, and (b) a parallel versus a project group structure. The dependent variables were group cohesion and the subjects' affective responses to the activity.

Humor has frequently been discussed in relation to affective behavior and the processes of therapy. Tooper (1984) noted that humor can help to put pain in perspective and can promote an individual's sense of group membership. Block, Browning, and McGrath (1983) asserted that shared laughter or amusement can promote intimacy, belonging, warmth, and friendliness among group members. Heuscher (1980) observed that humor can broaden an individual's thought and facilitate insight. Young and Frye (1966) stated that humor can release tension and allow the individual to express emotion. In summary, humor can be a significant component of therapeutic activity.

It is difficult to operationalize a humorous activity because individual persons experience and express humor in different ways. In this study, humor was incorporated into the experimental activity (making paper hats) in two ways. First, subjects making the hats were told to create "silly" hats that were "funny" and "ridiculous," whereas subjects in the control activity (making bookmarks) were not given these explicit verbal cues. Second, it was assumed that the making of paper hats would be inherently more humorous to the population under study (female undergraduates) than the making of bookmarks. Bookmarks are functional, and they are associated with...
schoolwork. In contrast, paper hats are playful in that they have no function other than to entertain.

Group structure, the second independent variable in this study, also has been considered a significant component of activity analysis. Mosey (1973) identified the ability to participate in groups as a basic skill required for an individual to be able to function adequately in the community. She identified five group interaction skills and five respective group structures. These structures can be described as (a) parallel, (b) project, (c) egocentric-cooperative, (d) cooperative, and (e) mature. A parallel group is characterized by persons being with others but involved in individual tasks. A project group is characterized by individuals participating in short-term tasks that necessitate some sharing.

Adelstein and Nelson (1985) examined how the production of shared versus nonshared end products and materials influences the affective responses of subjects. Different groups made collages. Some groups were structured in such a way that members worked individually on their projects, and other groups were structured so that members worked together. These authors found no significant differences between the affective responses generated within a parallel group and those generated within a project group structure. However, these results were restricted to a particular population and to a particular activity.

A study by Schwartzberg, Howe, and McDermott (1982) resulted in somewhat different findings. They examined the effects of three group structures on social interaction in a population of hospitalized patients on a psychiatric unit. The three structures they examined were (a) a verbal, process-oriented group geared for discussion; (b) an open, parallel occupational therapy group where each subject selected and participated in an activity based on his or her own treatment goals and interests; and (c) a self-expression group which had a combination of task-oriented and process-oriented features. Their results supported the hypothesis that these group structures affect the quality and quantity of interpersonal interactions.

In the present study, the Osgood short-form semantic differential (Osgood, May, & Miron, 1975) was used to assess the meanings of the different activity experiences to the participants. This is the same instrument that was used by Adelstein and Nelson (1985), and it has been described in detail by Nelson, Thompson, and Moore (1982). It measures three factors of affective meaning: evaluation (how the activity is valued); power (the potency of the activity); and action (the vitality of the activity).

Another variable measured was group cohesion, one of several variables measured by the Group Environment Scale (GES) (Moos & Humphrey, 1974). Group cohesion may denote subjects' attraction to the group, group morale, or coordination of group members' efforts (Cartwright & Zander, 1957). Factors noted for increasing group cohesion are (a) frequent group meetings, (b) similarities among group members, (c) competition with other groups, and (d) an increase in social status of the group (Mosey, 1973). Cohesion may promote group functions or it may deter them. Mosey stated that a high degree of cohesion contributes to group interaction, learning among group members, and goal accomplishment.

It was hypothesized that humor as a component of an activity will increase group cohesion and elicit positive affective responses. It was also hypothesized that project groups will experience greater cohesion than parallel groups.

Method

Subjects. Twenty-eight female subjects participated. Men were excluded because informal pilot studies by the principal investigator suggested that humor-oriented groups containing a mixture of male and female subjects deserve separate study. All subjects were undergraduates at Western Michigan University, with half the subjects being occupational therapy students (see section on procedures below for control of this variable). The principal investigator recruited subjects by asking them to volunteer as research subjects in an unnamed activity that would require less than an hour of their time.

Instruments. Osgood's short-form semantic differential (Osgood, May, & Miron, 1975, p. 172) was used to assess the meanings each activity had for the subjects. This instrument consists of seven-step scales of paired opposites defined by adjectives. Subjects were asked to rate the activity by placing an X on each of the twelve scales. Using factor analysis, Osgood (1952, p. 230) found that three factors, evaluation, power, and action, described the semantic space of a concept. Reliability and validity data for the semantic differential have been established (Osgood, May, & Miron, 1975; Osgood, 1952).

The GES (Moos & Humphrey, 1974) measures group cohesion and nine other variables. In the present study, all ten variables were measured; however, the main concern of this study was with group cohesion. The nine other variables are leader support, expressiveness, independence, task orientation, self-discovery, anger and aggression, order and organiza-
tion, leader control, and innovation. The GES consists of 90 true–false statements that have been shown through factor analysis to cluster into the variables listed above. Reliability is established for this instrument. The authors of the GES are well-known for developing a series of measurements for different types of social climates. Campbell (1978, pp. 839–840) has praised the GES for its conceptual framework as well as for its practicality. However, the measurement of group cohesion and other small group variables is not yet a highly developed area from a psychometric standpoint.

Procedure. The 14 non–occupational therapy students signed up for one of four dates without knowing how the sessions would differ. The 14 occupational therapy students did the same thing, but for different dates. In each of the resulting groups there were three or four subjects. One non–occupational therapy student group and one occupational therapy student group separately experienced each of the following conditions: Hats–Parallel; Hats–Project (both humor conditions); Bookmarks–Parallel; and Bookmarks–Project (both nonhumor conditions). The eight groups met over a 2-month period in classrooms or campus meeting rooms.

Instructions for each type of group were put on a poster board and read to the group by the principal investigator. The two groups in the Hats–Parallel condition were told that their goal was to create silly hats, “hats so funny that group members will find them ridiculous and will want to laugh.” They were told to “have fun.” They were also told, “Work individually on your hats, although you may occasionally ask other group members for ideas or suggestions.” The two groups in the Hats–Project condition were given the same instructions except that they were told to work together as a group in making their hats.

The two groups in the Bookmarks–Parallel condition were told that their goal was to make bookmarks with each person working individually, although they could occasionally ask for ideas or suggestions. Playfulness and laughter were not mentioned. Finally, the two groups in the Bookmarks–Project condition were told to make bookmarks by working together as a group.

All groups were told to keep making hats or bookmarks for 40 minutes. They were given examples of completed products, but they were assured that there was no need to copy the examples and that their products would not be judged in any way. All groups were provided with the following supplies: black, white, red, yellow, and blue construction paper, scotch tape, glue, and scissors. Each group was given the same amounts and types of supplies. The principal investigator left the room, but returned every 10 minutes to repeat and explain the instructions if there were any questions.

Results

Table 1 summarizes the results. The Statistical Package for the Social Sciences (SPSS) default model for a two-way analysis of variance (level of group structure × level of humor) was used to analyze the data.

Evaluation factor. An analysis of variance suggested significant differences between the subjects making hats and the subjects constructing bookmarks on the evaluation factor (see Table 2). However, the assumption of homogeneity of variance was questionable, with Bartlett Box $F(3,976) = 3.3, p = .021$. Note in Table 1 that the standard deviation of the Bookmarks–Project condition was greater than the standard deviation of the other cells. In such a case, Neter, Wasserman, and Kutner (1985, p. 168) have recommended the use of weighted least squares, with the weight of an observation equal to the reciprocal of the observation's error team variance. When this was done in the General Linear Models (GLM) Procedure of the SAS (SAS Institute, 1979), the difference between hat making and bookmark making was still significant, $F(1,24) = 10.6, p = .003$. In other words, the lack of homogeneity of variance does not disqualify the finding that an activity designed to elicit humor was evaluated significantly higher than the other condition.

Subjects evaluated the hat-making activity high regardless of whether it was done in a parallel group or in a project group. There was no significant interaction between the two independent variables.

Power factor. Analysis demonstrated no statistical significance.

Table 1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Group Structure</th>
<th>Parallel</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation</td>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Hats (humor)</td>
<td></td>
<td>16.0 (1.9)</td>
<td>8</td>
</tr>
<tr>
<td>Bookmarks (nonhumor)</td>
<td></td>
<td>13.7 (1.5)</td>
<td>6</td>
</tr>
<tr>
<td>Power</td>
<td></td>
<td>12.3 (2.8)</td>
<td>8</td>
</tr>
<tr>
<td>Hats (humor)</td>
<td></td>
<td>10.0 (4.2)</td>
<td>6</td>
</tr>
<tr>
<td>Bookmarks (nonhumor)</td>
<td></td>
<td>10.7 (1.6)</td>
<td>6</td>
</tr>
<tr>
<td>Action</td>
<td></td>
<td>16.4 (1.9)</td>
<td>8</td>
</tr>
<tr>
<td>Hats (humor)</td>
<td></td>
<td>10.7 (1.6)</td>
<td>6</td>
</tr>
<tr>
<td>Bookmarks (nonhumor)</td>
<td></td>
<td>32.0 (10.7)</td>
<td>6</td>
</tr>
</tbody>
</table>

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control, and innovation. Each factor analyzed revealed a statistically significant interaction between seven factors: leader support, expressiveness, independence, task orientation, self-discovery, leader control, and innovation. Other factors of the GES were also collected, although they were not the central features of this study. Significant interactions were revealed on the following factors: leader support, expressiveness, independence, task orientation, self-discovery, leader control, and innovation. Each factor analyzed revealed a statistically significant interaction between the groups' structure and whether or not it had been designed to elicit humor. Subjects who participated in a parallel group structure making bookmarks rated their groups lowest on all of the above-mentioned factors of the GES.

**Discussion**

Though the results of this study cannot be automatically generalized to clinical situations, this study confirms the premise that it is important for occupational therapists to consider humor when analyzing an activity. Clinically, occupational therapists often work with populations who suffer from inaccurate and distorted perceptions which contribute to inappropriate affect. Humor, because it alters affect and perceptions, can be a potentially therapeutic medium within activities. "Humor," wrote Block et al. (1983, p. 90), "presents a novel and unexpected aspect of the world which is accompanied by tension and released by laughter"; this process can provide a sense of proportion to one's problems, promote social skill, and facilitate self-disclosure. Humor and its accompanying laughter result in the collapse of the boundary between domains of thought and experience, the sudden presence of the extraordinary in the ordinary, a sudden realization of paradox, or the appearance of a negation in an affirmation (or affirmation in a negation), all of which, again, state that things are not as they seem. (Rossel, 1979, p. 411)

Therefore, humor provides a way to reintegrate feelings, thoughts, and perceptions in a new and changed way.

This study has also shown that an activity structured for humor can bring people together and can influence the social climate of a small group. Group cohesion was stimulated not only in the project group involving humor but also in the parallel group involving humor. Seven other indicators of group climate were also significantly affected by the presence of humor. Occupational therapists often encounter clients who have had little experience in cohesive groups and who have not developed adequate group interaction skills. If therapists can synthesize group activities that promote group interaction skills and relationships among group members, clients may learn generalizable interpersonal skills.

Another finding was that group structure (project vs. parallel) interacted with humor in a significant way. Specifically, the parallel groups making bookmarks rated this activity much lower than the project groups making bookmarks. The fact that activity group structure made a difference qualifies the findings of Adelstein and Nelson (1985), a study that did not find significant differences between shared-product groups (project groups) and non-shared-product groups (parallel groups). The collage activities stud-

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**Table 2**

**Analyses of Variance**

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohesion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within cells (error)</td>
<td>24</td>
<td>146.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(parallel vs. project)</td>
<td>1</td>
<td>1131.6</td>
<td>7.7</td>
<td>.010</td>
</tr>
<tr>
<td>Level of humor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(hats vs. bookmarks)</td>
<td>1</td>
<td>891.1</td>
<td>6.5</td>
<td>.018</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>897.9</td>
<td>5.5</td>
<td>.027</td>
</tr>
</tbody>
</table>

**Action factor.** Hat making was rated significantly higher on the action factor than bookmarks making. There was also an interaction that closely approached statistical significance between the level of structure and the presence or absence of intended humor. Subjects making bookmarks in the parallel group rated their activity particularly low on the action factor \(M = 10.7\) in comparison to the other conditions. The Bartlett-Box F test revealed no problem in regards to homogeneity of variance.

**Cohesion.** The cohesion of the hat-making groups was rated significantly higher than that of the bookmarks-making groups. An analysis of variance also revealed a statistically significant interaction. Subjects making bookmarks in the parallel condition recorded especially low scores in terms of cohesion \(M = 32.0\). The Bartlett-Box F test revealed no problem in regards to homogeneity of variance.

**Nine other factors of the GES.** Data on the nine other factors of the GES were also collected, although they were not the central features of this study. Significant interactions were revealed on the following seven factors: leader support, expressiveness, independence, task orientation, self-discovery, leader control, and innovation. Each factor analyzed revealed a statistically significant interaction between the groups' structure and whether or not it had been...
ied in Adelstein and Nelson had no special orienta
tion to humor.

A contributing to humor in project groups may be the
sharing that subjects are required to do. Brown,
Dixon, and Hudson (1982) noted that laughter is fa­
cilitated by the presence of others. In addition, sub­jects in project groups may experience a relatively high level of arousal because of the expectation of sharing. Yates and Miller (1982) found that the prior arousal state affects subjects’ appreciation of humor.

Future studies in related areas should investigate
humor within other activity contexts. Humor is inher­ently a difficult variable to study, since it depends so much on the perceptions of subjects. Future re­searchers in this area are advised to conduct pilot studies within the population under study before fi­nalizing their operationalizations of the independent variable. The clear-cut results of the present study would have been quite different without such preliminary probes (of course, pilot subjects should be ex­cluded from the final sample). Another area for future investigation would be the direct observation and recording of subjects’ behavior while they are en­gaged in the activity.

Conclusion
This study documents some of the elements of humor
as an activity component, and it confirms the impor­tance of group structure as a consideration in activity analysis. Whether in a parallel group or a project

A. humor is a factor to be taken seriously by occupa­tional therapists.

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