This paper evaluates the extent to which certain program activities such as discussion activities, "it" games, group games, swimming, arts and crafts, special events, written activities, or transitional activities measurably decrease anti-social and non-social behavior among anti-social children and, likewise, increase the incidence of pro-social behavior among such children. Variables such as subjects' age category (children vs. youth), extent of worker training (trained vs. untrained), treatment method (social learning, traditional group work, or group-centered), and the mode of group composition (anti-social children only, pro-social children only, or pro-social children plus an anti-social child) were evaluated in terms of their effects on the choice of activities by workers and the behavior of the children. Subjects were boys ranging in age from 6 to 18. Results point to the efficacy of recreationally-oriented group treatment methods for anti-social children and to the relative undesirability of highly verbal insight therapies. (Author)
SOCIAL GROUP WORK WITH ANTI-SOCIAL CHILDREN
AN EMPIRICAL INVESTIGATION OF THE RELEVANCE OF PROGRAMMING

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It is generally agreed that programming represents an essential facet of social group work practice, regardless of the clientele being served (Vinter, 1965, 1967; Konopka, 1972; Wilson and Ryland, 1949). However, few research studies exist concerning the actual effects of programming on the behavior of anti-social children. In view of its widespread utilization, empirical investigations of the effects of different programs on the behaviors of anti-social children represent a necessary professional activity and, moreover, one that is relevant for the development of a rational approach toward service delivery. This paper evaluates the extent to which certain program activities (discussion activities, "it" games, group games, swimming, arts and crafts, special events, written activities, or transitional activities) measurably decrease anti-social and non-social behavior among anti-social children and, likewise, increase the incidence of pro-social behavior among such children. Variables such as subjects' age category (children vs youth), extent of worker training (trained vs untrained), treatment method (social learning, traditional group work, or group centered), and the mode of group composition (anti-social children only, pro-social children only, or pro-social children plus an anti-social child) were evaluated in terms of their effects on the choice of activities by workers and the behavior of the children.

Historical Review

Many theories have been set forth concerning programming in social group work (Redl and Wineman, 1952; Churchill, 1959; Wilson and Ryland, 1949; Coyle, 1949; Konopka, 1972; Bartlett, 1958; Middleman, 1968; Tropp, 1971; Vinter, 1965, 1967; Whittaker, 1970). However, upon reviewing the literature the authors found no systematic studies reporting the actual effects of program activities on adults and only two studies concerning the effects of programming on children's behavior (Gump and Sutton-Smith, 1955a, 1955b). One study by the
latter authors investigated the effects on a group member of occupying a controlling position in games. The data indicated that children who were given strong control positions in games tended to win, gain the respect of peers, and exhibit strong self-regard (1955a). In a second investigation (1955b) two programs—swimming and crafts—were assessed for their effects on children's behavior. The global finding was that peer-peer interaction is significantly higher during swimming, whereas child-counselor interaction is higher during crafts. In the present study program will be defined as a sequenced set of stimuli to which clients react. More specifically, programs will be viewed as specific group activities that afford a particular set of discriminative stimuli, a particular set of reinforcements, and require a particular type of response pattern.

METHODOLOGY

Site

The study site was a community agency which provides recreational, leisure time, and educational services for 16,000 enrolled members and for the larger community. The physical plant includes two modern buildings, a 100-acre site with day camp facilities, and a 400-acre site with residential camping facilities. Each year the professional group work staff of the agency organizes approximately 200 clubs and classes for children ranging in age from 6 to 12 years. As part of its regular services the agency has admitted physically handicapped children to its program. Similarly, it has sponsored discussion groups for parents and children with social behavioral difficulties. Historically the agency's endeavors have been in the field of aging (Goodman, et al., 1971), mental retardation (Pumphrey, et al., 1969), and community action.

Subjects

The subjects were boys ranging in age from 8 to 16 years. Subjects were
defined as anti-social according to various diagnostic measures utilized by members of the professional therapeutic community, i.e. teachers, counselors, psychologists, and social workers. The anti-social children were referred to the community center from various agencies such as a special school district, mental health centers, juvenile courts, children's homes, and so forth. To help professionals refer children the investigators devised a checklist illustrating the types of behaviors that a child should exhibit to be considered for referral. The behaviors denoted on the checklist were analogous to those used for an observational scale in the research. Six groups consisted of one anti-social child randomly chosen from the original pool of anti-social children and integrated into an otherwise pro-social group. These groups were designated as mixed groups. Placing the anti-social child involved a complicated sampling procedure. Children referred to the project were stratified by age and each child was randomly selected from each age level to participate in a mixed group or in one of the six anti-social groups.

Ten groups of children composed of 95 regularly enrolled members of the community center were defined as pro-social and were studied as comparison groups. Definition of these groups as pro-social was based on the assumption that an agency such as a community center ordinarily provides services for pro-social clientele, that is, clientele who engage in illegal or deviant behavior rarely or not at all. Anti-social, mixed, and pro-social comparison groups averaged 9 members, with a range of 6 to 15 members. The groups met at the center for a two-hour period once per week to engage in various physical activities such as basketball, hockey, swimming or nature hikes, and to discuss topics of mutual interest, such as difficulties at school, with parents, drugs, sex, girls, and so forth. The groups met for an average of 10 times, with a range of 6 to 16 meetings. Every precaution was taken to avoid stigmatization
of the anti-social children. They were treated as regular agency members, were given regular membership cards, and were encouraged to participate in other activities offered at the center. In addition, in the training of group counselors efforts were made to assure that relatively similar expectations would be held for all children in the program, including the referred children.

The children classified as anti-social were primarily of lower middle class background and of the Protestant faith. The children who served as comparison groups were largely from an upper middle class background and of the Jewish faith. Except for the referred child, the mixed groups were analogous to the comparison groups. Children's groups consisted of children between the ages of 9 and 12. Those in youth groups ranged from 13 to 16 years of age.

Variables

Program content was the central variable assessed for its effect on behavior. Other variables studied in conjunction with program content were ages of group members, composition of the group, treatment method, and level of worker training. The four latter factors were balanced into the design as closely as possible but it was not possible to have all groups in equal proportions corresponding to all factors and all factor levels. This necessitated testing for two variables at a time; a statistical program that accounts for this lack of balance was utilized for data analysis (Finn, 1969).

TREATMENT METHODS

Group Centered Method

For this method, the group leaders seldom, if ever, structured group activ-

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ities, friendship relationships, or task relationships. The leader permitted members to select their own activities and to develop their own friendships, tasks, and interpersonal relationships with one another. The leader planned no systematic series of interventions to change members' behaviors. His interactions with the group were to be spontaneous. Only when the psychological or physical safety of a member was in significant jeopardy was he to intervene in a rational, planned manner.

Social Learning Method

Leaders structured activities, friendship relationships, and task relationships by helping members to set specific group goals with specific ensuing rewards for the group as a whole or for individual members. Usually all members were expected to share equally in the rewards. The leader used himself as a reinforcer to increase certain behaviors group members exhibited. He also used other techniques such as extinction, stimulus control, and so forth to decrease certain behaviors.

Traditional Group Work Method

Leaders structured activities, friendship relationships, and task relationships by helping both individual members and the group to set goals. The leader focused particularly upon group power structures, group norms, and group governing and operating procedures. Although rewards were used they were utilized less frequently than in the preceding method and represented only one form of leader intervention.²

LEVEL OF WORKER TRAINING

Workers were categorized into two groups, trained and untrained. Trained workers were first and second year male students from two accredited graduate schools of social work. The untrained workers were regularly employed male

recreational leaders at the agency. Untrained workers were undergraduate students. All but one majored in the social sciences. All but one of the leaders' supervisors had earned graduate social work degrees. The non-social work supervisor had earned a master's degree in guidance and had supervised group workers for two previous years.

NON-PARTICIPANT OBSERVATION

A unique non-participant observation technique was devised in order to measure the frequency of pro-social, non-social, and anti-social behavior exhibited by the children. This procedure seldom had been implemented in relatively open settings such as community centers. An observer was placed in the groups and was instructed to remain as unobtrusive as possible and to avoid virtually all social interactions with the group. Upon his introduction, the children were informed that he would not interfere in any way with the group, that all information obtained would be confidential and would be reviewed only by the research team, and that they could help the observer to do his job by ignoring him as best as possible.

A checklist which yielded highly reliable data was used to tabulate the incidences of pro-social, non-social, and anti-social behavior observed. Checklist reliability was established through simultaneous ratings of behavior recorded on video tapes illustrating the small group behavior/similar children. The tapes included numerous illustrations of anti-social behavior. Observers were also trained by means of the video tapes. The training sessions were completed when each observer could reliably agree on behavioral coding with one of the investigators and other observers at a level of .90 or above, utilizing the rating categories later described in detail. Observations were made in a fixed order every ten seconds for one of the ten children, then for another child, and so on until all of the children had been observed. The
procedure was repeated for the duration of the group meeting. In each instance the first behavioral act observed for a child was rated either as pro-social, non-social, or anti-social. In order to minimize bias due to observers' expectations, the raters were not informed of the hypothesized changes for each experimental condition or for any particular subject.

To insure consistent agreement among the observers, 40 separate reliability checks were performed on the ratings. These checks were made by having the observers simultaneously rate the interactions of children on videotapes. Different tapes illustrating children interacting in various types of situations, such as talking, painting, playing ball, building a campfire, and so forth were used in each reliability session to prevent the observers from rating a child solely on the basis of previous acquaintance with the videotape. The following formula yielded a ratio of inter-observer agreement, interval by interval:

\[
\text{Ratio of inter-observer agreement} = \frac{\text{Number of agreements}}{\text{Number of agreements} + \text{Number of disagreements}}
\]

The mean of the reliability ratios was .91, with a range of .80 to 1.00. The preceding formula was used to establish reliability ratios for the tabulation of behavioral data and construction of graphs. The means of these ratios were .97 and 1.00, respectively.

**BEHAVIORAL CATEGORIES**

**Anti-social behavior**

Anti-social behavior was defined as any behavior exhibited by a group member that disrupts, hurts, or annoys other members, or that otherwise prevents members from participating in the group's tasks or activities. These include gross motor behaviors, physical contacts, verbalizations, object interference, or other distracting behaviors. Anti-social motor behaviors include those that
disrupt, hurt, or annoy others as a result of the child's running, jumping, moving furniture, and so forth. Anti-social physical contacts include those that disrupt, hurt, or annoy others as a result of the child's biting, kicking, shoving, pinching, slapping, and so forth. Anti-social verbalizations include name-calling, crying, screaming, disruptive whistling, and similar behaviors. Anti-social object interference refers to such actions as destroying or hiding others' belongings, slamming toys against walls, and so forth. Distracting behaviors include sitting out of position, luring others away from group activities, and similar actions. No effort was made to qualitatively differentiate the extent to which each particular behavior may be classified as anti-social in nature. In all probability any effort to differentially weight social behaviors would be doomed to failure at this stage of knowledge development. The central importance of the recording scheme inheres, instead, in its capacity to systematically tabulate obviously anti-social behaviors according to a time sampling format and, consequently, to calculate relatively accurate frequencies of anti-social, pro-social, and non-social behavior per unit time for each child. Moreover, in conjunction with the data presented below, the format permits an approximation of the proportion of total behavior observed for each child that is either anti-social, pro-social, or non-social in nature.

Pro-social behavior

Pro-social behavior was defined as any behavior exhibited by a group member that helps the group to move toward completion of a task or that otherwise exemplifies constructive participation in the group's activities. Illustrative pro-social behaviors include instances wherein a given child helps another, demonstrates skills, provides others with materials or objects necessary for participation, asks the group leader to help someone who is experiencing difficulty, requests others to engage in the group's activities, positively
reinforces others' task participation, seeks relevant information, stops others from arguing, attends to instructions necessary for participation, and similar actions.

**Non-social behavior**

All behavior cannot be categorized solely as pro-social or anti-social. In many instances children temporarily withdraw from group activity without either helping or disrupting others. For the present study non-social behavior was defined as any behavior exhibited by a group member that is not directly related to the group's on-going activity. Such behavior is neither directed toward helping the group move toward completion of a task nor toward disrupting, hurting, or annoying others participating in the group's activities. Relevant illustrations include staring out of a window or into space, laying one's head on a piece of furniture, playing or remaining alone while others are engaged in a group activity, and so forth.

**Measurement of program activity**

Observers also were trained to reliably code the beginning and end points of each program activity. In order to qualify for measurement, the duration of any program activity within the group work session had to be at least five minutes or equal to 10% of the total length of the session. Therefore, in a session lasting for a minimum of 50 minutes a given program activity had to exist for a minimum of 5 minutes; in sessions lasting less than 50 minutes it was possible to include a program activity that persisted for at least 10% of the session (e.g., 4 minutes of a 40 minute session).

As noted earlier, the behavioral observation data were classified into three mutually exclusive categories: pro-social, non-social, and anti-social. The observer based his judgment on the first behavior observed for the child in each time interval. The total number of 10-second units of behavior scored during a
given program served as the denominator of the behavior score. The frequency count of each of the three behavior types was the numerator.

For example, in a group session lasting 60 minutes, 6 participants spent 20 minutes in verbal program and 40 minutes playing hockey. The denominator for the discussion activity is 120 (20 x 6 ten-second intervals). When there were no absent members the denominator equaled the duration of the session. However, if one member out of eight was absent in the above hypothetical session, the denominator would be 105 (or 120 x 7/8), since 1/8 of the observation intervals were not included. If 5 instances of non-social and 80 instances of pro-social behavior were recorded for the 20 observed minutes of verbal program, the score index of the three behavior categories would be: anti-social, 5/105; non-social, 20/105; pro-social, 50/105.

For each group, the sums of members' scores for each type of activity were totalled and then recorded as percentages per unit of time. The total group percentage scores for the eight types of program content were coded and assessed for statistical analysis of variance. For each group, then, there were three categories of social behavior scores (pro-social, non-social, and anti-social) and a maximum of eight types of program content. With these data it was possible to assess the differential incidence of each type of behavior.

Program Activity

Program activity was divided into the following eight categories:

Verbal Activity: program in which the central concern is verbal communication, e.g., discussion, conversation, and planning.

"It" Games: individually centered games in which occupation of the central position rotates from one participant to another.

Team Sports: games in which groups or teams compete with each other for scores that will enable one team to be victorious over the other.
Free Swimming: non-competitive swimming and unstructured play in the swimming pool and immediately adjacent area.

Arts and Crafts: individual work with various materials and media that results in the creation of finished objects, e.g., clay modelling, leather work, weaving, painting, and so forth.

Special Events: trips away from the agency to museums, movies, sites of historical interest, and so forth.

Transitional Activity: rest periods, preparations for engaging in other types of program, walking to a meeting place, or other brief activity that takes place during the interim period between two major activities.

Written Tasks: filling out questionnaires, writing letters, and so forth.

Choice of Program

Group workers were allowed to exercise individual choice in the selection of programs so long as the programs were compatible with the treatment method utilized. Supervision was offered at least twice per month. Additionally, there was a consultant available for each of the three methods. Each consultant prepared the supervisors and group workers for each treatment method through discussion of assigned readings on the method and through role playing of the technique.

RESULTS

There were four group difference factors (age of group members, level of worker training, group composition, and treatment method) and one main factor (program activity). The study design was restricted to the treatment of two factors at a time. The first factor always was the factor of repeated observation (program activity); the second factor was, in rotation, one of the four group difference factors (Winer, 1966, pp. 299-319). This approach created a
relatively powerful, balanced, and systematic opportunity for a test of mean differences between activities. 3

Table 1 presents the mean pro-social, non-social, and anti-social behavior scores for all groups and for all types of program activities. The data show

[Insert Table 1 about here]

that verbal and transitional activities were characterized by the lowest incidence of pro-social behavior; team sports, free swimming, and writing activities were characterized by the highest incidence. Verbal and transitional activities had the highest incidence of non-social behavior; team sports and writing activities had the lowest incidence of non-social behavior. The most relevant data on anti-social behavior indicates that free swimming had the lowest incidence of anti-social behavior; team sports were next lowest. Transitional and verbal activities had the highest incidence of anti-social behavior. Since the design did not allow all activities to be compared to all others simultaneously, various activities were chosen from a theoretical framework which seemed to be most important for the present study. The first activity selected was verbal discussion; all other activities were simultaneously contrasted with this activity. Verbal discussion was selected since it appeared that groups alloted more time to this activity than to any other single activity. As expected, verbal activities

[Insert Table 2 about here]

were characterized by less pro-social behavior than team sports, "it" games, swimming and writing activities (see Table 2). For non-social behavior verbal

3Analysis was performed by the NYBCUL computer program. NYBCUL performs an exact least squares multivariate analysis of variance or covariance for any crossed and/or nested design. The number of observations per cell may be equal or proportionate, or may include missing observations and incomplete designs. (State University of New York, Computing Center, NYBCUL, VER-2, June 16, 1969.)
activities yielded higher scores than team sports, arts and crafts, special events and writing activities. Anti-social behavior was more frequent during verbal activity than during team sports, "it" games, or swimming. When the effects of members' age, worker training, treatment method, and type of group composition were evaluated no significant variations were observed in members' behavior. Consequently those variables had little effect on programming and/or members' behavior.

**Swimming Compared with Other Activities**

Data presented in Table 3 suggest that on the incidence of pro-social behavior children may not differ between swimming and the other six activities.

The same can be said for non-social behavior. However, on anti-social behavior swimming did yield a significantly lower incidence than "it" games, team sports, written or transitional activities. Again other rival factors tested did not yield significant results. Inspection of Table 4 indicates that special events yielded less non-social behavior than written activities, "it" games yielded less anti-social behavior than team sports, and transitional activities yielded more anti-social behavior than team sports, more non-social behavior than writing activities, and less pro-social behavior than team sports and writing activities. Likewise, rival factors had little effect on programming.

**Discussion**

The data suggest that swimming activities, group games, and writing activities lead to the least amount of anti-social behavior per time unit and that transitional and discussion activities lead to the most. Writing activities, team sports, and special events were excellent activities for the reduction of...
non-social behavior. The data suggest that other key variables, e.g., members' age, extent of worker training, treatment method, and type of group composition, had little effect on programming. It seems that activities such as "it" games, team sports, free swimming, arts and crafts, and writing provide essential conditions for the reduction of anti-social behavior. They are highly structured, have high reinforcement value, and explicit in the delineation of behavioral expectations.

The failure of verbal and transitional activities to generate as much pro-social behavior as the other activities can be explained by the assumption that the environmental cues (discriminating stimuli) for relevant participation in "it" games, team sports, free swimming, arts and crafts, and special events are more visible and specific. The rules, activity instructions, equipment, and specific features of the activity environment provide strong stimulus control for program-relevant behavior. Verbal and transitional activities lack visible and specific cues, and therefore, program-relevant behavior depends more on random, vague, or covert stimuli. The structural ambiguity of verbal and transitional activities seems to have generated more heterogeneous social behaviors than the recreational activities.

Reinforcement distribution and visibility also are important factors that may explain the different levels of pro-social behavior generated by recreational and task activities as opposed to verbal and transitional ones. Recreational activities and games, in particular, are structured so that visible and/or contingent reinforcement of program-relevant behavior is inherent. Moreover, the reinforcement value for verbal and transitional activities may be lower than that for ones oriented toward recreation.

The reinforcement in recreational activities seems to be largely activity mediated, so that group members are less dependent on peers or the worker for reinforcement. Naturally not all recreational activities are equally "generous"
and "equitable" in their schedule of reinforcement delivery. However, it appears that many such activities are more plentiful sources of contingent reinforcement than are verbal activities. **In brief, then, the data clearly point to the efficacy of recreational oriented group treatment methods for anti-social children and, perhaps, to the relative undesirability of highly verbal insight therapies.**

The most striking finding in the exploratory tests of activity variation was the lack of anti-social behavior during free swimming. This trend was uniform in all activity comparisons, and five of the seven mean differences were significant. There are a number of explanations for these findings. First, free swimming requires that participants maneuver successfully in water, and this requires a broad range of demands on one's response repertoire. Likewise, group members have a good deal of behavioral latitude when swimming; they may play or paddle about individually, organize a water sport or game, race, dive, and so forth according to the individual needs and levels of competence. In addition to the strenuous physical exertion, there are such factors as the novel and enticing physical environment, a varied play atmosphere, and many playmates and behavioral models.

In large part, the present data collection scheme permits the empirical testing of hypotheses set forth about programming elsewhere in the group work literature. Vinter, for example, posited that "limiting excessive aggression, swimming induces somewhat more liking and friendlier relations than arts and crafts" (Vinter, 1967, p. 107). Our data regarding these activities tend to support his hypothesis although mean differences in scores for the two activities did not attain usual levels of statistical significance.

In this study, the absence of activity variation effects in several comparisons should be regarded as tentative. Future investigations should attempt to develop criteria which allow the assessment of stimulus cues and reinforcement frequency of different activities. Likewise, response ranges, or skills,
needed for participation in an activity should be elaborated. These data will help group workers to choose activities on a more rational basis so that clients' treatment objectives may be attained more readily and in conjunction with peers who may benefit in one way or another from mutual participation in a pre-planned series of programs intended to enhance the possibility of therapeutic change.
REFERENCES


<table>
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<th>Activity Type</th>
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<th>Anti-social</th>
<th>Total</th>
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<td>16.6</td>
<td>9.2</td>
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<td>Et-games</td>
<td>19</td>
<td>83.2</td>
<td>12.3</td>
<td>7.0</td>
<td>100.0</td>
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<td>17</td>
<td>87.8</td>
<td>5.3</td>
<td>7.0</td>
<td>100.0</td>
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<td>85.0</td>
<td>12.7</td>
<td>2.3</td>
<td>100.0</td>
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<td>11.3</td>
<td>6.7</td>
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<td>10.8</td>
<td>8.4</td>
<td>100.0</td>
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<td>39.5</td>
<td>14.2</td>
<td>6.3</td>
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</tr>
<tr>
<td>Transitional activities</td>
<td>16</td>
<td>71.7</td>
<td>13.6</td>
<td>12.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Not all groups participate in all types of program content.
TABLE 2

VERBAL ACTIVITIES COMBINED VS NACH OF SEVEN OTHER ACTIVITY TYPES:
SIGNIFICANT DIFFERENCES BETWEEN SCORES FOR THREE BEHAVIOR CATEGORIES

<table>
<thead>
<tr>
<th>Activity types</th>
<th>n</th>
<th>Pro-social</th>
<th>Non-social</th>
<th>Anti-social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team sports vs verbal activities</td>
<td>17</td>
<td>-</td>
<td>*</td>
<td>+</td>
</tr>
<tr>
<td>It-games vs verbal activities</td>
<td>19</td>
<td>-</td>
<td>NS</td>
<td>+</td>
</tr>
<tr>
<td>Swimming vs verbal activities</td>
<td>9</td>
<td>-</td>
<td>NS</td>
<td>+</td>
</tr>
<tr>
<td>Arts-crafts vs verbal activities</td>
<td>10</td>
<td>NS</td>
<td>+</td>
<td>NS</td>
</tr>
<tr>
<td>Special events vs verbal activities</td>
<td>17</td>
<td>NS</td>
<td>+</td>
<td>NS</td>
</tr>
<tr>
<td>Writing activities vs verbal activities</td>
<td>13</td>
<td>-</td>
<td>+</td>
<td>NS</td>
</tr>
<tr>
<td>Transitional activities vs verbal activities</td>
<td>16</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

Note. --: Verbal mean score significantly less than mean score of other activity.
+ : Verbal mean score significantly more than mean score of other activity.
NS: Verbal mean score not significantly different from mean score of other activity.
N: Number of groups that participated in both activities.
### Table 3

**Swimming Compared with Six Activity Types: Significant Differences Between Scores for Three Behavior Categories**

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>N</th>
<th>Pro-social</th>
<th>Non-social</th>
<th>Anti-social</th>
</tr>
</thead>
<tbody>
<tr>
<td>It-games</td>
<td>9</td>
<td>NS</td>
<td>NS</td>
<td>-</td>
</tr>
<tr>
<td>Team sports</td>
<td>7</td>
<td>NS</td>
<td>NS</td>
<td>-</td>
</tr>
<tr>
<td>Arts and crafts</td>
<td>5</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Special events</td>
<td>3</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Writing activities</td>
<td>8</td>
<td>NS</td>
<td>NS</td>
<td>-</td>
</tr>
<tr>
<td>Transitional activities</td>
<td>8</td>
<td>NS</td>
<td>NS</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note.**
- NS: Mean difference not significant.
- -: Swimming mean score significantly less than mean score of other activity.
- N: Number of groups that participated in both activities.
### Table 4

**Remaining Activity Comparisons: Significant Differences Between Scores for Three Behavior Categories**

<table>
<thead>
<tr>
<th>Activity Type</th>
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<th>Behavior Category</th>
<th>It-games</th>
<th>Transitional</th>
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<tr>
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<td>NS - NS</td>
<td></td>
<td>(Not tested)</td>
<td>+ - NS</td>
</tr>
<tr>
<td>N</td>
<td>12 12 12</td>
<td></td>
<td>9 9 9</td>
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<td>Team sports</td>
<td>NS NS NS</td>
<td></td>
<td>NS NS -</td>
<td>12 12 12</td>
</tr>
<tr>
<td>n</td>
<td>13 13 13</td>
<td></td>
<td>15 15 15</td>
<td></td>
</tr>
<tr>
<td>Arts and crafts</td>
<td>(Not tested)</td>
<td></td>
<td>NS NS NS</td>
<td>8 8 8</td>
</tr>
<tr>
<td>N</td>
<td>10 10 10</td>
<td></td>
<td>10 10</td>
<td></td>
</tr>
</tbody>
</table>

**Note.**
- NS: Mean differences not significant.
- +: Mean score of activity in row significantly larger than mean score of activity in column.
- -: Mean score of activity in row significantly smaller than mean score of activity in column.
- #: Number of groups that participated in both activities.