This paper describes a study designed to collect quantified observational data on the behavior of children and teachers throughout the day at three typical quality day care centers. From 50 to 55 hours of observation were completed on five randomly-chosen 3-year-olds in each setting. While the number of subjects and centers was limited, the study's purpose was not to confirm experimental hypotheses but to provide data for generating further research. Instruments used included a day care director's interview, classroom activity logs, and the Human Interaction Scale. Factors considered included relative time spent in intellectual and non-intellectual activities, gross motor compared with small motor activity, proportion of time spent in teacher-selected activity, and restrictiveness of environment. Analysis of data revealed differences between centers in percentages of time children spent in kinds of classroom activities and in interactions with others. Such differences suggest that existing research and conceptual models of day care are oversimplified. Day care is viewed as far from uniform in its treatment of children, and need is seen for: (1) study of a broader range of centers than is normally considered, and (2) examination of the entire span of the operational day rather than of brief portions of the day. University-associated model centers, commonly used for research on day care, are seen as atypical. It is suggested that "quality" in day care be assessed through the productiveness of individual children's behavior and the extent of individual environment matches, rather than inferred from the presence of set characteristics in the centers. (Author/BF)
A DESCRIPTIVE STUDY OF THREE TYPICAL "QUALITY" DAY CARE CENTERS

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An overview of day care research suggests that few studies are ecologically valid. The study described in the paper was designed to collect quantified observational data on the behavior of children and teachers throughout the operational day at three typical centers. Between 50 and 55 hours of observation were completed on five 3 year olds in each setting. An analysis of the data revealed differences between centers in children's activities and interaction. Suggestions for day care research and the conceptualization of quality care are presented.
A DESCRIPTIVE STUDY OF THREE TYPICAL "QUALITY" DAY CARE CENTERS

In the last ten years attitudes toward day care have changed. Originally studied as potentially harmful environments, centers have been conceptualized recently as a positive intervention. Unfortunately, as surveys of day care research make clear (Chapman & Lazar, Note 1), research dealing with day care has many inadequacies.

Day care studies fall into two categories. Most experimental studies (e.g. Caldwell & Richmond, 1968) have been implemented in model centers associated with universities. Data tend to be in the form of standardized test scores. The second kind of study, day care surveys, are concerned with a broader range of centers (Keyserling, 1972). However, in surveys, the data tend to be subjective informal observations of lists of features. The first kind of study produces limited, structured information about untypical settings; the second kind produces unsystematic, rich information about typical settings.

Only in the series of studies at Pacific Oaks College (Prescott, 1971) has the strength of systematic data been combined with a large number of observations in typical settings. A number of interesting hypotheses have been generated from these studies. According to Prescott and her colleagues, the quality of day care is more closely related to the size of the center and philosophy of the director than to variables such as fee, equipment, and child-adult ratio. They found that it was useful to differentiate centers as open or closed in terms of choices for
activity. Different kinds of children seemed to "thrive" in open and closed centers.

The purpose of the study presented in this paper was to produce a description of children's activities and interactions in three typical quality day care centers in Austin, Texas. The study was based in part on the Pacific Oaks studies (Prescott, Note 2; Prescott, 1973; Prescott, Jones, & Kritchevsky, 1972).

Method

Selection of centers. Ten professionals in the field of early education were asked to nominate centers which were examples of quality day care and which received no federal, state or local subsidy. Eleven centers were nominated and visited. Three centers, with cooperative directors, which were considered to represent the highest quality day care, were chosen.

Procedures in the centers. Each center was observed on four days within a three week period, in the autumn of 1974. On the first day background information was collected, the director interviewed, procedures explained, and five 3 year olds randomly chosen from the roll. Classroom activity logs (Brandt, Note 3) and anecdotal observations for each child were recorded on the second and third day from the time the center opened until closing time. On the fourth day, two observers recorded behavior samples for each child using the Human Interaction Scale (White & Watts, 1973). On that day, teachers were asked to complete the card sorts and information sheets (Prescott, 1973) for each child. Between 50 and 55 hours of observation were completed in each center.
Instruments. The Day Care Director's Interview was based on the questionnaire used in the Keyserling study (1972). During the structured interview, information pertaining to those aspects of the day care most discussed in the literature was obtained.

The classroom activity log procedures (Brandt, Note 4) structured the recording of activities for the full operational day at each center. The duration of each activity was recorded along with the beginning and ending time. Dimensions of activities—group form, motor form, content, and selection—were also recorded.

The Human Interaction Scale has five scales—activity of the child, interaction technique of the other person, encouragement to the child, compliance by the child, and initiation. The duration of each activity in seconds is recorded. In this study, each child was followed for ten minutes of each hour he was in the center. The observer narrated a description of the child's activity into a cassette recorder. The narration was later transcribed, coded and timed. The reliability ranged from .87 to .89 in the three centers.

The card sort of children's characteristics included the 33 traits previously found to relate to the quality of day care (Prescott, 1973) and cards which allowed the teacher to designate the child as a thriver, nonthriven, or average. A questionnaire (Prescott, 1973) elicited family information and comments by the teacher.

Data analysis. Durations of classroom activities, children's activities, and interactions were calculated along with the various
dimensions of each. All duration figures were converted to percentages of total time of observation, for ease in interpretation.

**Results**

**Description of the centers.** Center A was a nonprofit day care with an enrollment of 118 children between 3 and 6 years old. The families ranged from working to upper middle class in income and status. The program was divided into a school program (before lunch) and a day care program (after lunch); the morning teacher was trained in education, while the afternoon caretakers were not. The program model was that of a traditional nursery school in the morning. The center was located in a church.

Center B was a commercial center with an enrollment of 100 3 to 6 year olds. The socioeconomic status was similar to that of the families of Center A. This center had a full day integrated program and a single teacher. The teacher had participated as a student in a high school vocational program at Center B the year before the study. The program stressed academic content and rules of behavior. It was located in a specially designed building.

Center C had an enrollment of 70 children 2 to 6 years old. The families were of slightly lower SES than those of the other two centers. The program was integrated through the day with a single teacher. Children attended brief music and Spanish sessions with special teachers. The program stressed dealing with individual children in a group context, the developmental needs of the children, and encouraging the children to
experience and to value experiences. The teachers, who were trained in early education and development, combined elements of parental and teacher roles. The school was located in a set of houses.

Comparison of classroom activities. The comparison of selected dimensions of activities is presented in Table 1. The most striking comparison is in the category of motor activity. Five times as much time was spent in gross motor as in small motor activity in Center A, while similar amounts were spent in each category in Center B. The most academically oriented center, B, had the greatest percentage of time in stationary and teacher selected activity. Center A, which had the dichotomized program, had the lowest percentage of intellectual activity.

Comparison of children's activities and interactions. The comparison of percentages of time spent in selected categories of the Human Interaction Scale appear in Table 2. Center C, in which maternal and teacher roles were combined, had the highest percentage of time spent by children in highly intellectual activity, interaction with others, and compliance. It had the lowest percentage of time spent by children in nonintellectual activity. Center B had the highest percentage of time spent by others, directed to children, governed by restrictive interaction techniques and discouragement.
The productivity of different activity settings, in terms of the dominance of highly intellectual activity over nonintellectual activity, differed in each center. For instance, in Center A 67% highly intellectual and 23% nonintellectual activity time was observed in settings in which children had a choice of a variety of activities. In teacher-structured settings, 5% of activity time was highly intellectual and 73% nonintellectual. In Center B, nonintellectual activity occupied higher percentages of time than highly intellectual activity in each activity setting. In Center C, in which songs and games were used for teaching, teacher-structured sessions were the most productive, with 60% highly intellectual and 30% nonintellectual activity time.

Comparison of children's characteristics. Different kinds of children were rated as thrivers or nonthrivers in each center. In Center A, active children were rated as thrivers and quiet children were rated as nonthrivers. In Center B, all children were described as troublemakers, but those who best responded to adult constraints were labelled thrivers. In Center C, the thrivers and nonthrivers had characteristics similar to those of the children in Prescott's sample (1973). Detailed case studies of the children and centers have been reported elsewhere (Drezek, 1975).

Discussion

This study was limited by the small number of centers and children observed, and the method of selection of the centers; strong generalizations about universal day care cannot be made on the basis of the findings. However, the purpose of the study was not to confirm experimental
hypotheses, but rather to gather quantified descriptive data dealing with
typical quality day care, for the purpose of generating hypotheses for
further research.

The most important implications of this study are for day care
research. The discussion of day care as an intervention has proceeded
as if day care was a uniform treatment. In this study of three centers,
all with trained personnel, knowledgeable directors, and similar child-
adult ratios, it is apparent that day care is not a uniform treatment.
A second implication for research concerns what Bruner (1971) has termed
the ecological validity of such research. Most day care studies, with
quantified data, have sampled a narrow range of centers for a brief portion
of the day. If day care research is to affect policy, research must
sample a broader range of centers and examine the entire span of the
operational day. This study does not support the claim (Caldwell, 1973)
that model centers are similar to typical centers.

The results of this study do support many of the conclusions
of the Pacific Oaks studies. Children's activities and interactions were
most productive and positive in the center closest in size to a medium
sized center in Prescott's work (Prescott, Jones, & Kritchevsky, 1972).
The centers with directors trained in early education had the least
restrictive environments. The center which was adult-centered, with an
emphasis on academics and rules, had the most restrictive environment and
the most stationary activity.

Day care centers appear to be complex settings. Within each
setting certain activity sessions were more productive than others.
Children perceived as thrivers had different traits in each center. These results suggest that the question of quality in day care can most fruitfully be examined in terms of the ability of the center to provide a range of individual-setting matches. Quality in this study, as determined by the data, had no relationship to lists of characteristics of quality centers which appear in the literature (Abt, 1971).

Day care centers frequently borrow models from other settings--kindergarten, nursery, babysitting. Day care differs from these settings in that it replaces, rather than supplements, much of the child-rearing functions of the family. This difference was considered in the planning of only one center, C. Significantly, it was this center which combined parent and teacher roles, which was most productive in terms of the interactions and activities observed.

Conclusions

In an observational study of 3 year olds in three typical quality day care centers, differences between centers were found in the percentages of time spent in kinds of classroom and children's activities and interaction. Such differences suggest that the existing research and conceptual model of day care is oversimplified. Systematic, observational studies in typical centers over the range of the day are needed as a base for policy. Quality in day care should be assessed through measurements of the productiveness of individual children's behavior, and the extent of individual environment matches, rather than inferred from the presence of set characteristics in the centers.
Reference Notes


References


Table 1
Comparison of Selected Dimensions of Classroom Activities in the Three Centers

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Percentage of Total Time Spent in Each Dimension</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Center A</td>
</tr>
<tr>
<td>Structured Transitions</td>
<td>8%</td>
</tr>
<tr>
<td>Motor</td>
<td></td>
</tr>
<tr>
<td>Gross</td>
<td>50</td>
</tr>
<tr>
<td>Small</td>
<td>10</td>
</tr>
<tr>
<td>Stationary</td>
<td>40</td>
</tr>
<tr>
<td>Selection</td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>43</td>
</tr>
<tr>
<td>Pupil</td>
<td>54</td>
</tr>
<tr>
<td>Partial Teacher</td>
<td>3</td>
</tr>
<tr>
<td>Content</td>
<td></td>
</tr>
<tr>
<td>Pupil Behavior</td>
<td>86</td>
</tr>
<tr>
<td>Intellectual</td>
<td>14</td>
</tr>
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</table>
Table 2

Percentages of Time Spent in Selected Activities and Interactions in the Three Centers

<table>
<thead>
<tr>
<th>Categories</th>
<th>Centers</th>
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<tbody>
<tr>
<td></td>
<td>Center A</td>
</tr>
<tr>
<td>Highly Intellectual Activity</td>
<td>17%</td>
</tr>
<tr>
<td>Nonintellectual Activity</td>
<td>63</td>
</tr>
<tr>
<td>Interaction with Others</td>
<td>21</td>
</tr>
<tr>
<td>Positive Interaction Techniques</td>
<td>93</td>
</tr>
<tr>
<td>Restrictive Interaction Techniques</td>
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</tr>
<tr>
<td>Compliance</td>
<td>40</td>
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<tr>
<td>Noncompliance</td>
<td>4</td>
</tr>
<tr>
<td>Encouragement</td>
<td>49</td>
</tr>
<tr>
<td>Discouragement</td>
<td>13</td>
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