ABSTRACT
        A study was conducted comparing young children's
experiences in three types of day care--closed structure, open
structure and family--with their experiences in home care
supplemented by part-time nursery school. A total of 112 children,
aged 2 to 5, were observed, each for 180-200 minutes. Eighty-four
were selected from 15 day care centers, half having open and half
having closed structures. Fourteen children came from 14 family day
care homes. Fourteen were children from intact families who spend
half the day in nursery school and half at home. The Day Care
Environmental Inventory was designed to permit immediate coding of
two levels of behavior--the mode of behavior every 15 seconds and
activity segments of which the 15-second codings are a part.
Differences between types of care were found in the availability and
usefulness of adults, opportunities for autonomy and initiative,
supports for self-esteem, and opportunities for cognitive engagement.
Closed structure group day car appears to provide clear limits and
adult input to which children must attend, but it appears to be
somewhat lacking in opportunities for autonomy and initiative, in
positive adult-child interaction, and in supports for self-esteem.
Open structure group care offers opportunities for child-child
interaction and more autonomy and initiative, but adult input and
opportunities for cognitive engagement are low. Family day care and
nursery school-home care are similar in that adults are more
available to children than in group care and opportunities for
autonomy and initiative are higher. Supports for self-esteem are also
high. (KM)

A Comparison of Three Types of Day Care and Nursery School-Home Care*

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Although efforts are now being expended to provide extensive day care services for the nation's children and increasing numbers of working mothers are now using day care, little is known about the alterations in the young child's environment which various forms of day care might produce or how these alterations might differ from the traditional pattern of care at home.

Most of the information now available concerning the effects of day care on children stems from exemplary programs. These studies typically show short term cognitive gains in children similar to Head Start. None show negative effects (Chapman and Lazar, 1971; LaCrosse, 1970). However, exemplary programs are not necessarily comparable to those existing in communities, nor do the evaluative schemes look for effects of specific environmental variations.

Traditionally, the optimal environment for young children has been assumed to be the home and neighborhood where supervision is exercised by the mother in her role as homemaker. In recent years growing numbers of middle class mothers have supplemented the home-neighborhood environment with a part time nursery school experience. In middle class communities, home plus nursery school now probably is considered the ideal environment by non-working parents who have maximum choice.

Among families who use day care services, in-home care still accounts for nearly one half of all day care provided. However, government policy has been most concerned with out-of-home care especially center care. At present group care in centers accounts for about 6% of day care services. On the basis of experience in Southern California, I would estimate that open and closed structure day care occur with about equal frequency (Prescott and Jones, 1967). Less attention has been given to care in someone else's home, commonly known as family day care, which accounts for 31% of all day care (White House Conference on Children, 1970).

This study is concerned with the differences in young children's experience in three types of day care available in communities: 1) closed structure group care, 2) open structure group care and 3) family day care. These types of care will be compared to children's experience in home care supplemented by part time nursery school.

Study Design

One hundred and twelve children, age 2 to 5, were observed, each for 180-200 minutes. Eighty-four of these children were selected from 14 day care centers with a community reputation for quality, one half having open and one half having closed structure programs as determined by the administrator's policies on teacher versus child initiation of activities 1/ . Fourteen children were selected from 14 family day care homes where the criterion for quality was commitment to participation in a demonstration community family day care project 2/. The nursery school-home combination consisted of 14 children from intact families who attended a half-day community nursery school and spent the remainder of the day at home with mother. Mean age of the children was 45 months. There were no significant differences by age or sex across types of care. The three types of day care included children from families varying in socio-economic status and ethnicity.

An observational instrument, The Day Care Environmental Inventory, was designed to permit immediate coding of two levels of behavior. One code was designed to record the child's mode of behavior in categories of rejecting, thrusting, responding and integrating, his direction of attention and amount of adult input every 15 seconds. The other code provides descriptors for a unit called the activity segment which accounts for the larger activity system of which the 15-second coding is a part. (For example, an activity segment begins when a child goes to the swing area and selects a swing; it continues until the child stops swinging and leaves.) Paired observations for purposes of

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1/ For group care community reputation for quality was based on several criteria: stability of operation, adequacy of funding and physical plant, sponsorship by recognized community groups (Prescott, 1973).

2/ All family day care givers were engaged in family day care at the time of contact by the Community Family Day Care Project and had embarked on it of their own initiative. They were established caregivers ranging in experience from 18 months to 15 years. (The purpose of the project was not to train the family day care mothers, but to learn from them (Sale, 1971, 1972). This sample is considered representative of populations of women who spontaneously engage in family day care. It is probably not representative of populations who are recruited to do family day care by a welfare department or other agency (Emlen, 1971, 1972).

reliability were made throughout the study. Information on reliability
is available for all categories 3/.

Findings

The frequency of certain modes of behavior differed significantly
by type of care. Children in closed structure group care as compared
to the other three types of care were highest on the following behaviors:

meets expectations (examples: obeys, keeps body in prescribed
position such as standing in line properly, answers
questions)

receives frustration, rejection or pain (examples: child is
told by two children he approached, "We don't want to
play with you." or, in asnwer to teacher's question about
the color of a red ball, John volunteers that it is round.
The teacher answers, "No, we are talking about color, not
shape." In both cases, the child looks visibly upset.)

tentative behaviors (such as looking across the yard while
fumbling with a puzzle)

not attending to external stimuli (examples: thumbsucking,
crying)

ignores intrusion (example: adult says, "Everyone sit down,"
Child remains standing.)

Children in closed structure care were significantly lower on the
following behaviors:

total thrusting behavior (includes being physically active,
giving orders, selecting, choosing, playful and aggressive
intrusion, asking for help, giving opinions)

receives help (examples: adult sets up paints for child; one
child finds a puzzle for another child)

tactile, sensory exploring (examples:child tests finger paint;
child sways in response to a story about wind in trees)

Children in open structure group care were highest on all types of
active rejection (examples: child avoids being bumped by moving to
opposite side of table; child says, "No", when another child attempts
to take his puzzle; child hits a child who knocks down block structure).
These were markedly lower in showing awareness of cognitive constraints
(examples: "This wheel can't fit there; it has to go here." "You have
four blocks. I have only three.").

3/ Explanation of coding categories, procedures, and detailed information
concerning reliability are available in Prescott, Kritchevsky, and
Jones, 1972.

Children in family day care were <u>highest</u> on the following behaviors:

> receives help (examples: adult asks, "Would you like to go
>   outside?" or "Maybe some more glue would help.")
> tactile sensory exploring
> total thrusting

Children in family day care were <u>lowest</u> on the following behaviors:

> meets expectations
> receives pain, frustration
> total rejecting (includes ignores intrusion and actively rejects)
> tentative behaviors
> not attending to external stimuli

Children in nursery school-home care were <u>highest</u> in shows awareness of cognitive constraints. They were also high on total thrusting.

Nursery school-home children were <u>lowest</u> on the following behaviors:

> total rejecting (tied with family day care)
> total responding (includes looks, watches, obeys, answers)

Direction of Attention

The child's direction of attention also differed by type of care. Direction of attention to adults was highest in nursery school-home, followed by family day care and closed structure. It was significantly lower in open structure day care. However, direction of attention to children was significantly higher in open structure, and was lowest in nursery school-home care.

Adult Input

The type and amount of adult input also differed by type of care. Children in closed structure group care received significantly more adult pressure (i.e., input which requires compliance). Children in nursery school-home care received the highest amount of adult facilitation (i.e., adult input which suggests or elaborates) followed by family day care. Total adult input in open structure care was significantly lower than in all other types of care. Both types of home-based care provided higher amounts of adult input to the individual child than did center-based care.

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Activity Segment Descriptors

There were also marked differences in the way in which children initiated and terminated activity segments. In closed structure settings this decision was made most frequently by adults. The incidence of adult pressured initiation decreased sharply across types of care and was lowest in home-based care. Adult facilitation of initiation was markedly low in closed structure care.

This basic difference in who initiates determined other characteristics of the child's day. In closed structure centers time spent in structured transitions, such as lining up to go outside, toileting, waiting for lunch, averaged 24% of the child's time. In home-based care it dropped to less than 3%. Amount of time spent in free choice rose steadily across types of care from closed to open and was highest in home-based care.

Other Descriptors

There were marked differences by type of care in other activity segment descriptors. The frequencies of the majority of these descriptors ranged in a continuum across types of care in order from closed, open, family day care, to nursery school-home.

Ranging in a continuum, closed structure centers were highest and nursery school-home lowest on the following descriptors:

> activity segments labeled as: imitation of prescribed
>   patterns (such as group recitation)
> teacher emphasis on rules of social living (example: "Remember,
>   John, we share.")
> adult closes off possibilities (example: two boys start to
>   swing on their tummies and are stopped by the teacher)
> absence of pleasurable affect
> use of simple play equipment (example: play equipment with only
>   one part or type of material, such as jungle gym, tri-
>   cycles, sand box with sand only)

Nursery school-home care showed a marked deviation from this pattern for the descriptor limited mobility. Although children in nursery school-home care were generally free to engage in large muscle activities, they often chose activities of limited mobility such as cognitive games, small muscle construction toys or art activities.

On a continuum from low to high, closed structure centers rated lowest and nursery school-home highest on the following:

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activity segment labeled as:
        unusual creative exploring (examples: playing with shav-
            ing cream, examining bugs and worms as opposed to
            play dough, easel paint, collage)
        unusual cognitive exploring (example: melting ice in
            corn popper)
friendly teacher approach
teacher emphasis on:
        consideration
        imparting information
        pleasure and delight
        creativity, experimentation
teacher individually involved with a child or small group
        of children
child plays alone
use of play equipment where three or more play materials are
        juxtaposed, for example: sand, digging equipment and water

Summary and Conclusions

Certain findings appear pertinent to current controversies regarding
the adequacy of day care as compared to a good home as a child-rearing
environment. There appear to be differences between types of care in
(1) the availability and usefulness of adults as indicated by a) amount
and type of adult input, b) amount of child's attention directed to
adults, c) incidence of asking for and receiving help, d) frequency of
1:1 adult-child involvement; (2) opportunities for autonomy and initiative
as indicated by a) ratio of thrusting behavior to conforming behavior,
b) percentage of activity segments initiated and terminated by the adult
rather than by the child, c) incidence and length of structured
transitions and d) opportunities to engage in solitary activities; (3)
supports for self-esteem as negatively indicated by a) incidence of
rejection and frustration and b) interference with functioning; and (4)
opportunities for cognitive engagement as indicated by frequency of
awareness of cognitive constraints. Other behaviors such as looking
and watching, attention directed to the environment, and social inter-
action remained remarkably stable across type of care.

Closed structure group day care appears to provide clear limits
and adult input to which children must attend, but it appears to be
somewhat lacking in opportunities for autonomy and initiative and in
positive adult-child interaction, or in supports for self-esteem.
Sensory stimulation also is notably lacking. Adults rarely hold or hug
children, and messy materials such as finger paint, clay and other
tactile sensual materials characteristically are absent. Environmental
responsiveness in the form of rugs, pillows, swings,animals, and cuddly
toys usually is lacking. Restrictions on mobility and requirements to
maintain specific body positions are high.

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Open structure group care offers opportunities for rewarding child-child interaction and provides more opportunities for autonomy and initiative. However, adult input appears to be markedly diluted as compared to other types of care. Opportunities for cognitive engagement also were relatively low.

Family day care and nursery school-home care present markedly similar profiles. Adults in both home-based settings were more available to children than in group care; opportunities for the child to make choices and to control the environment were markedly higher than in group care. Supports for self-esteem appeared high. Opportunities for cognitive engagement did not appear to be lower in family day care than in open structure group care, although adult input toward this goal may be somewhat less. Nursery school-home care appeared to provide for maximum individualization and for somewhat more cognitive input than family day care.

Roger Barker has observed that behavior settings (in the present discussion, family homes and day care centers) appear to possess inherent regulatory features that stem from the purposes for which the settings exist, their physical attributes, and the number and kinds of persons present in them. These aspects of a setting determine to a great extent the activities and types of behavior that will probably occur within its boundaries (Barker, 1968).

The findings reported here were associated with marked differences in the physical setting and in the adult-child ratio during activity segments. One to one and 1:2, 3 ratios occurred with about 5 times the frequency in home-based as compared to center care. It appears that some day care settings are not optimal for certain kinds of activities and behavior and that such actions are not likely to occur unless the adults involved are highly motivated to bring them about and are exceptionally skilled in doing so. The question about possible long term effects of the differences reported here on children remains unanswered.

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES
BY TYPE OF CARE

BEHAVIORAL VARIABLES	TYPE OF CARE			
	Closed Centers (N=42)	Open Centers (N=42)	Family Day Care (N=14)	Nursery School-Home (N=14)
15-Second Coding				
* Total rejecting	3.5%	3.6%	2.3%	2.4%
* Actively rejects	1.9	2.6	1.6	1.6
** Ignores intrusion	1.6	1.0	0.7	0.8
** Total thrusting	25.7	34.2	37.0	37.7
* Total responding (except looks, watches)	23.0	19.3	18.9	17.5
** Meets expectations	15.6	10.9	7.2	8.0
** Receives help	4.5	5.4	9.5	7.6
** Receives frustration, rejection	2.5	2.1	1.0	1.2
* Tactile, sensory	1.9	2.3	4.0	2.1
NS Total integrating	21.0	19.9	22.1	21.5
** Shows awareness of cognitive constraints	2.8	2.1	3.1	4.3
* Not attending to external stimuli	2.0	1.3	0.3	0.7
** Tentative behavior	7.3	5.5	2.6	3.9
* Direction of attention to adult	25.2	21.7	26.4	29.0
** Direction of attention to child	19.9	21.9	16.3	13.7
NS Direction of attention to environment	46.5	48.8	48.3	48.9
** Direction of attention to group	3.5	3.8	1.2	4.4
** Dual focus	4.9	3.8	7.9	4.0
	Frequency of Adult Input to Individual Child (per 100 minutes)			
** Total adult input	33.4	22.2	40.3	40.1
** Adult instigation	11.1	13.0	28.9	35.4
** Adult pressure	22.3	9.2	11.5	4.7

* Significant at .05 level; **, .01 level; NS, not significant (F-ratio)

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ACTIVITY SEGMENT DESCRIPTORS BY TYPE OF CARE

DESCRIPTORS	TYPE OF CARE			
	Closed Centers (N=42)	Open Center (N=42)	Family Day Care (N=14)	Nursery School-Home (N=14)
Source of Initiation				
*** Adult pressured	58.1%	20.0%	11.1%	7.7%
** Adult facilitated	9.6	23.0	20.2	27.0
** Another child	1.2	4.4	7.6	4.6
*** Spontaneous	26.3	45.9	55.1	52.5
Source of Termination				
*** Adult pressured	57.1	20.5	14.2	6.1
* Adult facilitated	10.5	20.1	13.6	19.9
* Another child	1.7	3.6	8.1	5.1
*** Spontaneous	21.5	42.6	48.5	56.1
Program Structure				
*** Free choice	29.2	62.2	73.7	75.5
NS Teacher directed individual	3.9	2.0	3.4	2.6
*** Teacher selected individual	6.5	0.7	2.7	0.7
*** Teacher directed group	24.0	10.6	3.4	8.6
*** Structured transition	24.0	9.9	2.0	2.6
Activity Segment Label				
*** Imitating	8.0	2.4	1.0	1.0
** Unusual creative exploring	1.6	4.4	6.1	9.2
** Standard cognitive	9.6	3.5	2.5	4.1
*** Unusual cognitive	1.6	2.1	3.5	9.2
Teacher Approach				
*** Sensitive	9.0	20.5	29.8	34.7
NS Friendly	27.5	31.5	30.8	28.1
*** Neutral	27.3	16.5	2.0	8.7
*** Insensitive	17.2	4.4	1.5	1.0
Teacher Emphasis				
*** Social rules, control, restraint	34.5	16.6	8.1	5.1
* Consideration, mutuality	4.0	9.7	12.1	10.7
*** Imparting information	5.2	5.7	6.6	17.8
** Pleasure and delight and dealing with emotion	3.2	11.3	12.1	10.7
* Creativity and experimentation	0.4	3.8	0.5	5.1

(cont.)

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ACTIVITY SEGMENT DESCRIPTORS BY TYPE OF CARE   (cont.)

DESCRIPTORS	TYPE OF CARE			
	Closed Centers (N=42)	Open Centers (N=42)	Family Day Care (N=14)	Nursery School-Home (N=14)
Social Structure				
** Child alone	5.0%	6.1%	13.1%	13.8%
NS One friend present	7.5	12.8	8.1	10.7
*** Adult involved individually with				
small group	1.5	3.9	5.5	17.8
Complexity of Play Materials				
** Simple	57.6	44.9	42.3	26.2
*** Three materials juxtaposed	5.2	10.9	12.8	26.7
Mobility				
* Limited	51.7	36.1	14.7	42.9
Affect				
*** Neutral	34.7	26.8	21.7	15.8
Child Involvement				
*** Low	13.9	8.2	3.6	5.6
Adult Influence				
*** Closes possibilities	31.5	14.4	13.1	9.7

* Significant at .05 level; **, .01 level; *** .001 level; NS, not significant
(F-ratio)

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