
Evaluating the Observable Effects of Foster Grandparents on Hospitalized Children

SUZANNE ZIEGLER, PhD
JOHANNA KING, PhD

THE EFFECT OF HOSPITALIZATION ON CHILDREN HAS BEEN discussed in the clinical and sociological literature for at least three decades. The interest in this topic reflects a general concern about the effect that lack of a parental relationship may have on children's physical and mental development. The key figure expressing this concern has been Bowlby (1).

Many studies in institutions, including acute care and chronic care hospitals, have focused on the effect on children of the interruption of, or the lack of, parental nurture. The classic study in the literature on anaclitic depression in infants, conducted by Spitz (2) in an orphanage, demonstrated extreme differences in development between parented and unparented children. Even earlier, Edelston (3) had documented behavior disturbance in young hospitalized children that he attributed to separation from parents. Several review articles cover the work done in this area since the forties (4-6). Although many studies of the effects of hospitalization on children have diverse objectives, methods, and results, they show a cumulative pattern from which we can derive some significant conclusions.

1. Hospitalization tends to most negatively affect children between the ages of 7 and 54 months (4-9).

2. Within the age span 7-54 months, either lengthy or repeated brief hospitalization has long-range negative effects (10,11).

3. The presence of the parent or a parent surrogate tends to have a positive effect on the behavior of children and to ameliorate some of the negative effects of hospitalization (12-14).

Although studies of the nonmedical effects of hospitalization on children have been numerous and generalizations based on this literature can be made, certain methodological problems plague such studies and make them, in the aggregate, less conclusive than one might expect.

The central problems are (a) arriving at an operational definition of the negative effects of hospitalization on children (both during and after the experience) and (b) finding an appropriate method to collect the study data. A few studies depend on observers to supply data; most, however, depend on reports from hospital staff, parents, or both. Neither observers' reports nor self-report scales are tested for reliability over time or between raters, and rarely do any two researchers use the same instrument or try to replicate the conditions and constraints of previous studies.

The use of observers to provide data on children's behavior has the advantage over parental or staff reporting of the same behavior in that it is immediate rather than retrospective and is objective rather than subjective—provided that high inter-rater reliability is established. Observation, however, is costly compared with subjective reporting, even when it involves only a single measure of response, such as the pulse (15) or blood pressure (16). And since observation of higher level, more complex responses is far more difficult and costly, it is consequently rarely used. Also, molar behaviors—constellations of simpler, or molecular behaviors—are difficult to define in truly independent terms. (Molecular dimensions describe “elementary physical

Dr. Ziegler is research coordinator, Child in the City, a program at the University of Toronto, and Dr. King is a psychologist at the Counseling Center, California State University at Chico. The project described was made possible by a contribution from the Atkinson Foundation, Toronto. The administrative and nursing staff of the Hospital for Sick Children in Toronto assisted in the study by providing subjects and data.

Tearsheet requests to Johanna King, PhD, 1505 Manzanita Ave., Chico, Calif. 95926.

states and movements," and such descriptions "can usually be made accurately and in terms which are easy to communicate." But, "with molar categories, an inference has already been made about the 'point' of a piece of behaviour, and many implicit expectations must enter into such descriptions since they involve an element of inspired guesswork" (17).) Even when the problem of defining behaviors has been resolved, the establishment of inter-rater reliability in describing the presence or absence of these molar behaviors is in itself challenging (17), and few experimenters have used blind ratings or multiple observers (5).

Few studies to evaluate the effects of the presence of parents or parent-surrogates on the behavior of hospitalized children have been conducted that have not depended exclusively on anecdotal reports; that have had a satisfactory experimental design (including an appropriate control group plus clearly defined, mutually exclusive behavioral criteria); and that have established a satisfactory level of inter-rater reliability.

Although good research and evaluation studies are lacking, programs seeking to expand the contacts between parents and hospitalized children and to supply parent-surrogates when necessary have proliferated. Such efforts may be justified on humanitarian grounds alone, but these grounds may be insufficient both for investigators with an interest in the phenomenon of separation anxiety and its long-term consequences and for those making decisions about the funding of such programs, which must compete with other programs for funds.

Foster Grandparent Programs

Since 1965, the U.S. Government has made funds available to Federal regions for what are called Foster

Grandparent Programs, and such programs have been adopted by many pediatric hospitals and many pediatric wards of acute and chronic institutions. In these programs, men and women of retirement age are paid a modest salary for acting as friendly visitors to unvisited or undervisited hospitalized children. When possible, persons bilingual in English and another language commonly used in the region (typically Spanish) are chosen. The major goal of the programs as far as the children are concerned is to "render supportive, person-to-person services to children with special or exceptional needs" (18).

For hospitalized children whose parents cannot, or do not, visit regularly for whatever reasons, the foster grandparent serves as a surrogate parent. His or her job is to visit at the same time every day (or at least every weekday) and converse with the child much as a concerned and caring relative might do. The visitor may help the child with routines like eating or walking to the washrooms or playroom and may engage in informal activities with the child, like playing games, reading stories, or discussing a television program. For children who would be rarely visited otherwise, the Foster Grandparent Program provides an adult who belongs to the child for a set period every day, who does not have to be shared, and whose attention is not constantly diverted, as is inevitable with the nursing and medical staff.

Some efforts have been made to evaluate the effectiveness of Foster Grandparent Programs. In 1966, for example, data on about 900 children served by some 500 foster grandparents all over the United States were assembled from a variety of persons and records (19). The children were of all ages and were in various kinds of institutions. On the dimensions tapped in the evaluation, about half of the children reportedly improved

in the course of their contact with the foster grandparents. The interviewing was systematic and standardized, but no control group was used in the study, and no standardized outcome variables were measured. Similarly, in a 1975 survey, 38 randomly selected Foster Grandparent Programs (25 percent of all such programs) were systematically sampled. Staff members in the 38 programs were asked to answer a set of questions. Eighty-nine percent of the project personnel reported that the children's progress was accelerated by the foster grandparents, and 82 percent said that the program resulted in earlier termination of special treatment for the children (20). More recently, McGregor reported on the first year of a foster grandparent program implemented in two children's institutions in Australia and modeled on the American scheme (21). Responses to questionnaires administered before and after the program was carried out showed that the foster grandparents and supervisory staffs saw positive benefits from the program to the children (aged 2-16 years) over the 4 or 5 months of the study. A standardized measure of functioning (the Bayley scales) that was used in the study revealed small but significant improvement in the development levels of the children in the two institutions, but in this study, as in previous ones, there was no control group.

Only one systematic evaluation of Foster Grandparent Programs has been done that produced quantified, comparable results. Saltz, using standardized intelligence and maturity scales, systematic observations, and ratings by the institutional staff, compared infants and preschool children residing in two comparable children's institutions, one of which was served by a Foster Grandparent Program (22-24). Controls were available for 33 infants under 1 year old, but for only 14 of the toddlers. Significant differences in favor of the infants with foster grandparents were found in vocalization behavior but not in the results of a standardized test of developmental progress (the Cattell Infant Intelligence Test). Stanford-Binet results for the 14 pairs of experimental and control toddlers showed a 5-point gain after 12 months of the program for the groups with foster grandparents, compared with a 6-point loss for the control group, a difference that is significant at the 0.95 level of prediction.

Saltz found a measurable difference in the development of toddlers with foster grandparents compared with other institutionalized toddlers over 2 years of age, but she found no measurable difference for infants. Furthermore, her measures of improvement in ability and maturity are not suitable for use in an acute care setting where hospitalization is measured in days or weeks, not months or years. Yet the pediatric wards

of acute care hospitals are common settings for Foster Grandparent Programs. Because the Foster Grandparent Program is so widespread in acute care settings in the United States, as well as in chronic care settings, and because this typically 2-hour-per-day substitute parenting is generally the best alternative for hospitalized children who are never or infrequently visited, a series of systematic evaluations of such a program in operation, with quantifiable measures and a control group, needed to be done.

Branstetter (14) compared children in institutions who had parent visitors or foster grandparent visitors with unvisited children. Three groups of 10 children each, aged 14-36 months, were assigned to one of the following conditions: (a) mother present, roomed in with child, (b) substitute mother (foster grandparent) present at least 6 hours per day, and (c) mother absent—no substitute. The children were observed naturally on eight occasions (twice a day for 4 days) during their first week of hospitalization. ". . . the substitute mothering group showed behavior similar to that of the mother-present group. These two groups manifested *much less disturbed* behavior than did the mother-absent group." The general variables measured in the study included "dependency, aggression, social interaction, social isolation-withdrawal, play, curiosity-attention, autonomous activities, self-oriented activity (autoeroticism), crying and fear." A methodological flaw, however, weakens these results. Some observations about the children were made when parents and foster grandparents were present, so that the setting during the period of observation was not comparable to the setting of the unvisited group of children, in which visitors were never present. When further analyses were done based only on observations made when no visitors were present in any child's room, 5 of the 12 significant differences in behavior disappeared (written communication from Branstetter received in 1979). Nevertheless, significant intergroup differences remained in respect to seven variables; the most significant differences ($P = \leq 0.001$) were in play behavior, withdrawal, and egocentric speech.

In Branstetter's study, mothers and mother substitutes were with the child most of his or her waking hours. Except in a brief experimental program, however, it would be unrealistic to expect mother substitutes to spend that much time with a child. In the usual Foster Grandparent Program, 2 hours is the upper limit of time that the adult spends with the child. A question that arises therefore is: Will the substitute mother (the foster grandparent) be effective enough in a relatively brief 2-hour-per-day contact with the child to produce results in the child resembling those of a

more constantly present natural parent? Our study addressed this substantive question, as well as some methodological issues. It did not address the issue of the effects of the Foster Grandparent Program on the caregivers—the foster grandparents—and thus, it is not a complete evaluation of such a program.

Methods

The sample. We set out to test the impact of a Foster Grandparent Program on children in an acute care setting by gathering quantifiable data on both an experimental group and two control groups. The 67 children who served as subjects for the study were all patients at the Hospital for Sick Children in Toronto, Ontario. They are described in table 1. Sixty-four of them were 7 months through 4 years and 11 months old, and three were either 5 or 6 years old. Forty-three were hospitalized for 10 to 30 days; 4 for 6 to 9 days; and 20 for more than 30 days. Three groups of children, roughly matched for age and length of stay, constituted the entire study sample. It was not possible to control for diagnosis, but having as a criterion a minimum length of stay of 1 week eliminated children with relatively minor procedures, such as tonsillectomies. From the original 96 children selected for the study, 29 had to be dropped because of early discharge from the hospital, transfer to another hospital, or death. The 67 remaining children were divided into an experimental group with foster grandparents ($N = 26$), an undervisited control group ($N = 21$), and a parent-visited control group ($N = 20$). No information was available to us except age, record of previous hospitalization, and diagnosis. All children under age 5 who were admitted to the hospital during the 4 months of the study and whose diagnosis suggested a stay of at least 1 week and not more than 4 weeks were accepted until we filled each of the three treatment groups. Three older children were taken because younger ones were not available; also, several children were kept in the hospital longer than we had estimated they would

be. Acceptance into the study was controlled so that the three treatment groups would be matched for age, previous hospitalization, and diagnostic category as these related to the projected length of hospitalization.

The experimental group was comprised of children who either were not visited in the hospital or were undervisited by their own families and to whom we assigned a foster grandparent for 2 hours each weekday afternoon for the duration of their hospital stays. We defined undervisited as 5 or fewer hours of visiting per week. The first control group was made up of similarly unvisited or undervisited children, but no foster grandparents were assigned to them. These children received whatever individual social and emotional care and support that the nursing and recreation staff could give. A weakness of our study was that we had no way to document this staff time. Assignment to one or the other of these two groups was random.

The second control group was composed of children who were visited frequently by their parents. "Frequently" was defined as 10 or more hours of visiting per week; in many cases, parents were with their children for 6 or more hours every day, including weekends.

Although children in the three treatment groups were matched by age, length of hospital stay, and previous hospitalization, no effort was made to match them by sex because in previous research no differential responses to hospitalization had been found for boys and girls. A significant intergroup difference in the number of days of observation per child was found. Children in the age group 12–18 months were overrepresented in the group with the greatest number of days of observation, but this difference did not seriously affect the comparability of results, since there were no significant correlations between the number of observation days and any of the behavioral variables.

Instruments and procedures. Two specific assessment difficulties are evident throughout much of the litera-

Table 1. Characteristics of the sample by age group

Characteristic	Age in months				Total ($N = 67$)
	6–11 ($N = 12$)	12–18 ($N = 19$)	19–36 ($N = 23$)	37–52 ($N = 13$)	
Number previously hospitalized	9	10	17	10	46
Mean length of stay in days	31.8	32.5	28.4	37.7	31.6
Median length of stay in days	21	21	21	19	...
Mean numbers of observations per child	40.8	56.8	46.1	43.1	47.6
Number in experimental group (with foster grandparents)	5	7	10	4	26
Number in control group 1 (visited by parents)	2	7	8	3	20
Number in control group 2 (undervisited)	5	5	5	6	21

ture on the effects of hospitalization on children. The first is the lack of agreement on just what aspects of children's inhospitable behavior are most vulnerable to the effects of hospitalization, with the resultant lack of efforts at replication. The second difficulty is the lack of clear dimensions for some of the behaviors investigated and the consequent lack of a definition of what behaviors are maladaptive.

We created a form to assess six behavioral dimensions. At the top of this behavioral observation rating form, there was space to enter the child's name, the date, the observer's name, the ward, and the room number. Under each behavioral dimension except miscellaneous behaviors, three to six mutually exclusive and exhaustive alternatives were established, ranging from the least to the most adaptive behaviors. These six dimensions with their respective alternatives were as follows.

1. Vocalization:
 - Uncontrolled screaming, panic, frozen
 - Hard crying, strong verbal protest
 - Intermittent crying/mild verbal protest
 - Silence
 - Calm noncrying vocalization
2. Motor behavior (if child was asleep, no rating was done):
 - Thrashing about/hyperactive
 - Awake, but still
 - Moving about
3. Play behavior:
 - Not playing
 - Holding a toy but not playing
 - Playing
4. Fear:
 - Fearful/panic response
 - Anxious/apprehensive/irritable
 - Calm
 - Apparently happy
5. Environmental responsiveness:
 - Apparently oblivious to environment
 - Minimally responsive (visually alert but little or no motor response)
 - Responsive (motor as well as visual)
6. Miscellaneous odd behaviors:
 - Thumbsucking
 - Rocking
 - Picking at self
 - Masturbation
 - Other (describe)
 - No odd behaviors

Time samples of 6 successive 20-second periods per observation, with time in between for recording, were used. (The amount of time for recording data was not standardized.) The six dimensions we used are obviously molar, rather than molecular, and a certain amount of inference is necessary in such categories as "calm," "apparently happy," or "apparently oblivious to environment."

Two raters were used. Inter-rater reliability was calculated by having two observers use the form simultaneously for 1,000 trial observations; 84 percent agreement was obtained. In the course of the study, all observations were blind, in that the observers did not know to which group any child belonged.

Our hypotheses were that control group 2 (under-visited children) would least frequently show adaptive behavior; the behavior of the parent-visited children would be the most adaptive; and the behavior of children in the experimental group, those with foster grandparents, would fall in between and be more like that of the parent-visited children than of the unvisited children. Because our total numbers per group were small (table 1), it was not possible to test these hypotheses for specific age groups.

Results

Few instances of extreme behavior were recorded. No screaming was reported, and only three children were ever observed to cry hard. Only one child was observed to thrash about. No child exhibited a panic-stricken response. Only three children ever appeared to be oblivious of their environment (while awake). Exaggerated or autoerotic behavior was so rare that the category "miscellaneous odd behaviors" was dropped from the analysis. On all but one of the remaining five behavioral variables, all three groups were above the middle of the range in the adaptive direction (table 2). Thus, the children in our sample, whether in the experimental or control groups, were not characterized by observable manifestations of disturbed behavior.

Our first hypothesis was tested in a three-way analysis of variance; our second was tested through paired comparison tests. In both cases the support for our predictions was weak. The five behavioral variables are interdependent, and the intervariable correlations were all significant. But for only one of the behavioral domains, were the differences between groups significant; namely, play behavior, on which control group 2 was significantly lower (that is, the children were observed to play less) than the other two groups. In control group 2, the children played only 11 percent of the time they were under observation, compared with 16 percent for the experimental group and 22 percent for

Table 2. Means and standard deviations (SDs) for five behaviorable variables for the three groups of children under observation

<i>Behavioral domain</i>	<i>Whole sample (N = 66)</i>	<i>Control group No. 1 (parent-visited) (N = 20)</i>	<i>Experimental group (foster grand-parents) (N = 26)</i>	<i>Control group No. 2 (undervisited) (N = 21)</i>
Vocal:				
Mean	4.13	4.15	4.14	4.07
SD	.23	.26	.23	.20
Motor:				
Mean	2.64	2.65	2.63	2.65
SD	.18	.23	.14	.18
Play:				
Mean	1.43	¹ 1.54	1.40	1.28
SD	.32	.41	.26	.20
Emotional:				
Mean	3.00	2.98	3.03	2.97
SD	.14	.15	.15	.11
Responsiveness to environment:				
Mean	2.57	2.57	2.58	2.54
SD	.23	.25	.21	.21
Mean across the 5 domains	13.77	13.91	13.78	12.51

¹ $P \leq 0.04$.

control group 1. The mean scores in the five behaviorial domains were, as we hypothesized, lowest for the undervisited group in four of five cases. In three of the four analyses with nonsignificant results, also, the mean score for the experimental group was closer to that of the parent-visited group than to that of the undervisited group. However, a multivariate analysis (with Wilk's criterion test) showed no significant overall effect attributable to membership in a particular group. Thus, our results are inconclusive and cannot be offered as convincing evidence that foster grandparent visitors or parent visitors cause hospitalized children to be more contented or responsive.

We had planned to compare the subsequent adjustment to home of the three groups of hospitalized children, based on Vernon's parent-rating scale of the posthospital emotional readjustment of children (5), but we had to abandon this project because the response rate from parents of children in the unvisited control group was too low. Thus, our observational ratings are the only measure that we have of intergroup differences, and although they do not contradict either of our research hypotheses, neither do they support them.

Discussion

The results of our experiment were disappointing in that the anticipated pattern of intergroup behavioral

differences (in which the children with the foster grandparents would resemble the parent-visited children more than the undervisited children) emerged too weakly to confirm the effectiveness of the foster grandparent intervention. Overall, the expected pattern (in which the mean scores of children with foster grandparents would be between the mean scores of the two control groups) was observed, but the intergroup differences, except in respect to play behavior, were too small to reach statistical significance, and therefore we cannot predict replicable results with confidence.

The clear implication of our results is that if Foster Grandparent Programs are to be judged on the basis of the foster grandchildren's behavior in the absence of their foster grandparents, the programs are a failure. The children are not observably more responsive, happier, or more tranquil for having had such visitors. Nor for that matter are the behaviors of children whose own parents regularly visit them distinguishable in this respect—when the parent is absent—from the behaviors of children with no visitors. How do we reconcile these results with those in the experimental literature cited earlier, which suggest that the negative effects of hospitalization on young children are to a large extent due to their separation from parents?

The answer appears to be that in those few studies in which two or three groups were compared (for example, visited versus unvisited children) and in which significant intergroup differences were found, a variable that was not controlled for was the differing effect that a visitor's presence had on a child's behavior when an observer was present and absent. Besides Branstetter's study, we reviewed three others in which significant differences were found between the most-visited and least-visited children. In Brain and Mackay's study (13), children were observed several times when they were visited by their mothers (who roomed with them) as well as when they were alone. The several observations were aggregated for each child. Mothers who did not room in may have been present during some of the observation periods, but undoubtedly during many fewer periods than the room-in mothers.

Similarly, Prugh and associates (12) observed "the behavior of child and parents on admission and during visiting." The 19 children in the control group were studied under normal conditions for that hospital—very limited visiting hours for parents and little encouragement for parents to participate in the ward care of their children. The matched experimental group of 19 children were studied at a later point, when an experimental program had been effected by the hospital that included an expanded visiting schedule for par-

ents and the integration of one parent's role in the ward care of the child. Observations in this study were aggregated with others made during play programs, traumatic procedures, and so forth. Again, one can assume that the number of observations made in the presence of visiting parents was likely to be significantly higher in the experimental group.

In the third study, Robertson and Robertson reported on foster parents' observations of their children in a nonhospital situation (25). They were always present, of course, at the time of the observation.

Only in our study, and in part in Branstetter's, were visited and undervisited children compared under similar conditions, that is, in the absence of the visitor. Branstetter's results indicate—and the contrast between our results and those in the studies just cited supports the idea—that the presence of a parent or parent surrogate during an observation is a critical intervening variable in the relationship between visits made to young children in the hospital and the behavior of those children in the hospital. Because the rate of return of parent questionnaires by one of the three experimental groups was inadequate, we could not reliably compare the three groups as to their posthospital behavior. Therefore, our study must stop with the observation of children's in-hospital behavior, saying nothing about the long-term effects of hospitalization.

Implications for Foster Grandparent Programs

On the basis of our results, as well as those of Branstetter and others, certain recommendations can be made about programs of the foster grandparent type. Since surrogate-parent visitors (or for that matter, natural parents) appear to have the most significant positive effects on children when they are actually with them and appear to have little mitigating effect on the children's behavior when they are not, two courses of action are indicated.

1. The parent or parent-surrogate should be allowed to spend as much time as possible with the child in order to maximize the period when the child is observably most active and involved.

2. The parent or surrogate should be encouraged to be with the child at the time of the child's maximal anxiety, since the presence of a visitor seems to lessen anxiety. Such times include hospital admission, painful or unpleasant procedures, bedtime, before an operation (during induction of anesthesia), and after an operation (in the recovery room). Yet on many such occasions parents and other visitors are typically barred from being with the children, even though these are the

periods when such visitors are perhaps most necessary and helpful to the child.

Although we cannot argue that the effectiveness of parent surrogates such as foster grandparents extends beyond their usual 2-hour visits, we can suggest with some confidence that when the parent surrogates are present, their effectiveness is similar to that of parents. We believe that even if our study has failed to offer strong support for the efficacy of interventions of the foster grandparent type in acute care settings, it fills a gap in the evaluation literature. Further, we hypothesize that in no evaluation will a 2-hour visiting program be found to significantly affect children's behavior in acute care hospitals until either (a) the program's effects are measured only while the friendly visitor is with the child—and the visitor should be present at moments of the child's highest probable anxiety—or until (b) the evaluation is based on much finer dimensions of behavior than have been typically used in observational studies. However, the finer the dimensions, the more difficult it will be to define and reliably observe them.

We believe our study raises an important question for policy makers. If program evaluation is to go beyond the anecdotal stage—and there is no question that had we depended on anecdotes for evaluation, our report, like so many others, would have been entirely positive—then we must be prepared to change our programs as the results of evaluation dictate. The contrast between our results and Branstetter's indicates that the observable carryover effects of parenting and substitute parenting beyond the hours when the parent or substitute parent is present is very limited. Our results suggest that such adult-child contact either should be constant, or lacking that, should be maintained during the periods and procedures most likely to be traumatic for the child. To the best of our knowledge, no hospital in the United States or Canada, and only one in England, attempts to provide all-day mother substitutes, and 10 years have passed since Branstetter's report. On the other hand, the 2-hour Foster Grandparent Program, though apparently only minimally effective in altering children's behavior in acute care settings throughout their entire waking hours, is widely implemented. Perhaps studies are needed of the effectiveness of these programs as supports during traumatic periods in a child's hospitalization, such as admission, painful procedures, and anesthesia induction and recovery. These are the very times when hospital personnel most commonly separate parents and parent surrogates from children.

Based on our work, the work of Branstetter, and the

many anecdotal reports on Foster Grandparent Programs—and pending further findings from future studies of similar interventions—we hypothesize that if the visiting of foster grandparents were altered to cover particularly traumatic times in children's hospitalization, that is, if it (a) began immediately upon the child's admission to the hospital, (b) was expanded beyond its usual current 2-hour duration, and (c) was activated during all traumatic medical procedures, we might then derive maximum benefits from the program at little additional cost. Parenthetically, the same recommendations appear to apply to the rules governing the visits of parents to their hospitalized children.

References

1. Bowlby, J.: Making and breaking of affectional bonds. Tavistock Publications, London, 1979.
2. Spitz, R. A.: Hospitalism. *Psychoanal Study Child* 1: 53-74 (1945).
3. Edelston, H.: Separation anxiety in young children: study of hospital cases. *Genet Psychol Monogr* 28:3-95 (1943).
4. Schaffer, H. R., and Calender, W. M.: Psychologic effects of hospitalization in infancy. *Pediatrics* 24: 528-539 (1959).
5. Vernon, D. T. A., Schulman, J. L., and Foley, J. M.: Changes in children's behavior after hospitalization. *Am J Dis Children* 111: 581-593 (1966).
6. King, J., and Ziegler, S.: Effects of hospitalization on children's behaviour. *Children's Health Care* 10: 20-28 (1981).
7. Ecterhoff, J. E.: Relationship of anesthesia to postoperative personality changes in children. *Am J Dis Child* 86: 587-591 (1953).
8. James, F. E.: The behaviour reactions of normal children to common operations. *Practitioner (London)* 185: 339-342 (1960).
9. Sides, J. P.: Emotional responses of children to physical illness and hospitalization. Unpublished doctoral dissertation. Auburn University, Auburn, Ga., 1977.
10. Douglass, J. W. B.: Early hospital admissions and later disturbances of behaviour and learning. *Dev Med Child Neurol (London)* 17: 456-480 (1975).
11. Quinton, D., and Rutter, M.: Early hospital admissions and later disturbances of behaviour: an attempted replication of Douglas' finding. *Dev Med Child Neurol (London)* 18: 447-459 (1976).
12. Prugh, D. G., et al: A study of the emotional reactions of children and families to hospitalization and illness. *Am J Orthopsychiatry* 20: 70-106 (1953).
13. Brain, D. J., and Mackay, I.: Controlled study of mothers and children in hospital. *Br Med J* 1: 278-280 (1968).
14. Branstetter, E.: The young child's response to hospitalization: separation anxiety or lack of mothering care? *Am J Public Health* 59: 92-97 (1969).
15. Burling, K. A., and Collipp, P. S.: Emotional responses of hospitalized children. *Clin Pediatr* 8: 641-649 (1969).
16. Clayton, G. W., and Hughes, J. G.: Variations in blood pressure in hospitalized children. *J Pediatr* 40: 462-468 (1952).
17. Cooper, E. S., et al.: Direct observation. *Bull Br Psychol Soc* 27: 3-7 (1974).
18. Agency for Volunteer Service (ACTION): Foster Grandparent Program operations handbook for sponsors. ACTION Publication No. 4405.90. Washington, D.C., 1975.
19. Greenleigh Associates, Inc.: An evaluation of the Foster Grandparent Program. New York, 1966.
20. Agency for Volunteer Service (ACTION): Foster Grandparent Program: project evaluations report. Office of Evaluation. Washington, D.C., 1976.
21. McGregor, M.: Evaluation of the first year of the foster grandparent scheme. Victorian Council on the Ageing, Melbourne, Australia, 1978.
22. Saltz, R.: Evaluation of a foster grandparent research program: funding of the foster grandparent research project. Merrill-Palmer Institute, Detroit, Mich., 1967.
23. Saltz, R.: Foster-grandparents and institutionalized young children: two years of a foster grandparents program. Merrill-Palmer Institute, Detroit, Mich., 1968.
24. Saltz, R.: Evaluation of a foster-grandparent program. *In* Child welfare services: a sourcebook, edited by A. Kadushin. The Macmillan Company, New York, 1970.
25. Robertson, J., and Robertson, J.: Young children in brief separation: a fresh look. *Psychoanal Study Child* 26: 264-315 (1971).

SYNOPSIS

ZIEGLER, SUZANNE (University of Toronto), and KING, JOHANNA: *Evaluating the observable effects of foster grandparents on hospitalized children. Public Health Reports, Vol. 97, November-December 1982, pp. 550-557.*

Because Foster Grandparent Programs have been widely implemented in acute care settings but not systematically evaluated, a study was done of the effects that the visiting of parent surrogates had on young children in acute care settings. Three

groups of children in such settings were compared: those with foster grandparents, those without visitors, and those visited by their parents. Intergroup differences in the children's hospital behavior reached statistical significance in respect to only one of five behavioral domains investigated. The results of the foster grandparent intervention were found to be relatively weak compared with the results reported in earlier studies. However, it was believed that the discrepancy could be accounted

for by the presence or absence of the visitor at the time of observation of the child's behavior.

Implications drawn from the study were that greater benefits might be derived from the Foster Grandparent Program at little additional cost if the foster grandparent began visiting immediately upon the child's admission to the hospital, if this visiting extended beyond the current standard 2-hour period, and if the visitor was present at all traumatic medical procedures.