

*HOME SAFETY: DEVELOPMENT AND VALIDATION OF ONE COMPONENT
OF AN ECOBEHAVIORAL TREATMENT PROGRAM FOR
ABUSED AND NEGLECTED CHILDREN*

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Parents may be charged with child abuse or neglect or both on the basis of a variety of circumstances. Child neglect, for example, is often documented when caseworkers observe that the family's home itself is so poorly kept that it presents an environment in which young children have ready access to lethal hazards such as poisons, uncovered wall outlets, and firearms. In this study, we describe the development of a Home Accident Prevention Inventory (HAPI) which was validated and used to assess hazards in the homes of several families under state protective service for child abuse and neglect. The HAPI included five categories of hazards: fire and electrical, mechanical-suffocation, ingested object suffocation, firearms, and solid/liquid poisons. Following the collection of baseline data, parents were presented with a treatment package that included instructions and demonstrations on making hazards inaccessible to children, plus feedback regarding the number and location of hazards in the home. The multiple-baseline design across hazardous categories in each family's home showed that the package resulted in decreases in the number of these accessible hazards. These improvements were maintained over an extended period of unannounced follow-up checks. This research provides a model for the development and assessment of an area previously unexamined in the child abuse and neglect literature.

DESCRIPTORS: child abuse, child neglect, home safety, ecobehavioral, hazards

Each year thousands of children are injured or killed in home accidents. In fact, 91% of all injuries and more than one-half of the fatalities to children under 5 years of age occur at home (Kravitz, 1973). Legislation requiring the packaging of poisonous products in child-resistant closures appears to have reduced the incidence of accidental poisonings (Walton, 1982). Educational campaigns, such as National Poison Prevention Week and Fire Prevention Week, involve state and local organizations who publicize the importance of poison and fire prevention through a variety of media such as brochures, public addresses on radio and television, and fact sheets that are distributed nationwide. Unfortunately, such educational programs are rarely evaluated to determine the extent to which they produce behavior change.

Research examining the effects of very specific

efforts to reduce hazardous conditions in the homes of young children has included an examination of the effectiveness of "Mr. Yuk" labels as a poison prevention aid for children 2 to 3 years old (Fergusson, Horwood, Beautrais, & Shannon, 1982). Mothers in an experimental group were given a leaflet outlining the "Mr. Yuk" Program and a description of how to introduce it to the child, a list describing poisons on which "Mr. Yuk" labels should be placed, and a sheet of "Mr. Yuk" labels. A control group received no such program. A comparison of poisonings of children in the homes and accessibility of common household toxics revealed no significant differences between the experimental and control groups.

In another study (Dershewitz & Williamson, 1977), an intervention consisting of written information explaining safety hazards, safety-proofing assignments, and follow-up home checks was administered to an experimental group of middle and upper income parents who brought their children to a pediatric clinic. A control group received no intervention. During an unannounced visit, the homes of both groups were later assessed for haz-

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ards. Virtually no differences existed between the experimental and control groups.

A subsequent study (Dershewitz, 1979) involved middle-class mothers who participated in a safety education program and who also received safety devices such as outlet covers and cabinet locks. A control group of mothers received only the devices. Statistically significant increases were noted in the use of outlet covers among both the experimental and control subjects.

The Dershewitz studies (1977, 1979) contained some methodological shortcomings, including the absence of preintervention baseline measurements and failure to obtain (or at least to report) reliability data. Nevertheless, the failure of most participants to use the cabinet locks is discouraging, especially given that the subjects were above average socioeconomically. Thus, it appears that new, perhaps more intensive, methods need to be developed to teach parents to eliminate household hazards, and these methods need to be assessed very carefully.

Accordingly, the purpose of our research was to develop and validate an assessment and behavior change "package" to reduce safety hazards that are common sources of injury or death to young children and which parents could eliminate through simple environmental rearrangements in the home. In addition, this package was designed particularly to reduce hazards in the homes of families with a history of child abuse or neglect, or both.

Unsafe physical environments represent a common descriptor of homes of child abusive and neglectful families (Gelles, 1982). Further, hazardous physical environments increase the risk of child abuse in two ways. First, children who live in these homes have an increased likelihood of receiving permanent handicapping injuries, and there is strong evidence that physically handicapped children are at especially high risk for abuse (Friedrich & Boriskin, 1980). Second, parents may use physically abusive procedures in a sincere attempt to stop a child from encountering a safety hazard such as an exposed electrical outlet. Such a parent is likely to be highly stressed and thus unable to control the child without being physically abusive

(Gelles, 1982; Vasta, 1982). Thus, improving the safety conditions in the homes of child abuse and neglect families is one of several concerns that Lutzker (in press) has suggested must be addressed in treating these problems from an ecobehavioral perspective. Therefore, the development of this package was undertaken in a larger context. Specifically, its development was designed to contribute to one component of a multifaceted, ecobehavioral program (Project 12-Ways) rendering treatment and prevention services to families referred for child abuse or neglect or both (Lutzker, in press; Lutzker, Frame, & Rice, 1982). In most cases, families seen by Project 12-Ways receive several services such as parent training, in-home stress reduction training, marital counseling (Campbell, O'Brien, Bickett, & Lutzker, 1983), personal hygiene training (Rosenfield-Schlichter, Sarber, Bueno, Greene, & Lutzker, 1983), nutritious meal planning and shopping (Sarber, Halasz, Messmer, Bickett, & Lutzker, 1983), activity training (Lutzker, McGimsey, McRae, & Campbell, 1983), money management, and home safety assessment and treatment.

The development of a safety program is particularly important for this population because the poor and unsafe conditions of the homes are often the basis for referring the clients. Although there is no known linear relationship between the number of hazards in a home and the frequency of accidents, casual observations of the homes described here produce a logical conclusion that reducing the number of safety hazards would reduce the likelihood of serious injury to the children who live in them. Also, of primary importance in this research was the development and validation of an assessment package.

METHOD

Participants

Six families living in rural southern Illinois who were receiving services from Project 12-Ways participated. The selection criteria were: the primary counselor identified home safety as one of the fam-

ily's service objectives, at least one child in the home was between 1 day and 4 years old, and a parent consented to participate. Of the 10 families whose consent was solicited, six agreed to participate. These families had all either abused or neglected at least one child in the home. Each home had severe safety hazards. Table 1 provides descriptive information pertaining to all participants.

Settings

All data collection and treatment took place in the individual residences that were located within a 100-mile radius of Carbondale in four counties of rural southern Illinois. Several of the dwellings could be described as substandard. Four homes were rental properties that were dilapidated, poorly insulated, insect-ridden, and commonly exuded a noticeable stench from within.

Assessment System: The Home Accident Prevention Inventory (HAPI)

Development of the HAPI. An inventory, referred to as the Home Accident Prevention Inventory (HAPI), was developed to measure the nature and quantity of hazardous items that were accessible to young children. The HAPI consisted of five broad categories of hazardous items: (a) fire and electrical; (b) suffocation by ingested objects; (c) suffocation by mechanical means; (d) firearms, and (e) poisoning by solids and liquids. These five hazardous categories and their subcategories are presented in Table 2 and represent hazards that are among the principal causes of accidental death in children from birth to 4 years of age, the age group most susceptible to accidents in the home. (Complete definitions included in the HAPI and observer training details can be obtained from the second or third author.)

Hazards included in the HAPI were identified from several sources, primarily the 1980 edition of *Accident Facts* published by the National Safety Council. Home safety checklists available from a variety of organizations were also used. Some of these publications were instrumental in formulating specific criteria for defining an object as hazardous. For example, one of the five major cate-

gories of hazards is "suffocation by ingestion of small objects." A Hazard Analysis Report titled, "Injuries Associated with Small Objects," published by the U.S. Consumer Product Safety Commission (1978) provided detailed measurement rules about the size of objects that would result in the tracheal obstruction of a small child. These measurement rules were incorporated into the HAPI.

The hazardous items included on the HAPI were considered dangerous only if they were accessible to the target children in the particular home. Accordingly, we defined a hazard as inaccessible if it was: (a) locked up using a child-proof or similar locking device, (b) had child-resistant closures (e.g., childproof caps on medicines), or (c) was out of the child's reach from either floor level or a second surface onto which the child might climb.

Content validation of the HAPI. The validity of the HAPI was further established by individuals associated with pediatric departments, safety commissions, and accident prevention research who completed a questionnaire consisting of 19 descriptions of hazardous situations that were compiled from the 26 hazards described in the HAPI. Using a scale ranging from 1 ("no threat") to 5 ("very serious threat"), the five experts were asked to rate the 19 hazardous situations. They were also asked if they thought additional items should be included. The mean ratings reported by the experts are found in Table 3. Virtually all items were considered at least a moderate threat.

Observation. Graduate assistants and counselors employed on Project 12-Ways were used as observers and were trained in several stages with performance criteria in each. These included a discussion of the definitions with the experimenters, satisfactory completion of a quiz pertaining to HAPI, and practice with the HAPI in nontarget homes.

The HAPI was administered on each home visit. Specifically, observers walked through the house and for each major hazardous category, recorded the following information:

1. The location of each accessible hazard.
2. Which and how many *subcategories* of ac-

Table 1
 Socio-Demographic Description of Participating Families

Name of family	Number of parents living in home	Parent that received training	Age of parent	Educational level of parent	Number of children (0-4 years)	Parent employment	Reason for referral	Type of dwelling	Did family move during program?	Other Project 12-ways treatment components
"A"	1	Mother	28	G.E.D.	4	None	Neglect	House	Yes	Basic skills training Parent-child training
"B"	2	Mother	33	Father—M.S. Mother attended some college	2	Father—assistant principal in H.S.	Prevention of abuse/neglect (Self-referral)	House	No	Parent-child training Basic skills training
"C"	1	Mother	25	H.S. grad.	3	None	Abuse	House	Yes	Parent-child training Self-control Health maintenance and nutrition Job placement Money management Assertiveness training Social support Leisure time Multiple setting behavior mgt.
"D"	2	Mother	25	H.S. grad.	3	Food services employee	Abuse	House	Yes	Parent-child training Basic skills training Multiple setting behavior mgt.
"E"	1	Mother	37	Illiterate	1	None	Neglect	House	No	Alcoholism Stress reduction Leisure time
"F"	1	Father	60	11th grade	4	None	Abuse	Mobile home	No	Parent-child training Job placement Assertiveness training

Table 2

Outline of Hazardous Subcategories Included in the Home Accident Prevention Inventory

I. Fire and electrical
A. Matches and cigarette lighters
B. Missing screen or guard in front of fireplace
C. Plate missing on electrical switches
D. Plate missing on electrical outlets
E. Backplate missing on television set
F. Electrical cords with exposed wires
II. Suffocation by ingested object
A. Small objects on floors and accessible furniture (scored only in homes with children who crawled).
III. Suffocation by mechanical objects
A. Cords within reach of crib/playpen
B. Plastic bags or thin plastic materials
IV. Firearms
A. Guns
V. Solid and liquid poisons
A. Pills
B. Tubes of medicine
C. Medicinal inhalers
D. Liquid medicine
E. Jars of medicine
F. Beauty items
G. Detergents/cleaners
H. Deodorizers/toilet additives
I. Polish/waxes
J. Paints
K. Solvents/thinners
L. Glues
M. Poisonous household plants
N. Fertilizer for plants
O. Petroleum products
P. Insecticides

Table 3

Mean Rating for Items Included in Content Validation Questionnaire Rank Ordered From Most Threatening (5) to Least Threatening (1)

Hazard	Mean rating
1. Accessible firearms in home	4.6
2. Accessible solvents and thinners	4.6
3. Accessible matches and lighters	4.0
4. Absence of fireplace guard or screen	4.0
5. Cover plates missing on electrical outlets/switches	4.0
6. Presence of cracked/frayed cords	4.0
7. Accessible medicines	4.0
8. Accessible paints, stains, preservatives, etc.	4.0
9. Absence of backplate on television set	3.8
10. Accessible poisonous household plants	3.8
11. Accessible insecticides, insect repellents, etc.	3.8
12. Accessible fertilizers and plant food	3.6
13. Accessible soaps, household detergents, etc.	3.4
14. Accessible thin plastic materials found in home	3.2
15. Accessible glues, adhesives, etc.	3.2
16. Presence of small, swallowable objects on floor/furniture	3.0
17. Accessible beauty products	3.0
18. Presence of cords within reach of baby's crib	2.8
19. Accessible petroleum or flammable products	2.8

cessible hazards were present. For example, if in the category of fire and electrical hazards there were 10 packs of accessible matches, these still only represented *one* hazardous *subcategory* (see Table 1).

3. The *absolute number* of accessible hazards. Thus, if 10 packs of matches and four exposed outlets were accessible, this constituted 14 hazards in the fire and electrical category, although these 14 hazards represented only two subcategories.

Reliability. Reliability of assessment was conducted at each family's home during each condition. On these occasions the reliability and primary observers went through the home independently and used the HAPI to record the hazards.

Materials

During treatment phases, various safety accessories were provided to families if these accessories were necessary to reduce hazardous situations. These accessories included electrical outlet/switch plates, electrical tape, and locks for childproofing cabinets (e.g., Kindergards). Table 4 lists the safety accessories that were given to each family.

Experimental Procedures

Orientation and baseline. During the initial visit, parents were provided with an explanation of the HAPI. They were told that through their

Table 4
Safety Accessories Given to Families

Family	Type of accessory	Quantity
"A"	Outlet plate	1
	Plastic coated combination chain lock	1
"B"	Childproof lock	1
"C"	Electrical tape	1 roll
"D"	Shelf	1
	Cabinet lock	1
	Plastic coated combination chain lock	1
"E"	None	—
"F"	Childproof lock	4

participation they would learn to "childproof" their homes and that the counselors would need to make several visits before the program was completed. Parents were asked to provide written permission for the counselors to look for hazards throughout the home; however, they had the prerogative to identify particular locations as "off limits." In addition, they were told that they would initially be asked to perform tasks that required little time and effort; however, as the program progressed the counselor might ask them to make changes in the home that required more time.

After permission was obtained, the HAPI was administered. Each parent was then told that feedback regarding this assessment would be provided on the next home visit after the results of the HAPI had been reviewed. Thus, prior to the next visit these baseline data were examined by the counselor to determine which of the five categories would be targeted first and to determine if any safety accessories were needed.

Implementation of the education-feedback package. During the second home check the HAPI was readministered, and the education-feedback package was implemented. Specifically, parents were told of three ways to make household hazards inaccessible: (a) by using child-resistant closures, (b) locking up items, or (c) keeping items out of children's reach. Each of these methods was de-

scribed for the parents who were given an opportunity to ask questions and restate these methods to the counselor. If the parents could not restate the safety precautions, verbal prompts were given until they answered correctly. For example, if a parent could not recall child-resistant closures the counselor said, "You will find these on some containers of medicine."

During this home check parents were told about specific hazards in the first targeted category. The category that was first selected was the one with the least number of hazardous items recorded during baseline. The rationale for this was to promote the chances of parents achieving early success. The counselor gave the parent verbal feedback regarding the absolute number of items in the targeted category that were found during the present visit. For example, the counselor would say to the parent, "There are nine unsafe fire and electrical hazards in your home. These dangerous situations should be corrected. Let's discuss how we can do this." The counselor then located one target item and demonstrated how it could be made inaccessible from the child by one of three methods. When there were no "out of reach" locations in the home, the counselor provided the parent with a childproof lock so that the item could be stored in a cabinet. The counselor then asked, "Do you know where any similar items may be found in your home?" If the parents knew of similar items they were asked to practice making one inaccessible. If the parents could not locate an item, the counselor located one and asked the parent to make it inaccessible to the children. Performance feedback was given to the parents. In the event that safety devices were needed, parents were given the device and were asked to show the counselor where and how to install it. If the parents could not properly do this, the counselor explained the process until the parent could properly demonstrate installation.

At the end of the session, the counselor gave the parent a written list of hazardous items in the targeted category and their locations in the home. For example, the list may have read, "matches in drawer in parent's bedroom; outlet plate missing in living room." Parents were asked to correct all

hazards included on the list by the next visit, scheduled approximately 1 week later, using the methods modeled by the counselor. Additionally, they were asked to make inaccessible any additional target items in that category. That is, parents were asked to maintain safety changes in the home by placing target items back in appropriate places after use, and by checking for other possible safety hazards on a regular basis.

No instructions were given to parents about nontargeted hazardous categories; therefore, any generalization to nontargeted hazards would be evident when the HAPI was administered during the following home visit. The parents were told that the education-feedback package would begin on subsequent visits for other categories when the first targeted category of hazards had been corrected. The criterion for treating the next category was a 50% reduction in the number of hazardous items (not subcategories) in the preceding category. If the 50% reduction criterion was not met in the target category, modeling and practice procedures were repeated. Furthermore, if on any home check the number of hazardous items exceeded the original 50% criterion in any previously targeted categories, the parents were given feedback about these hazardous items and were asked to correct the situation; however, in these instances they were not prevented from progressing to new categories of hazards.

On subsequent visits the counselor praised the parent for meeting the 50% reduction criterion in each and every previously targeted category. Nevertheless, even after this criterion was met, the counselor continued to provide corrective feedback about the number and location of hazards in previously targeted categories. The parents could either correct the situation while the counselor was in the home, or the hazard was added to the list of items to be corrected by the next scheduled home check. Finally, on subsequent visits the counselor had parents restate the methods that could be used to make items inaccessible and asked them to give a brief description of the previously targeted categories by naming examples of hazards in the category (i.e., subcategories).

Follow-up visits. Follow-up visits began after the 50% reduction criterion had been met for all categories. Parents were aware that follow-up visits would be made but not when they would be scheduled. This was acceptable to the parents, because Project 12-Ways counselors often made home visits to carry out treatment plans. Follow-up home checks were conducted approximately 2 to 3 weeks apart.

During follow-up checks, the HAPI was administered, and the parents were asked to restate the methods of making hazards inaccessible and to describe the previously targeted categories. If hazardous items were found in the home, the counselor provided feedback. Parents were then asked to locate and eliminate these items while the counselor was in the home. Prompts were provided if the parent had difficulty correcting a situation. The parent received verbal praise for a low number of hazards and for correcting previously identified hazards. Follow-up home checks continued until all services provided by Project 12-Ways were discontinued.

Design

Within each family, a multiple-baseline across hazardous categories was used to evaluate the effects of the intervention.

Consumer Evaluation

When the program was completed, participants were given a questionnaire designed to assess the usefulness of the safety program. Eleven questions required the parent to rate their satisfaction with the program and its utility.

RESULTS

Figures 1–6 illustrate the effects of the education-feedback package on the accessibility of hazardous categories present in the families' homes. These figures present both the absolute number of accessible items and accessible sub-categories. Finally, the number of hazardous items recorded in each category is shown for both the primary and reliability observers.

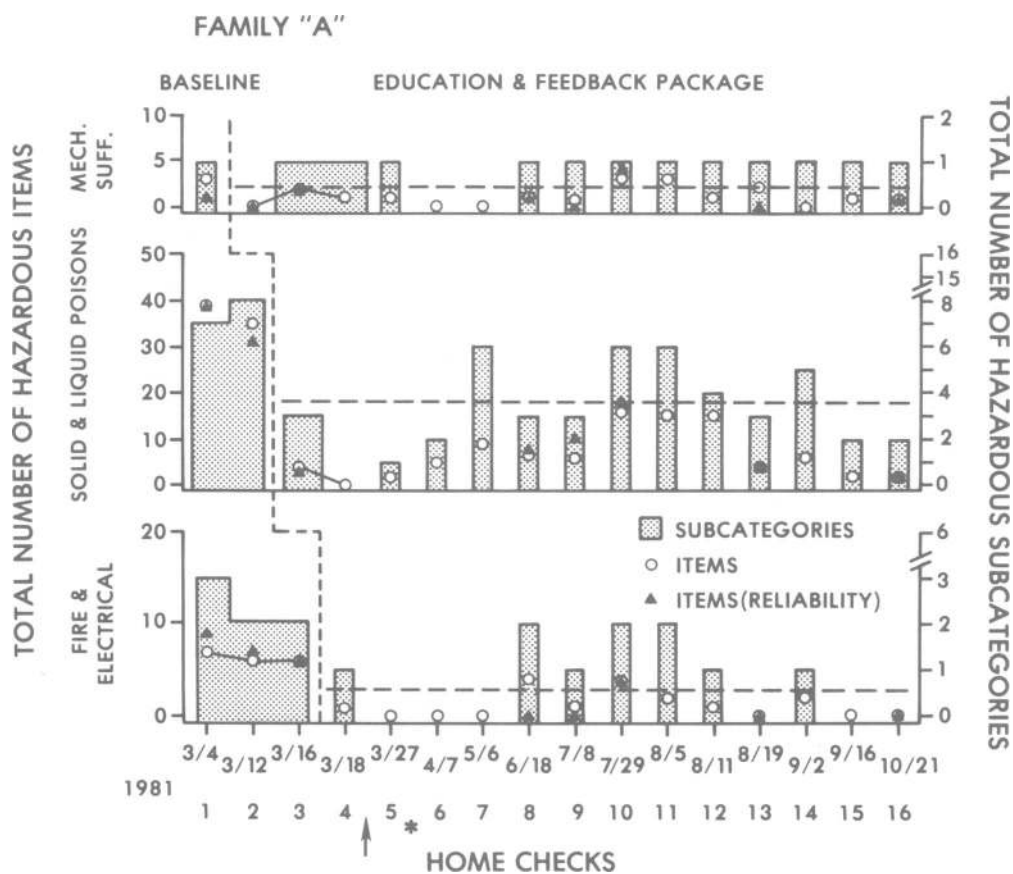


Figure 1. Family "A." Number of hazardous items (open circles—values read on the left y-axis) and subcategories (shaded bars—values read on the right y-axis) found in each category on each check of Family A's household. Reliability on the number of items scored can be visually assessed by comparing the primary observer's record (circles) to reliability observer's record (triangles). The arrow indicates the onset of unannounced follow-up checks and the asterisk indicates the family's move to a new residence. The reduction criterion of 50% is represented by a horizontal broken line placed in a specific home check column.

Data from the Family "A" home are presented in Figure 1. The absolute number of hazardous items found in each category diminished as the education-feedback package was applied successively. The education-feedback package was first applied to mechanical suffocation. The mean number of items found in this category during baseline was low (4); nevertheless, during the conditions of education-feedback and unannounced follow-up checks (which occurred as late as 7.5 months after initial intervention) the 50% reduction criterion of two or fewer hazards in this category was met on 10 out of 12 of the checks.

Similarly, the mean number of items found in the solid and liquid poisons category initially was 37 during baseline but dropped to 2 and 7.3, respectively, during intervention and follow-up. In fact, on 100% of the follow-up checks the 50% reduction criterion was met.

The education-feedback package was next applied to fire and electrical hazards. The mean numbers of items found during baseline, education-feedback package, and follow-up were 6.3, 1.0, and 1.6, respectively. On 10 out of 12 follow-up checks the 50% reduction criterion was met.

Figure 2 presents the application of the educa-

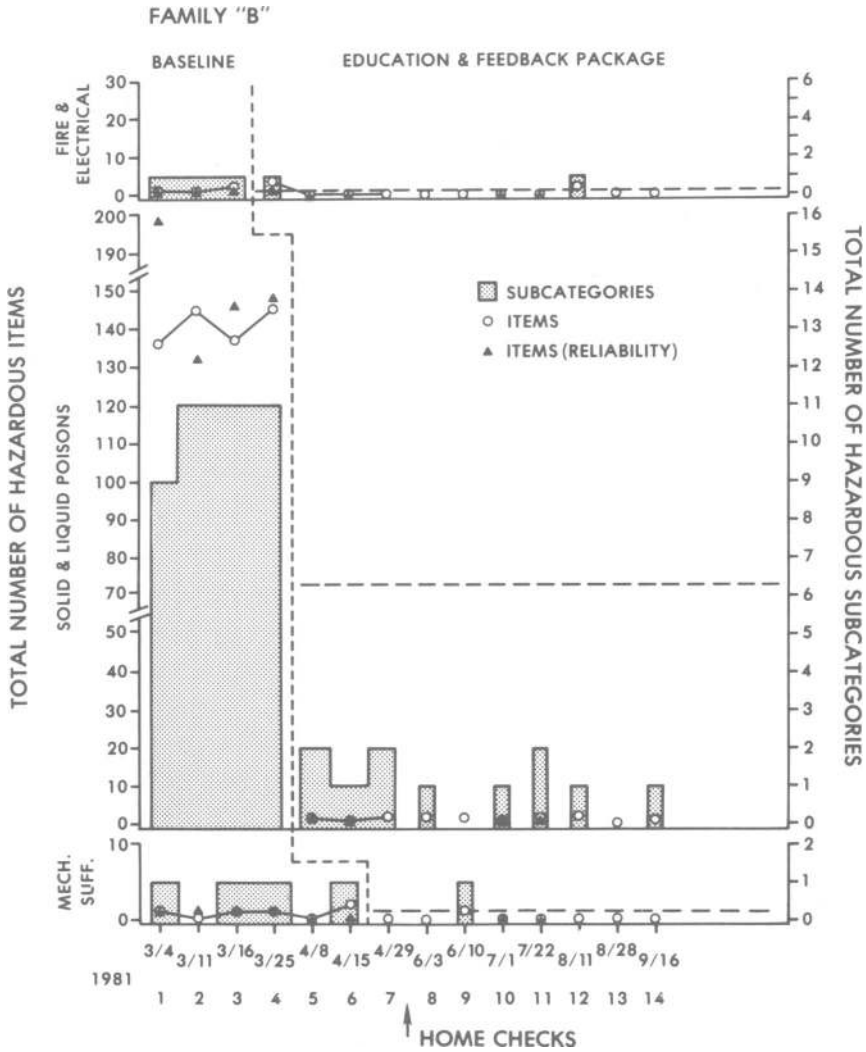


Figure 2. Family "B." Data are plotted in the same manner as for Family "A."

tion-feedback package sequentially across three hazardous categories in the home of Family "B." The reduction of hazardous items across the categories remained consistently low after the application of education-feedback package.

Figure 3 presents the application of the education-feedback package sequentially across four hazardous categories in the home of Family "C." Again, the most obvious reductions occurred among hazardous items in the solid and liquid poisons category, but the reduction criteria for the categories of mechanical suffocation and ingested ob-

ject suffocation are worth noting. These criteria were set at zero because there was only one hazardous item on the visit previous to the application of the education-feedback package.

Figure 4 presents the application of the education-feedback package sequentially across three hazardous categories in the home of Family "D." In the initial residence of this family there were very few cabinets and inaccessible locations for safe storage of hazardous items. Therefore, on home check 5 when the education-feedback package was applied, the family was provided with a 1 m ×

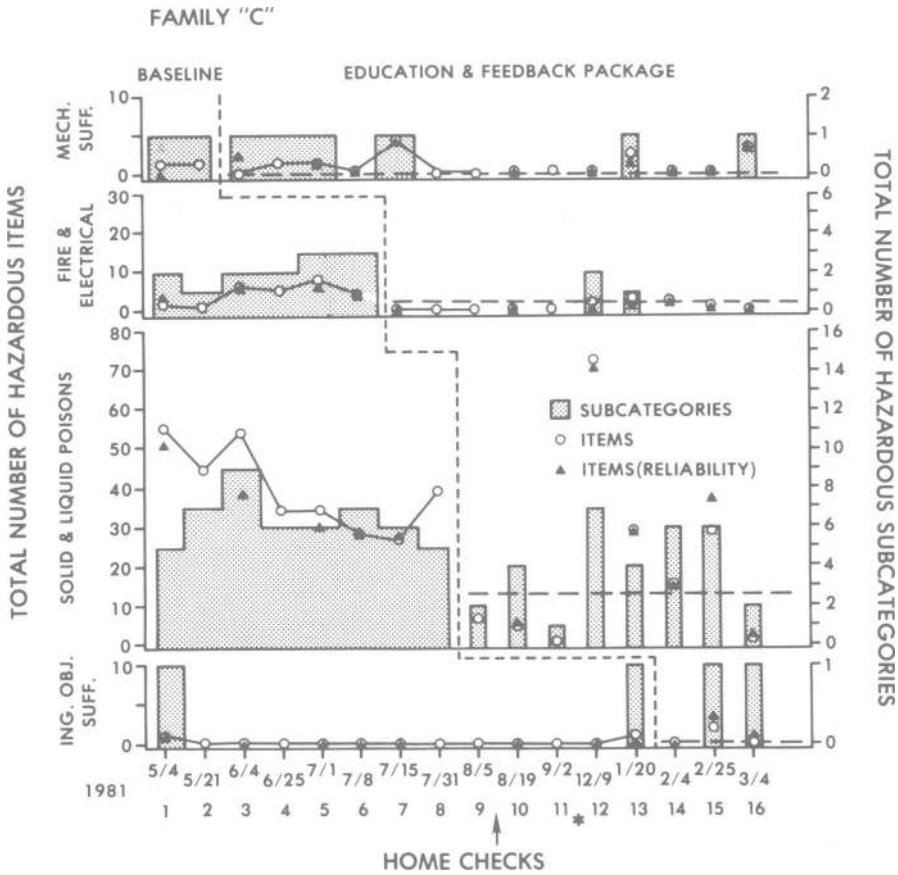


Figure 3. Family "C." Data are plotted in the same manner as for Family "A."

1.2 m wooden shelf to install in the home which provided a safe storage area for hazardous items. In addition, the family was given a plastic-coated combination chain lock because the available cabinets in the home were made of metal, and thus installation of a child-proof safety latch would be difficult. Criterion reductions occurred for nearly all of the unannounced visits. Two notable exceptions occurred on unannounced follow-up visits 13 and 15. At this time, however, the family had just moved to a new residence and many hazards were stored in boxes accessible to the children.

Figure 5 shows the results of treatment sequentially across four hazardous categories in the home of Family "E." The increase in fire and electrical items subsequent to treatment was due to matches that were left in an accessible location. Although

considerable progress was noted, during a follow-up check the parent stated she no longer wished to participate in the program and no longer "wanted people looking all over her house." Thus, the program was discontinued. Further, shortly thereafter all services offered by Project 12-Ways were terminated at the request of the client.

Figure 6 shows the effects of treatment sequentially across three hazardous categories in the home of Family "F." The reduction of hazardous items across the two categories labeled fire and electrical hazards and mechanical suffocation remained consistently low and met the 50% reduction criterion.

In the solid and liquid poisons category, the number of hazardous items on home check 5 actually increased after application of the education-feedback package. During that check the HAPI

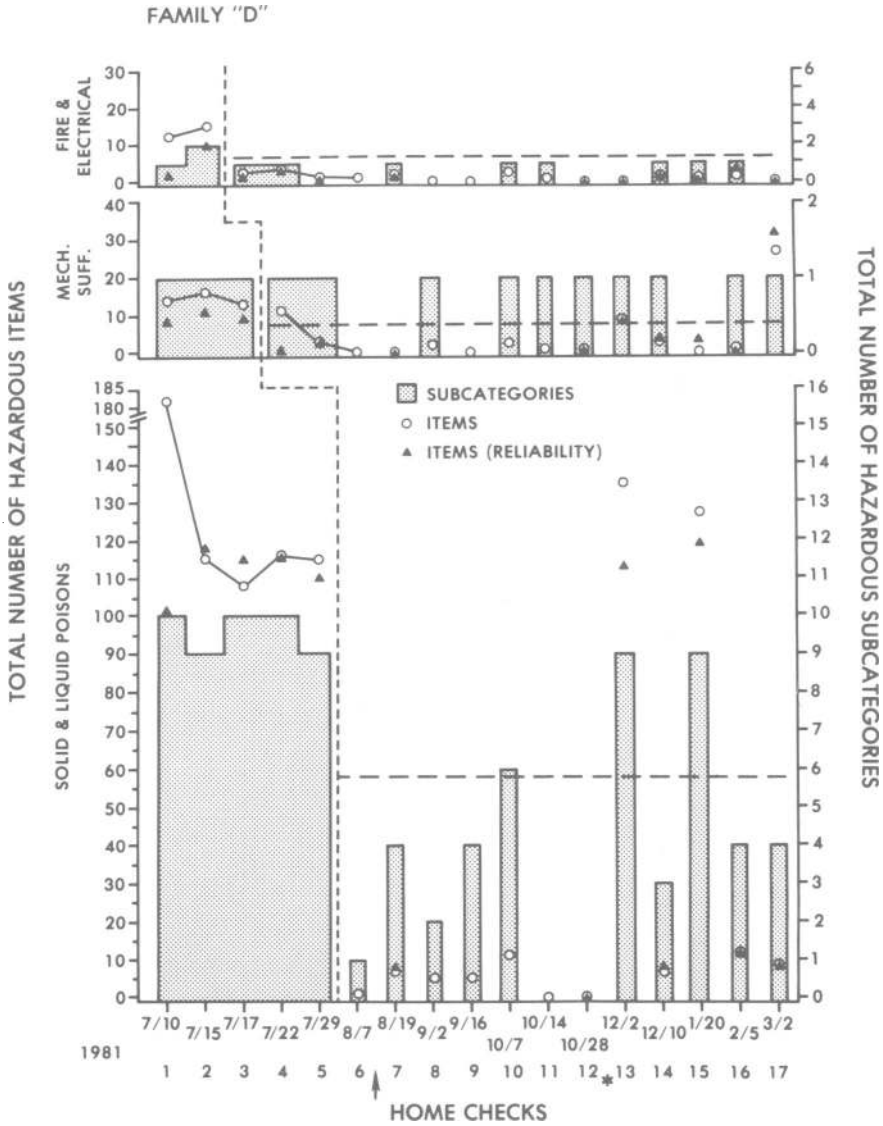


Figure 4. Family "D." Data are plotted in the same manner as for Family "A."

revealed that the parent had installed two childproof safety locks; however, the two locks did not reduce the number of hazardous items to meet the 50% reduction criterion. On home check 6, the counselors found that the parent had installed two more childproof safety locks. This resulted in a reduction of 40 hazardous items, but still did not result in meeting the 50% reduction criterion. On home check 7, the number of hazardous items was reduced and the 50% reduction criterion was met

due to installation of additional childproof safety locks. Home checks were discontinued after home check 11 because the youngest child had become 5 years of age.

The consistent reduction in the number of accessible hazards in all homes as a function of the education-feedback package is apparent from inspection of either the primary or reliability observers' data. However, in some homes there were occasional increases in the number of hazards

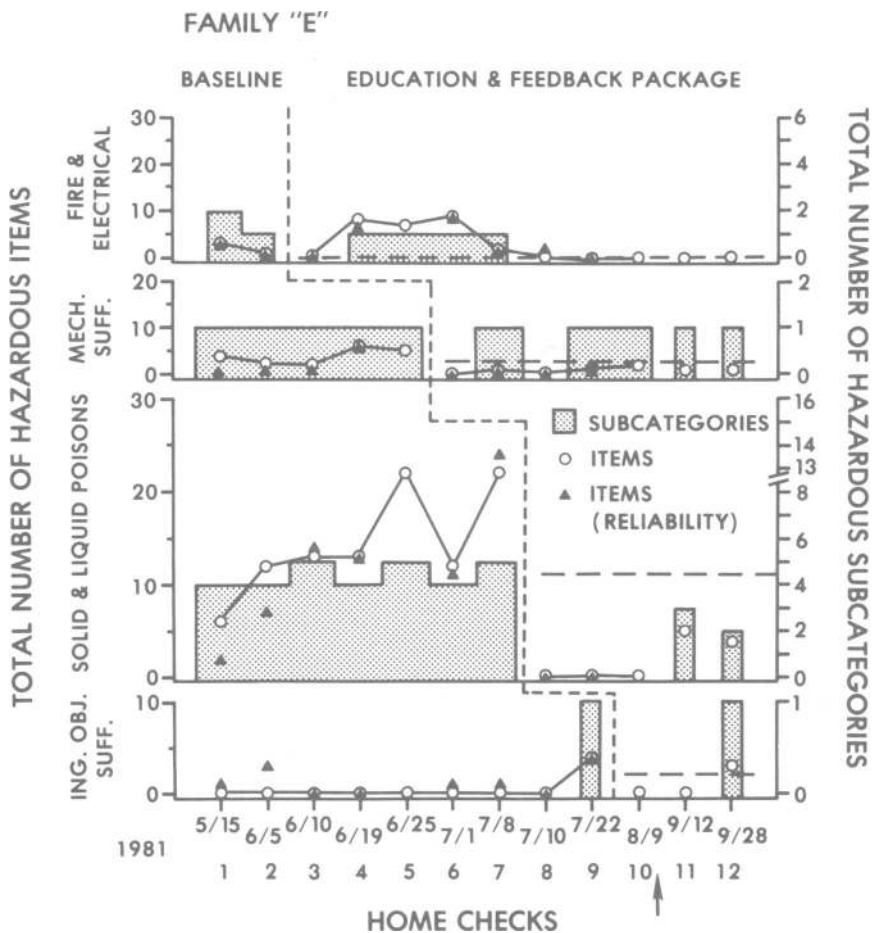


Figure 5. Family "E." Data are plotted in the same manner as for Family "A."

accessible to children. In two instances (Families "C" and "D"), these increases were due to moving to a new home and not yet storing products. Other increases in the number of accessible items occurred when Families "A" and "D" installed washing machines that children could climb on below shelves that had been inaccessible. This may indicate a lack of generalization in recognizing how this rearrangement made certain hazards newly accessible.

The responses of the parents to the program evaluation questionnaire were generally positive as indicated by Table 5. That is, not only did the parents favorably receive the treatment procedures, but they acknowledged that the safety conditions in the home had improved.

Follow-up data from the State Central Register regarding reported incidents of abuse or neglect showed only one instance of neglect in a 2-year period by the mother in Family "E." No home accidents were reported or known pre- or posttreatment in any of these families.

DISCUSSION

The number of hazards that were accessible to very young abused or neglected children generally diminished as the education-feedback package was implemented with their parents. Generalization to new categories virtually never occurred.

These changes were produced by what might be described as a highly structured, if not intrusive,

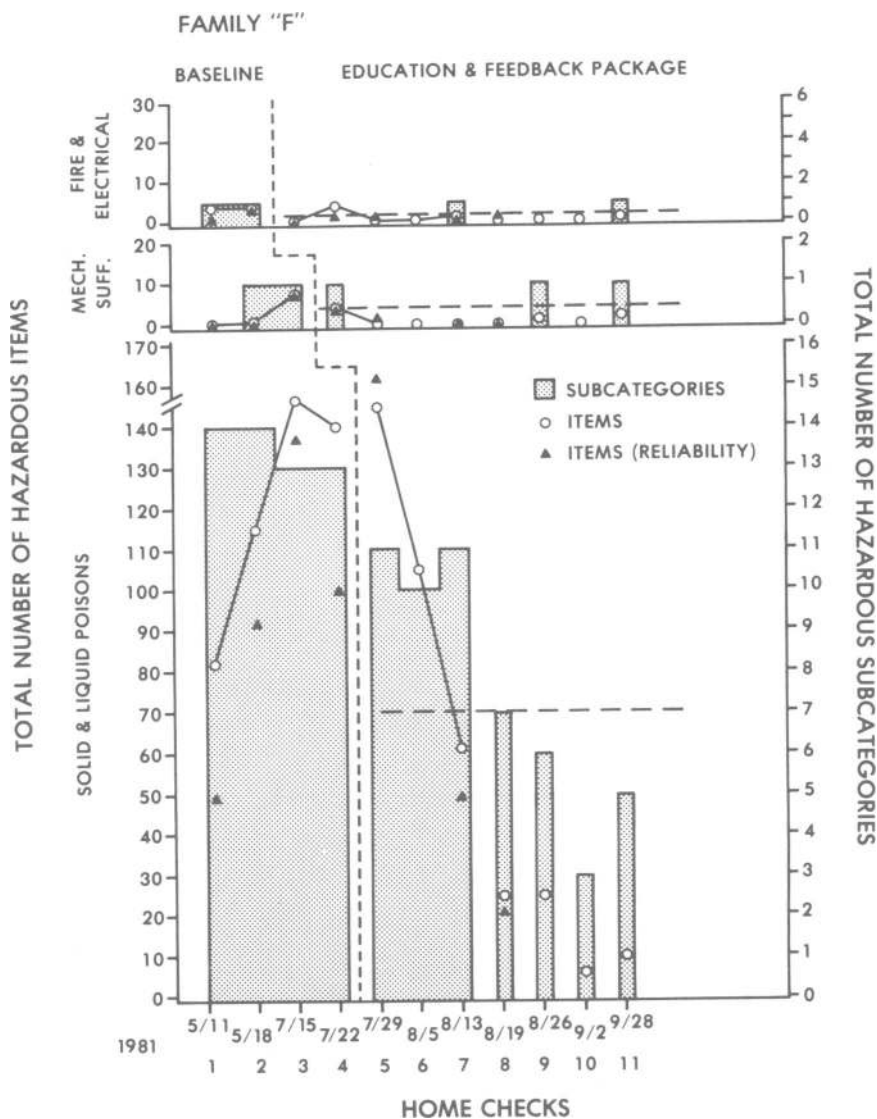


Figure 6. Family "F." Data are plotted in the same manner as for Family "A."

intervention. However, several points are pertinent to this issue. First, this research evolved from the findings of Dershewitz and his colleagues (1977, 1979) which indicated that parents, even those from higher socioeconomic levels than those in our study, did not make even a limited set of changes that would have made their homes safe for children. Therefore, the merits of this study are based on the demonstration that a program can be provided which has effects on parents removing or relocating household hazards.

A second point that must be considered pertains to the context in which this program was developed. Specifically, the home accident prevention program represented only one service of a larger program (Project 12-Ways) which also provided many other services such as marital counseling, child management, job placement, stress reduction, and so on (Lutzker, in press). In this respect the entire project could be considered "invasive." However, it would indeed be naive to assume that the conditions associated with child abuse and ne-

Table 5
Percent Distribution of Parent's Response to Program Evaluation Questionnaire

Since I have completed HAPI my home is:				
Much Safer 6/6	Safe	No Different	Less Safe	Much Less Safe
Starting HAPI in other homes where small children live would be a:				
Very Good Idea 4/6	Good Idea 1/6	Neither Good Nor Bad Idea 1/6	Bad Idea	Very Bad Idea
When the counselors checked my home I felt:				
Very Com- fortable	Comfortable 3/6	Neither Com- fortable Nor Uncomfortable 3/6	Uncomfortable	Very Uncom- fortable
How many things that you learned while participating in the program do you think you will remember?				
All 2/6	Most 4/6	Some	A Few	None
How much time did it take to make your home safe for your children?				
Very Little Time 2/6	A Little Time 3/6	A Lot of Time 1/6	Too Much Time	
From now on I plan to follow the recommendations of HAPI:				
Always 3/6	Most of the Time 3/6	Some Times	Seldom	Never
The safety devices that I was given, such as locks for my cabinets, were:				
Very Useful 3/6	Useful 3/6	Neither Useful Nor Useless	Useless	Very Useless
How much effort does it take to make your home safe for your children?				
Very Little Effort 3/6	A Little Effort 1/6	A Lot of Effort 2/6	Too Much Effort	
Do you think that additional hazards should be included in HAPI?				
	Yes 3/6		No 2/6	
Do you think that some hazards should not be included in HAPI?				
	Yes		No 6/6	

glect could be corrected in the absence of a highly structured program. All of the families who participated in this research were receiving other services from Project 12-Ways. Further, because many neglect charges are brought against these families as a result of the conspicuous safety hazards that catch the attention of the protective service caseworker, reducing these hazards helps absolve these

families from their protective service status when such reductions are combined with other improvements in their family life and environment (Lynch & Roberts, 1982). How the home safety program affected other Project 12-Ways services is unclear, except that the safety program added structure to other less structured services. This may have lent credibility to these other efforts.

Third, in response to the consumer evaluation, most families indicated that they were generally tolerant if not comfortable with the intrusiveness of the procedures. This is probably attributed to the care which the experimenters took in procuring parental permission and having parents identify any locations in the home that were off limits.

Finally, this study represents an initial step in a continuing research effort to develop less structured programs to produce the same improvements. In addition to making the program less structured, it is clear that procedures will need to be introduced to promote generalization because it was evident that some families were slow to store hazards properly when they moved to new homes or rearranged their present homes.

The development of the HAPI is a particularly useful outcome of this research. Other checklists and assessment protocols are typically restricted to assessing only one category of hazards (e.g., poisons). The more comprehensive HAPI may therefore be instrumental to the prevention of a wider range of accidents. The HAPI can be used by professionals such as caseworkers or Red Cross personnel.

The hazardous conditions in the home are often one of the many problems cited by protective service agencies concerned with child neglect (Lutzker, in press). We expect that this study can serve as a model for the development and validation of the other service components of Project 12-Ways that have been designed to effect behavioral solutions to this tragic and multifaceted social problem. Whereas hazards were not entirely removed and generalization over time and across settings was somewhat disappointing in some of the families, the contribution of this effort is the demonstration of a reliable and valid home safety assessment tool and the demonstration that changes can be made with a particularly recalcitrant problem of child abuse and neglect families, namely, home safety.

Finally, one might question how novel the treatment procedures were. That is, given the plentiful demonstrations in the literature that modeling, role playing, and feedback produce behavior change,

was it surprising that these procedures used in such an invasive manner in these families' homes should produce change? Remembering that these families were generally quite dysfunctional and possessing multiple problems, our answer to this question is "yes." Even though their homes might be considered safety "nightmares," change only occurred each time the intensive training was applied to each major category. Little, if any, generalization across responses occurred. Thus, it took these "well-worn" behavioral techniques to produce change. Again, however, perhaps the most significant contribution of this research is the demonstration that empirical procedures can be used to assess and treat components of the deviant family systems (Lutzker, 1980) and social networks (Wahler & Graves, 1983) operating in families involved with child abuse and neglect and that this particular component, home safety, has never received such careful methodological attention. Future efforts should concentrate on more "streamlined" treatment techniques that would produce even more dramatic results. Longitudinal data from a large population should be gathered to determine whether the home accident prevention program affected the incidence of household accidents involving these young children.

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