

EVALUATION OF A PARENT-TRAINING MANUAL FOR REDUCING CHILDREN'S FEAR OF THE DARK

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We evaluated the effectiveness of a manual to teach parents how to help their children overcome fear of the dark. The primary components of the package included desensitization, reinforcement, and verbal self-control statements. Six fearful children ages 3-11 and their parents participated. A multiple-baseline design across three pairs of matched subjects was used. Outcome measures consisted of the level of nighttime illumination voluntarily set by the child on a rheostat installed in the bedroom and the child's subjective rating of his or her fear level during the night. The data indicated that all children were sleeping all night with the rheostat set at criterion level or lower within 2 weeks after initiation of treatment, without any report of fear. Follow-up measures at 3, 6, and 12 months showed that all children maintained or improved on the reduced fear behaviors achieved during the treatment.

DESCRIPTORS: children, parent training, self-control

Self-help manuals designed to teach parents effective ways to deal with common child management problems are currently popular. Although many of these manuals lack empirical support (Glasgow & Rosen, 1978), others have undergone systematic evaluation and have been very effective, (e.g., McMahon & Forehand, 1978). Therefore, self-help therapies show promise and have clear advantages, especially in terms of cost-effectiveness (McMahon & Forehand, 1980).

Fear of the dark is a common childhood problem (Marks, 1969). Five studies in the behavioral literature have dealt with this problem (Graziano & Mooney, 1980; Graziano, Mooney, Huber, & Ignasiak, 1979; Kanfer, Karoly, & Newman, 1975; Kelley, 1976; Leitenberg & Callahan, 1973). Because these studies showed generally positive outcomes, we consolidated the findings of previous investigations and tested the effectiveness of a written self-help treatment package to be used by parents in the home to reduce children's fear of the dark. The primary components of the package included desensitization, reinforcement, and verbal self-control coping skills.

METHOD

Participants

Eleven parents responded to fliers and personal contacts concerning the study. Criteria for inclusion were parental reports that: (a) their child was afraid of the dark, including descriptions of specific fearful behaviors (e.g., the child leaves the room at night complaining of being frightened or insists that a light be left on at night in the bedroom); (b) the child could not stay alone in a dark room for even 1 minute; and (c) the onset of the problem occurred more than 1 year prior to initiation of the study. Six of the 11 met the above criteria for inclusion.

Participants were four males and two females, ages 3-11, and their parents. Diversity of symptoms included tantrums, intricate rituals or "exorcisms," insisting that bright lights and radios be left on in their rooms, wanting someone with them in bed who would stay awake while the child was sleeping, and inability to go on camping trips or to spend the night with friends and relatives. Parents' ages ranged from 24 to 34 years. Five mothers and one father implemented the program. One parent had not completed high school, whereas others had at least some college level training. There was no fee for services.

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Apparatus

The manual. All parents were provided with a 53-page parent-training manual (described in the *Procedures* section). The four sections of the manual were designed to teach parents fear-reducing skills in an easy-to-read, straightforward, and entertaining manner.

Rheostat. An Ohmite Model VT 1 variable auto transformer was placed within reach of each child's bed. The rheostat controlled the illumination of a 40-watt bulb in a lamp (without a shade) near the child's bed. The rheostat was calibrated from 1 (total darkness) to 11 (full room illumination).

Measures

Bedtime illumination level. The rheostat level set by the child each evening before going to bed (and any subsequent changes in setting during the night) was the major dependent variable in this study. The criterion for success was that the child be able to stay in the room all night with the rheostat set at level 4 or below. The criterion level was equivalent to a very dim night light, and enabled the child to see well enough to find a light switch if he or she awakened during the night.

The experimenter visited every home once during each phase of the study to assess the reliability to the parent's recording. In each case, the experimenter observed the child's rheostat setting at bedtime. In all cases, both the parent and the experimenter independently recorded the same rheostat level set by the child.

Illumination level for the "game." Rheostat settings were also recorded while the child played a fear-reducing game each evening. Reliability of this measure was assessed in a manner similar to that described for bedtime. In all cases the experimenter and parent recorded the same rheostat level.

Fear level. Each morning the child was asked to report the level of fear that was experienced during the night using a fear thermometer (Kelley, 1976). This measure was an attempt to assess the child's subjective fear level. The thermometer depicted five levels of fear represented by drawings

of children's faces, accompanied by the statements: "extremely scared," "very scared," "a little scared," "not very scared," or "not scared a bit." Every morning the parent recorded the child's reported fear level.

Design

We used a multiple-baseline design, with replication across three pairs of matched subjects.

Procedures

Baseline. Following an initial interview, all parents were given Part I of the manual, which instructed parents how to carry out the baseline procedures. Each night the parent asked the child to set the rheostat at the level where there was only enough light so that he or she could stay in the room all night without being afraid (adapted from Kanfer et al., 1975). Parents recorded and graphed the rheostat level at bedtime, and checked the room again during the night or in the morning while the child was still asleep to see if the level had been changed. If the rheostat level had been changed, the parent recorded this new level as well.

Fear reduction program. After a stable baseline was established, one member from the matched pair received Parts II and III of the manual and began treatment procedures of positive reinforcement, desensitization, and verbal control. Part II contained the rationale of the treatment procedures. The actual treatment procedures were described in detail in Part III of the manual. The fear-reducing program included three basic parts: a fear-reducing game, a bedtime measure, and a morning measure.

Each evening, well before bedtime, the parent and the child practiced relaxing and repeating positive self-statements aloud, such as "I am brave and I can take care of myself when I'm alone or when I'm in the dark." When the child went to bed, the parent and child carried out a procedure similar to baseline. However, in addition, the child was rewarded in the morning for staying the *whole* night in a progressively more dimly lit room. The general rule was that the child was to dim the light

one-half number lower or more from the previous night's setting to receive the reward. The final goal of the game was for the child to stay alone in the bedroom for 5 minutes, with the light at criterion level or lower.

Each morning, the data were recorded and graphed so the child could see his or her progress. The child was rewarded with verbal praise, physical contact (such as hugging), and toys, treats, or tokens for staying in the bedroom at progressively lower illumination levels and longer time periods.

In addition to providing or withholding rewards, each morning the parent asked the child to report the level of fear that was experienced during the night using the fear thermometer.

After the participants had reached or exceeded the minimum criterion level, they received the final section of the manual (Part IV), which explained fading of reinforcement procedures. Methods were also described on how to deal with the recurrence of the fear.

Throughout the study, the experimenter kept in contact with all participants via phone calls and a minimal number of home visits for data collection purposes. On completion of the program, parents filled out a questionnaire in which we attempted to assess the degree of success and satisfaction with the program.

RESULTS

Figure 1 shows the data collected by parents for each matched pair of children. The baseline data for MF, SD, JK, and BL were relatively stable. Baselines for FS and DG were somewhat variable. DG actually set the rheostat level at or below criterion level during baseline; however, the nightly rheostat settings did not stabilize until the treatment phase. It is important to note that during baseline the father reported he had praised DG for dimming the light. He also reported that when his son set the rheostat dial on a relatively bright setting he would say, "Are you sure that you want that much light on?"

The data plotted for the fear-reducing game

represent the average rheostat setting each evening the game was played, and do not reflect increases in length of time the child remained in the room. In most cases, the data reflect a steady decline in illumination levels.

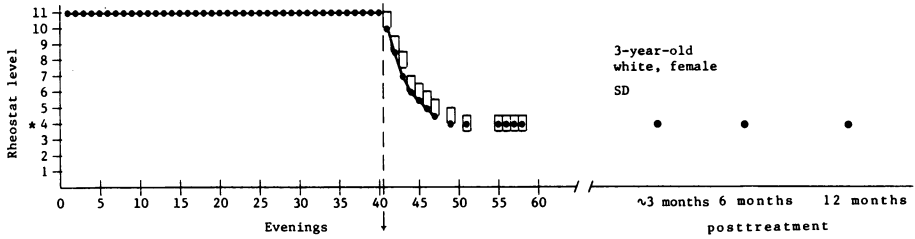
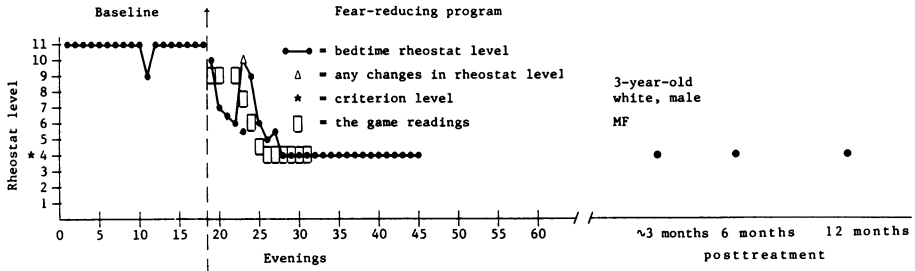
The data for the treatment phase show a generally steady decrease in light intensity following exposure to parts II and III of the manual. JK's data are an exception. After treatment had been explained, JK replied that he did not want to participate in the treatment, that he did not like the rheostat setup, and that if he had to participate in the treatment he would not sleep with the light on at all (which is apparently what he did). The data indicate that all children were sleeping all night with the light at criterion level or lower by the end of treatment, and that this behavior was maintained or improved at 3, 6, and 12 months post-treatment.

Fear thermometer data indicated that children reported little or no fear each day of baseline and treatment. No new problem behaviors or fears were reported to have resulted from the treatment in any of the cases. All parents expressed enthusiasm concerning the program, both in an anonymous posttreatment consumer satisfaction survey, and through personal communication.

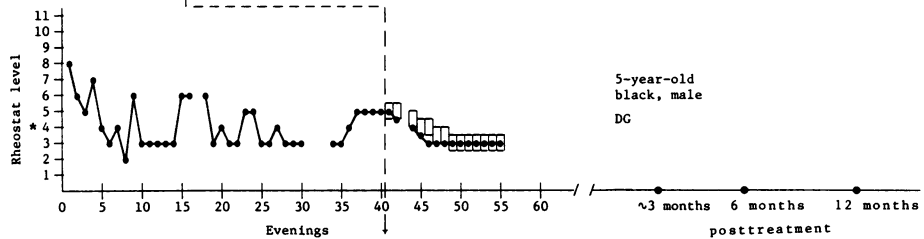
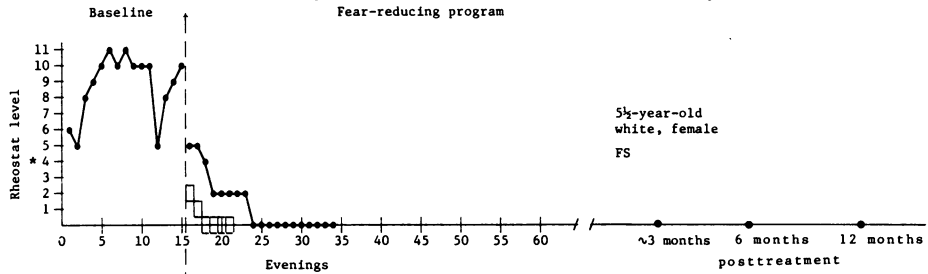
DISCUSSION

The results suggest that some children's moderate to severe fear of the dark may be reduced or eliminated via their parents' implementation of procedures described in a written manual. These parents were apparently able to implement simple data collection, reinforcement, and desensitization procedures, and to teach their children to use coping self-statements. The intervention appeared to be cost-effective in that treatment took only a few minutes each evening, and all children reached the criterion level within 2 weeks. These gains were maintained for a least 1 year. In addition, the written manual cost less than \$2.00 to reproduce. The main expense was for the rheostat, which cost \$12.50. Another advantage was that therapist

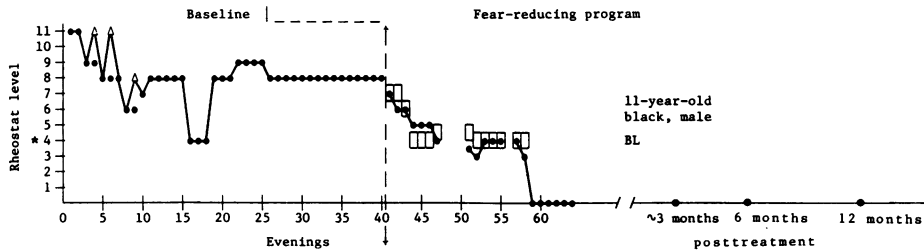
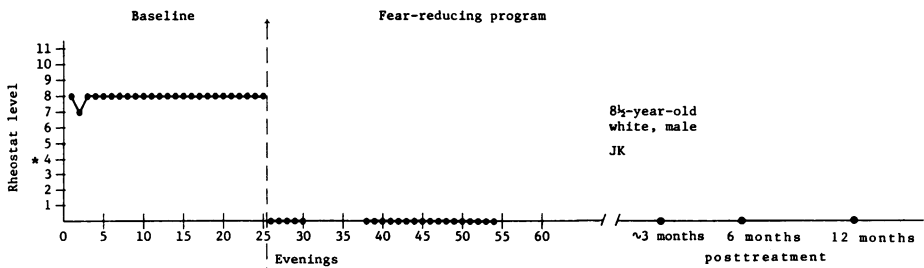
Pair 1



Pair 2



Pair 3



contact time was minimal. Graziano and Mooney's (1980) treatment appeared to be more expensive, including three training sessions spread out over a 3-week period, and a minimum of four staff. Overall, the intervention via the written manual appears promising for at least some families.

Several factors necessitate that the findings be considered preliminary. The representativeness of this small sample is unknown. Although the experimenter provided no direct training to the parents, frequent contact occurred. Therefore, the effect of the manual alone cannot be determined. Neither the crucial components of the manual nor whether or not other demand characteristics were responsible for behavior changes can be determined from the study. The fact that DG and JK altered their behavior with so little intervention suggests that some children may need only simple prompts and encouragement to achieve reduced illumination levels. This is consistent with Kelley's (1976) findings that verbal instruction or demand alone may decrease fear behavior. The difficulty in explaining JK's rapid behavior change suggests that the variables that produced these changes in fear behavior are unclear. Finally, the relationship between the rheostat measure of "fear" used in this study and actual physiological states is unknown. The children may have learned to alter their overt behavior as a result of the contingencies without changes in their actual physiological responding.

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