*ASSESSMENT AND TREATMENT OF CLINICAL
FEARS IN MENTALLY RETARDED CHILDREN*

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Three moderately mentally retarded females ranging from 8 to 10 years of age were treated for long-standing fears. These children had refused to talk with or be in the same general vicinity of adults other than their parents, a few close family members, and to a lesser degree, their teacher. To establish an accurate criterion for successful performance on dependent measures, participants were matched on age, sex, and level of mental retardation with children having "normal" amounts of fear. Dependent measures included approaching and talking to strange adults as well as child ratings of overall fear. Participant modeling was given by the mother who provided a sufficient amount of physical and verbal prompts to ensure that an acceptable greeting of adults specified by the mother were made. These prompts were gradually faded out as treatment progressed. Treatment, which was given in a multiple baseline format across subjects, proved effective and gains in the reduction of fears were maintained at the six month follow-up.

DESCRIPTORS: mentally retarded children, phobic behavior, generalization, social validity

Typical reports are that 9 out of 10 children show fear of something (MacFarlane, Allen, & Honzik, 1954) and that the number of fears per child generally averages 2.7 to 4.6 (Hagman, 1932; Jersild & Holmes, 1935). Some degree of fear is, of course, adaptive, but it is estimated that 8% of children show unreasonable maladaptive fear responses (Crewe, 1973; Miller, Barrett, & Hampe, 1974). Operationally, these maladaptive behaviors may be defined as persisting over an extended period of time and as eliciting fear that is unreasonable, given the potential for physical harm that is presented. Treating these problem behaviors is important, not only from the standpoint that they are presently debilitating to the child, but these unreasonable fears are often strong indicators of continued problems throughout the adulthood years as well (Marks & Gelder, 1966).

Among the feared stimuli that are most persistent in children are animals, interpersonal interactions, and inanimate objects or events such as the dark (Bandura & Menlove, 1968; Miller, Barrett, Hampe, & Noble, 1972; Scherer & Nakamura, 1968). Studies of these problem behaviors have been conducted with children with normal intelligence (see Ollendick, 1979). However, it seems reasonable that cognitively impaired children also evince behavior problems of this type. It has been noted by Zigler (1966) and Bijou (1966), for example, that avoidance and the fear that frequently precipitates it can and frequently does interfere with the mentally retarded person's ability to adapt adequately in their natural environment.

Another problem is that presence of mental retardation in itself often results in stress beyond that observed in families with normal children (Group for the Advancement of Psychiatry, 1963). Mentally retarded children are more vulnerable to these stresses than normal children or adults which can produce overt psychiatric manifestations in mentally retarded children (Phillips & Williams, 1975). These data are further borne

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out by Rutter's (1971) findings that a quarter of the mentally retarded children show significant psychiatric disorders, a rate over three times that of children with normal cognitive capacities.

A number of behavioral procedures has proven effective for treating this problem behavior which has generally been conceded to be a learned response (Rachman, 1968). Among these is systematic desensitization (Barabasz, 1975; Mann & Rosenthal, 1969), reinforced practice (Leitenberg, 1976), and modeling approaches (Lewis, 1974; Ritter, 1968). However, despite the prevalence and severity of fears in children, which often prove to be debilitating, there have been few empirical studies with children on this important problem (Berecz, 1968). Those studies that have been conducted have tended to show a number of shortcomings with respect to a plethora of important variables. Ollendick (1979) in his recent review of childhood fears and phobias had aptly pointed out that among these are lack of sufficient follow-up, and treatment of behaviors that are not clinically relevant because they are not intense, long-standing, or deemed clinically relevant. Additionally, it was pointed out that treatment was generally of extremely short duration (e.g., four or five sessions), and the children treated were not from a psychiatric population. A further point that has not been mentioned in the literature is that none of these studies has been conducted with children who are mentally retarded.

The purpose of the present study was to extend the existing knowledge about the treatment of childhood fears in several important ways. These included treating moderately mentally retarded children with this problem and conducting the initial experiment in which participant modeling was used for the treatment of clinically relevant fears in childhood. Behaviors selected for treatment were pertinent because they were debilitating to the children and had resulted in referral to a mental health clinic. An additional extension is that the current study is the first to attempt to conduct a social validation study comparing fearful children to children judged to be

functioning normally on these same behaviors and who were matched to the participants on the variables of age, race, and sex. Such matching is critical if researchers are to establish accurately what are appropriate goals for improvement in clinical problems of the mentally retarded. Finally, the mother served as the primary therapist with each child, something infrequently attempted in the treatment of childhood fears.

METHOD

Participants

Three white females in the moderate range of mental retardation according to American Association on Mental Deficiency criteria participated in the study (Grossman, 1977). These children, who lived at home with their parents, were 8, 8, and 10 years of age, respectively. All three had been referred to a community mental health center for debilitating fears defined as behavior occurring for 6 mo or more which limited the ability to function normally at home and at school. Considerable "general fear" was also evident based on parent reports using the Louisville Fear Survey Schedule (Miller et al., 1972).

These children were not perceived as particularly troublesome for their teachers (TMR class) in that they were doing well in academic subjects compared to their classmates and they did not act out in class. However, these children were not popular (based on sociometric rating), had few friends, and frequently complained of being fearful of strangers and acquaintances.

The children, identified by their parents as excessively fearful, were in three separate school district special education classes ($N = 6$ to 12). To further establish the children's fearful behavior before beginning the study, they were taken by the teacher to a room in the school where a male experimenter was waiting. The teacher then said, "Please go introduce yourself to the nice man." Behavior of the children was scored by two independent raters who were situated behind a one-way mirror. Scoring was based on how closely the child approached the male

stranger (measured in feet). Each child was then shown pieces of paper, numbered 1 to 7, which represented degrees of fear (i.e., 1 = none to 7 = great). Each child was asked to rate how "afraid" this encounter had made them. To facilitate the accuracy of their ratings, bar graphs of varying heights were placed above the numbers to depict visually the amounts of fear (see detailed description in target behavior and assessment section).

Social Validity Measure

In previous studies of fearful children, no criteria had been established to determine if treatment effects were sufficient to demonstrate that they were clinically significant. To establish a criterion for success, the teacher and teacher's aides were asked to rank order the same sex peers as the participant from their class in order of socially appropriate fear level. This behavior was rated based on the degree of fear displayed toward significant adult strangers in the child's life who were identified as "safe." Safe was defined as persons who would not harm the child. The ratings from both the teacher and the aide were summed. The child with the lowest total score was determined to be the most normal on fear of strangers. The child chosen from the class of each particular participant, who was also the same age as the participant, was the only person matched with his or her classmate on clinical performance. The child thus identified was then run through the same assessment given to the participants for the study. Their scores were then used as a "clinical" criterion for successful treatment.

Setting for Further Assessment and the Treatment

The study was conducted at a mental health clinic in a 5m × 6.5m (15' × 21') room with a one-way mirror and adjacent observation room. The floor was covered with 1-ft. square tile, an important feature because the tiles were used in the assessment of approach in distance from the feared object. Probe sessions were also conducted in the children's homes.

Target Behavior and Assessment

Fear of adult strangers was defined as refusing to approach or speak to grown-ups other than immediate family members or, to a lesser degree, their teacher. This behavior was a major problem, primarily around the parents' social lives because it severely hampered the families' ability to engage in social activities with friends. The children refused to stay with babysitters or to engage in social outings their parents undertook with friends. In all cases, the parents were the referral sources. Parents indicated that the reasons they felt their children needed to overcome this problem was because of extreme negative emotional reactions when friends came to their homes or they attempted to go out. Parents indicated that this problem placed severe restrictions on their social lives.

After the initial selection of these children for treatment, they were assessed at each clinic visit. These sessions were held twice weekly (Monday and Thursday) and the children's fears were assessed on three dependent measures: approaching a strange adult, speaking with a strange adult, and a self-report of fear.

Approaching a strange adult was measured in the therapy room. Four strangers were involved in the assessment, with one approach trial run with each. During the training, the strange adults were persons different from those employed during assessment sessions. Assessment sessions followed treatment during that phase.

The mother accompanied the child into the therapy room following the treatment session and at the beginning of the baseline and follow-up trials. In all cases the mother and child went to a private waiting room (hereafter referred to as the lounge) until the experimental room could be readied for the assessment. The mother was instructed prior to the beginning of the assessment phase to ask her child to approach a stranger who was present in the room and to greet the person. Mother did not move from her spot 6 ft. from the stranger and did not provide any further instructions or encouragement.

Speaking to an adult was measured as the total number of words exchanged with the adult stranger. The adults ($N = 4$) were confederates of the experimenter and had been instructed to provide up to two responses to the child if they were greeted. For example, if the child said "Hello," the adult would say "Hello. I'm fine. How are you?" After delivering statements in response to two different statements from the child the confederate would then say "It was nice talking with you, will you please go back to your mother now?"

When the child returned to her parent, the mother would say, "Okay. Let's go back to the lounge." The mother and child then went to this room alone. It was adjacent to the experimental rooms which had the numerals 1 to 7 on one wall. Above the numerals were amounts analogous to the numerals represented in a bar graph form, made from rectangular pieces of yellow construction paper. Height (in inches) of each bar corresponded to the numeral below it. Thus, the height of the rectangles of construction paper for a "3" was $\frac{3}{4}$ the size of the rectangle of construction paper above the "7." The mother pointed to the wall on which the construction paper was placed and asked the child to point to the one which represented how fearful she had just been when asked to speak to the stranger. In addition, the mother would point to each of the seven points and say "None?" "A little?" "Some?" etc. After going over each of the seven points, the child was then asked to get up and point to the amount of fear experienced as represented by one of the points.

After this procedure was completed (an average of 5 min) the child and mother went back to the therapy room and began an assessment trial with another adult stranger. This procedure was repeated until all four adults had had contact with the child. Two of the adults were male and two were female to control for sex differences. Furthermore, several adults were used to ensure against the possibility that the child might habituate to one particular individual and to enhance the strength of the assessment methods by evalu-

ating the child's response to several rather than one strange adult.

Procedure

A multiple baseline across children was used (Hersen & Barlow, 1976). Dependent measures were interrelated thus obviating the applicability of a multiple baseline across behaviors.

Baseline. During this phase, the mother met with the experimenter in a separate room and went over the procedure for the assessment sessions. While this was being done the child waited with another family member with whom she was comfortable. Following the meeting with the experimenter, the mother and child began the assessment. Meetings with the experimenter lasted an average of 20 min.

Treatment. Treatment sessions were conducted in the same room as the assessments. The mother was equipped with a bug in the ear device and took instructions from the experimenter who observed the mother and child through the one-way mirror. The procedure used was participant modeling—a method which, based on the limited experimental data available, is the most effective procedure for eliminating fears of children (Ross, Ross, & Evans, 1971).

For the first training session, the mother took the child into the therapy room for two purposes: to allow the child to acclimate to the room and to describe and practice walking through the procedure (e.g., child approaching a strange adult to greet him or her at the mother's request). Particular emphasis was placed on making the greeting at the parent's request because the experimenter and parent agreed that only adults with whom the parent was familiar should be greeted. The mother explained that a strange adult was going to be brought into the room but that this was a nice person who was not going to harm them. Also the mother indicated that she would be with the child at all times. Next, the mother gave some examples of words she would like her child to say to the adult. Then she would say, "Okay. Now, let's practice what we are going to do."

The mother would then accompany the child to the designated spot where the strange adult would be standing for each trial. If necessary, the mother provided a prompt to the child as to what to say. In addition, the mother would also tell the child again what a proper greeting was and would then ask the child to repeat it. The mother then took the child back to the starting point and repeated the procedure until the child executed the required greeting on three successive trials. For all training sessions throughout the study, a tangible reward was provided by the mother each time the child completed a trial by making a correct greeting response. This criterion was used for the second phase of training which occurred on the second session, three days later, and which involved having a strange adult present in the room.

In the period between these two sessions, the mother was to practice with the child twice a day on making a greeting with the father or another family member who served as the "strange adult." Practice continued until the criterion of three successive correct responses was reached.

During the beginning of the second session at the clinic, the mother went through the practice of the greeting response one time without the stranger present. The mother and child then went to the lounge and the child was asked how fearful she had been, using the chart on the wall, as previously described. The mother and child remained in the lounge until signaled by the experimenter to return to the therapy room. While in the lounge, the mother indicated to the child that a stranger would be present, and they practiced what would be the greeting response.

For the first trial, the mother walked up to the stranger while holding the child's hand. If necessary, prompts to speak and/or what to say were used. After a successful response, the mother and child went to the lounge and the child received a tangible reinforcement (the mother praised her child when the appropriate greeting response was delivered). The same procedure was then repeated with the second strange adult. No session was terminated unless some

approximation of a successful response, as good or better than what had been made at previous trials, was completed. For example, although rare, the mother had to speak the words for the child in one instance and then have the child nod in agreement. It was stressed to the mother that allowing the child to avoid any semblance of an appropriate greeting could have considerable detrimental effects on the success of the training.

As the session progressed, the mother faded her verbal prompts, physical proximity, and contact with the child gradually. This goal was accomplished by standing next to the child but not holding her hand. Next the mother stood one foot behind the child, and so on as the procedure continued, until the mother could give the prompt from 6 ft. away from the strange adult.

Probe sessions. To assess the generalization of treatment effects further, participants were assessed periodically throughout the study on their willingness to interact with the friends of their parents. This measure of generalization was considered particularly pertinent because interactions with these persons was the primary reason for the referral in each of the three cases presented. Assessments were conducted in a fashion identical to that described in the experimental room except that the assessments were conducted in the child's home.

Another change in the procedures was that the father acted as the reliability assessor. He was trained by one of the persons (a bachelor's level psychologist) who collected reliability data at the clinic. As a further protection against possibly biased or otherwise unreliable reporting of these interactions at the parents' home, the reliability assessor who served as trainer of the father was also present at the home for 50% of these probe sessions as an independent rater of the dependent measures.

RESULTS

Reliability of the father's ratings based on agreement between the two raters was high and

is reported in Table 1. The only additional variation in the sessions at home compared to those at the clinic was that the child's room served as the lounge where fear ratings were made.

Two raters independently rated each of the dependent variables for 50% of the sessions randomly dispersed across conditions. At least one rater was present for all the training sessions. These ratings were made from the observation room equipped with a one-way mirror. Agreement was based on how the child responded to each of the four adult strangers and her self-report of fear made at the end of the assessment period. Reliability was computed by dividing the number of observed agreements by agreements plus disagreements multiplied by 100 for each session. The mean reliability for each dependent measure for each child is represented in Table 1.

Figure 1 shows that with the introduction of treatment all the dependent variables changed in the desired direction. Furthermore, these changes were maintained over 6 mo, as evinced by the follow-up data. Changes in the desired directions were rapid and put the children in the normal range based on the responses of their matched "normal" child. The performance of this latter group, who showed no excessive fear, is represented by the dotted lines that are present on each of the graphs.

DISCUSSION

Several important questions related to fears of mentally retarded children were answered in

the present study. Among them was the demonstration that clinically significant fear in mentally retarded children referred to a mental health clinic for treatment could be effectively modified. Also, it was found that a parent of the afflicted child could serve as the therapist. Furthermore, this is one of the few studies with children in which the behaviors treated were not analogue in nature and effects were evaluated over extended treatment and follow-up periods (Ollendick, 1979). It was also demonstrated in this study that modification of excessive fear could be made in a clinically significant fashion because a social validation criterion based on like peers without excessive fear was established.

Anecdotal information obtained during this experiment is also worth noting. For instance, the children were readily able to understand directions provided by their mothers. This finding is certainly important when treating any childhood problem. The mothers reported that they were readily able to grasp the reason for the type of training used and they reported that they were pleased with it. Mothers also recommended this treatment to other parents of children who have excessive fear. Furthermore, despite the fact that the children showed considerable discomfort at the beginning of the treatment, by the conclusion they expressed satisfaction with the program and indicated that they were happy that they could now talk with their parents' friends and go more places with their parents. The emphasis on consumer satisfaction is increasing in applied research. Therefore, the views of patients and

Table 1
Percent Agreement Between Raters for Each Child on Dependent Measures

	<i>Distance in Feet</i>		<i>Number of Words Spoken</i>		<i>Fear Rating</i>	
	<i>Mean</i>	<i>Range</i>	<i>Mean</i>	<i>Range</i>	<i>Mean</i>	<i>Range</i>
AT THE CLINIC						
Child 1	97%	83-100%	98%	90-100%	100%	100%
Child 2	92%	67-100%	95%	80-100%	100%	100%
Child 3	96%	83-100%	94%	90-100%	100%	100%
AT HOME						
Child 1	97%	83-100%	93%	87-100%	100%	100%
Child 2	93%	83-100%	98%	83-100%	100%	100%
Child 3	96%	83-100%	96%	80-100%	100%	100%

Fig. 1. Levels of fear during baseline treatment and follow-up sessions. The open circles represent a measure of generalization at the children's homes. Dependent measures are represented for all three children in a multiple baseline design. The dotted horizontal lines represent scores of nonfearful children.

parents on treatment effectiveness and the desirability of the program should be strongly considered in selecting treatment paradigms.

The positive effects obtained in the present study demonstrate the potential for the behavior treatment of maladaptive fears in mentally retarded children. Perhaps findings such as those presented here will result in further study of treatments for excessive fear and other forms of psychopathology displayed by this handicapped population.

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