BEHAVIORAL TRAINING FOR MOTHERS OF MENTALLY HANDICAPPED CHILDREN: TEACHING OF SELF-HELP SKILLS

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ABSTRACT

Deficits in self help skills are an inevitable problem with the mentally handicapped. The acquisition of self-help skills, learned effortlessly by more intelligent children, is a crucial aspect of the overall development of the mentally handicapped child. In the present study, thirty seven mothers of mentally handicapped children aged between 3½ and 8 years, with an IQ of less than 70, were trained in behavioral techniques such as shaping, task analysis, prompting, and modelling, to develop independent self-help functioning in their children. The self-help areas were toileting, feeding, bathing, washing, and dressing. Thirty two per cent of mothers reported complete skill learning. The problems encountered in the course of training and the subsequent evaluation of its efficacy are discussed.

Key words: *Self help skills, Behavioral methods.*

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Skill deficiency is an inevitable and widespread problem in the mentally handicapped population(1). Although learned effortlessly by other, more intelligent children, the acquisition of self-help skills is a crucial aspect of the overall development of mentally handicapped children. Recognition of this fact has led to considerable efforts to search for and develop methods for teaching independent self-help functioning. The first reports of the application of behavior modification procedures to train self-help skills, in the 1960's, are a milestone(2). Now the efficacy of parents as teachers of their own mentally handicapped children is a well documented fact(3).

In India such studies are scarce in spite of the fact that skill deficits is one of the most common presenting complaints given by parents seeking help for their mentally handicapped children. As such there is a need to explore the possibility of behavioral training being used effectively in both urban and rural settings in this country.

The aim of the present study is to equip mothers of mentally handicapped children with the behavioral training necessary to enable them to train self-help skills such as feeding skills, bathing, dressing and toileting, their own children. The problems encountered in the course of training and evaluation of effectiveness are also the focus of this study.

Material and Methods

A. *Sample*

Thirty-seven mothers of children aged between 3½ and 8 years with an IQ of below 70, were taken up for training in this study. These mothers were seeking help for their children at the Child Guidance Clinic,

Department of Psychiatry, All India Institute of Medical Sciences, New Delhi. The socio-demographic characteristics of the mothers are shown in *Table I*. The characteristics of the children are shown in *Table II*.

B. *Psychological Tests*

1. Standardized psychological tests were used to measure the intelligence level of each child. The tests were selected according to the suitability for each individual child, Vineland Social Maturity Scale was used for all the children, for children aged below 6 years Three Form Board, Seguin Form Board, and Gessel's Drawing tests were administered. Children above 6 years were assessed on Malin's Intelligence Scale for Indian Children (Verbal).

TABLE I–*Sociodemorgraphic Characteristics of the Mother*

Age (years)	20-29	30-39	40-49	Mean	(SD)
No.	13	19	5	31.91	(5.1)
%	35.1	51.4	13.5		

Education	Illiterate	I-V	VI-X	Graduate	P. Graduate
No.	1	6	11	11	4
%	2.7	16.2	29.7	29.7	10.8

Occupation	Housewife	Teaching	Clerical	Executive
No.	29	3	3	2
%	78.4	8.1	8.1	5.4

Socio-economic class	Upper	Middle	Low
No.	10	23	4
%	27.0	62.2	10.8

2. Special charts were prepared and used for recording observations of target skills.

3. A proforma to note various aspects of the mother's evaluation of the training programme was prepared.

4. Two parallel questionnaires were prepared for the pre-training and post training assessment of the mother's knowledge about mental retardation and some principles of learning. These questionnaires consisted of twenty questions each of the true/alas type.

C. *The Training Programme*

1. *Pre-training Assessment of Children*

A detailed case history of each child was taken. The presence of mental retardation was confirmed through clinical observation as well as standardized psychological testing.

TABLE II—*Characteristics of Children*

Sex			Male			Female
No.			27			10
%			72.9			27.1
Age (years)	4	5	6	7	8	Mean (SD) 6.02 (1.24)
No.	7	5	10	7	8	
%	18.92	13.51	27.03	18.92	21.62	

IQ	30-39	40-49	50-59	60-69
No.	5	15	12	5
%	13.5	40.5	32.5	13.5

2. *Pre training assessment of mothers*

The mothers were given a twenty-item questionnaire of the true/false variety, to measure knowledge about mental retardation and certain principles of learning.

3. *Counselling*

The training programme was initiated with counselling the mothers, explaining the nature of their child's problem, the need for special training, the issue of special schooling and vocation, what may be expected from the child at present and in the future, specific presenting problems and management possibilities. Any questions the mothers had were answered.

4. *Selecting target behaviors*

The mothers were asked to list 3 behaviors which they thought were necessary for child to learn at that period. Out of those 2, target behaviors were selected for intervention. The selected target behavior should be within child's developmental and intellectual potentiality, *e.g.,* a 4-year-old retarded child cannot learn how to tie shoe laces or do simple calculations.

5. *Baseline of the Skill*

Mothers were taught the importance of recording observations of behavior systematically. Using recording charts, they were shown how to assess and note down the skill level. Before starting the training, average of three days observation for a particular target behavior was taken as a baseline.

6. *Selection of Reinforcers*

The mothers were trained to select appropriate reinforcers, in the form of both material and social rewards for their children. The material rewards were mainly jeera sauf, peanuts, sweets given in very small quantity at one time. The social

rewards were praise, hug or pat ("Shabash" or very good).

7. *Training Techniques*

In both individual and group settings, consisting of 12 sessions, the mothers were taught various methods of developing self help skills. The techniques included were Reward Assessment, Reward Training, Task Analysis, Prompting, Shaping, Chaining, Modelling and Imitation.

The individual training sessions enabled the mothers to deal with specific problems while group sessions enabled the teaching of other skills to be demonstrated. Group settings also allowed for discussion among the mothers.

(a) *Procedure for toilet training:* The mothers were asked to record the time of defecation/urination of their children for 3-5 days. They were then asked to place the child on the toilet seat at the time when elimination normally occurs. When the child successfully voids in the toilet he is immediately rewarded with praise and a material reward. As training progressed, the child was also shown how to undress for toilet and pointing out the need to void in the toilet.

(b) *Procedure for feeding:* Teaching self feeding can be relatively easy because there is a reinforcer inherent in the food itself. This is particularly so when that food item is chosen which the child specially enjoys. Using task analysis, the feeding sequence was broken up into several small steps. With physical and gestural prompting, the child was taught the first step of the sequence. He was rewarded with praise by the mother until he learned the step, after which the next step in the feeding sequence was taught in the same way until the entire sequence had been mastered.

Shaping through successive appreciation was used with children with lower IQ while the method of imitation was used with children who were more intelligent. The teaching of feeding with spoons or hand was taught according to the eating habits of the family of such child.

(c) *Procedure for bathing and washing:* Washing was taught using physical prompting progressing to gestural and then verbal prompts. One step of the washing sequence is carried out by the child while the rest are done by the mother. Once that step has been mastered, the next step in the sequence is gone through in the same way, forming a chain. After three trials of each kind of prompting, the prompt was withdrawn to test for learning.

(d) *Procedure for dressing:* This task was also taught by the use of prompting and modelling as well as breaking up the task into small steps. Reward training was used to teach the dress sequence and also the undressing sequence. The need to train dressing with one garment at a time was emphasized.

8. *Monitoring and Testing Training Effectiveness*

The mothers were told the necessity of regular monitoring. They were shown how to test the effectiveness of their training by comparing pre training and post training skill performance level.

9. *Post Training Assessment*

(a) *Assessment of the mothers:* After the training programme the mothers were made to fill up a proforma concerning various aspects of questionnaire parallel to the one administered before training to measure change in attitude and knowledge.

(b) *Assessment of the children*

(*i*) *Studying the charts:* The monitoring charts were studied to note changes in skill levels.

(*ii*) *Clinical observation:* An attempt was made to observe the children's skill level in the hospital.

Results

The skill deficit presented with the highest frequency was that of dressing, perhaps because of the age of the children. Skill deficit frequency is shown in *Table III*.

A total of 54% of mothers attended 6 sessions spread over period of 15 days thus only 2-3 steps of task analysis could be achieved by them. On the average, these sessions were 2 groups and 4 individual. Only 32% of mothers came for follow up 6 months after termination of training sessions at the hospital and reported complete learning of the skill, *e.g.,* could eat/wear shirt, independently. In spite of the simple recording, mothers found it very difficult to record the learning process. They preferred to report verbally. It was not feasible for the children to demonstrate the learned skill in hospital setting, so the evaluation was mainly subjective observation of mothers and other family members. *Table IV* shows the difference between mothers' knowledge in pre and post assessment of their knowledge of mental retardation. All the mothers recognized the slow mental development in their children. After training there was change in the knowledge mental retardation is not an illness, mentally retarded child can learn simple things. In training these children, most of the mothers had not used praise in teaching. They either expected too much from the child or thought criticism for inappropriate behavior is necessary. Similarly undesirable behavior was though to be due to physical abnormalities associated with mental retardation. Undesirable behavior was not taken as learnt behavior and modified by simple methods.

TABLE III—*Frequency of Self Help Skills*

Self help skill	No.	%
Toilet	6	13.6
Feeding	11	25.0
Washing/bathing	7	15.9
Dressing	20	45.4

Discussion

In India, few investigations on toilet training the retarded have been done with experimental vigour. One reason for this is that in this country toilet training has not assumed the same importance it has in the West, particularly in rural families. Also the level of sophistication does not exist that enables training procedures to be accepted and applied readily. A third problem with toilet training is the unavailability of certain training devices, *e.g.,* electrical device for bladder control training. The problems encountered with toilet training in the present study included a difficulty in recording toileting behavior by the parents and problems in demonstrating correct toileting in the clinic setting. Thus determining the extent of learning was also a problem.

An obvious advantage in training feeding skills is that there is an inherent reinforcement in food, particularly if a food item that the child has a special liking for is used. An intensive programme such as that

TABLE IV–*Pre and Post Assessment of Mother's Knowledge*

Areas	Form A	Form B
Mental retardation as an illness	14.5	16
Mental development	27	28.5
Learning process	19	28.5
Reinforcement for positive behavior	23	27
Performance	12.5	25.5
Socialization	28	29
Undesirable behavior	15	25.5
Mean	13.03	17.10
Standard deviation	1.81	1.29
't', p	9.88	0.01

developed by Azrin and Armstrong was used in this study(4). However, greater success was achieved in training eating skills than toilet training. As opposed to the other skills, in self feeding skill, learning was more readily observable and could also be demonstrated in the clinic.

In the present study, the mothers were encouraged to adapt training procedures for washing skills according to their environment.

In many cases it was found that parents had not attempted to train the child in independent dressing. Often the mothers just found it easier and faster to dress the children themselves rather than attempting the time consuming training. However, independent dressing can not only reduce the burden of the parents, but also give the child a greater degree of control over his life. Despite the well recognized importance of learning this skill, relatively less research work has ensued. Only very basic dressing skills (including undressing) were attempted in this study.

It was observed that mothers whose motivation level was high to make their child independent, were most successful in learning and implementing training programme. Age, sex, educational level of the mothers were not related to the successful implementation of training. High dependency needs, expectation from the therapist, and demand for medication for increase in intelligence were negatively correlated with the outcome.

In a country where large families and the need for both parents to work, prevents spending much time with children, it is more than ever important for mentally handicapped children to be able to achieve some level of independent self-help functioning. The success of such training with mentally handicapped children who are brought to hospital and child guidance clinics depends on the motivation and understanding of parents.

The problems encountered in the course of such training require to be

identified and overcome. It is obvious, for instance that training techniques need to be modified to some extent to suit Indian conditions. Alternatives must be found to the use of various devices used in training, as these are not readily available in the country.

Since there are a fewer number of professionals working in this area, a training programme should be developed that makes the parents of mentally handicapped children as self sufficient as possible in the management and training of their children. Research must be directed towards simplifying methods of assessing and monitoring skill level.

REFERENCES

1. Lovass OI. Teaching self help skills. *In:* Handbook of Mental Retardation. Ed. Matson JL, Mulick JA. New York, Pergamon Press, 1983, pp 429-442.
2. Matson JL, Mulick JA. Handbook of Mental Retardation. New York, Pergamon Press, 1983, pp 429-442.
3. Baker BL, Heifetz LJ, Mruphy DM. Behavior training for parents of mentally retarded children. One year follow up. Amer Mental Def 1980, 85: 31-38.
4. Azrin NH, Amstrong PM. The 'Mini-meal'. A method for teaching eating skills to the profoundly retarded. Mental Retardation 1973, 11: 9-13.

NOTES AND NEWS

ANNUAL ORATION

The second annual Oration in honour of **Dr. S.M. Merchant** will be delivered by **Dr. C. Gopalan** (Nutrition Foundation of India) at 9.30 am on Sunday 22nd December, 1991, in the auditorium of the Bai Jerbai Wadia Hospital for Children, Bombay. The title of oration **Nutrition problems in Indian population.**

This will be followed by lectures on:

1. Past, present and future of Genetics in India by Prof. N.B. Kumta, Prof and Head, Deparment of Pediatrics, K.E.M. Hospital, Bombay.
2. Value and importance of imaging techniques in children by Dr. R.D. Lele, Medical Director, Jaslok Hospital, Bombay.

There is no registration fee.

Those wishing to attend may get in touch with the undersigned at the earliest, as Registration will be limited.

Dr. R.H. Merchant,
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