

Rehabilitation of Mentally Retarded Children through Environmental Protection

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ABSTRACT

In the present study an attempt has been made to give training to mentally retarded children in paper bag making. Five mentally retarded children having the mental age of 6 - 7 years were selected for the above purpose from Jodhpur city. It was hypothesized that the children will be able to make paper bags as taught by the vocational trainer. It was a co-relational type of research. A comparison of before and after training revealed the degree of change in the children's performance. Material used in the present study were newspaper and gum. After training a remarkable improvement was seen in the children's performance. As the trials increased, the number of errors decreased. Results also reveal that persons with mental retardation can be engaged in economically useful activities if systematic training and guidance is given.

Keywords: *Mentally Retarded Child, Environmental protection*

Mentally retarded children are often characterized as those who consume services rather than those who contribute to the community. A consumer of services is always viewed as being dependent upon the charity of others. Rehabilitation assists in removing this image and placing them in the role of contributor. Work is important as a means to earn wages, and through wages one can assess the contribution by them towards the quality of life. Work also means personal identity and status. Vocational training assists in removing their image and placing them in the role of contributor of environment protector (Jain and Gunthey, 2007).

Rehabilitation is defined as a process of restoring the handicapped individual to the fullest physical, mental, emotional, social, and vocational usefulness for which he is capable. Hence it includes processes, procedures and programmes, which are designed to enable the affected individual to function at a more adequate and personally satisfying level.

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Because the individual before disablement had developed higher level of functioning but due to certain unfortunate events, functions are lost fully or partially and rather permanently. Therefore needs to have rehabilitation programmes to re-educate him or her so that the person can be returned back to the main stream of normal life.

When parents learn about any difficulty or problem in their child's development, this information comes as a tremendous blow. They begin a journey that takes them into a life that is often filled with strong emotion, difficult choices, interactions with many different professionals and specialists, and an ongoing need for information and services. Initially, parents may feel isolated and alone, and not know where to begin their search for information, assistance, and understanding and support (Mathur and Mathur, 2007).

Employers may hesitate to recruit, hire and train individuals with mental retardation because they are not sure that they know how to accommodate their disability. Parents may have low expectations of work for their sons and daughters with mental retardation. They may worry that going to work may cause their son or daughter to lose entitlements which provide a monthly income and health coverage.

The basic aim of vocational training is to teach independent learning skill and to make them self-dependent. Looking to the competition era in the present scenario of the society, such type of skills are essential to run the life. Not only to the normal youth as well as disabled youth too, it is very clear that a mentally challenged child faces many problems to stand in this competitive world. He needs special training. He requires special type of skill, looking to his limited intellectual level. This type of training starts from the family from the person itself and the society in which the child is living.

Environmental protection is a practice of protecting the environment, on individual, organizational or governmental level, for the benefit of the natural environment and (or) humans. Due to the pressures of population and our technology the biophysical environment is being degraded, sometimes permanently. This has been recognized and governments began placing restraints on activities that caused environmental degradation. Since the 1960s activism by the environmental movement has created awareness of the various environmental issues. There is not a full agreement on the extent of the environmental impact of human activity and protection measures are occasionally criticized. Academic now offer courses such as environmental studies, environmental management and environmental engineering that study the history and methods of environmental protection. Protection of the environment is needed from various human activities. Waste, pollution, loss of biodiversity, introduction of invasive species, release of genetically modified organisms and toxics are some of the issues relating to environmental protection.

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Similar studies have been done by Kutty (2006), Mathur and Mathur (2007), Rao and Sivakumar (2004). Therefore, the present research work aimed to study rehabilitation of mentally retarded children through environmental protection.

The **objectives** of the present research were to find out the effect of continuous training programme among mentally retarded children regarding the development of paper-bag making skills, the effect of verbal reinforcement in the development of these skills and the effect of vocational rehabilitation on control of environmental pollution. It was **hypothesized** that continuous and rigorous training will be helpful in the development of vocational skills and environmental protection through paper-bag making. Time to time positive reinforcement will motivate the children to improve their performance.

METHODOLOGY

Research Design

For the present research work single group design was taken. The children were purposively selected. Rigorous & regular training of 1 hr was given to the children. In this training a series of demonstrations of making paper bags was given by the vocational trainer. The training program was distributed in parts as required in the nature of the task. Preferably chain work procedure was used for a proper coordination of the work among the children. After providing them adequate training of making paper bags, independent job work was allotted to them and time to time feedback was taken. The present research work was completed in two sessions i.e. the assessment of the mentally retarded children before the training as well as the assessment after the respective vocational training.

Pre-Test Measurement of various skills on paper bag making for four days	Application (Treatment) 30 days	Post Test 1 (immediately after application) Measurement of various skills on paper bag making	Post Test 2 (after post test 1) Measurement of various skills on paper bag making	Withdrawal of 15 days	Post Test 3 (immediately after withdrawal) Measurement of various skills on paper bag making	Reapplication (Treatment) 15 days	Post Test 4 (immediately after reapplication) Measurement of various skills on paper bag making
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The difference between before and after training assessment was revealed the impact of vocational training. This is a field experiment study in which training is used as independent variable whereas development of vocational skills and environmental protection is used as a set of dependent variables. The training was carried out on the subjects under similar conditions to

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control the situational relevant variable. The same sequence of task analysis was followed by the subjects in both the sessions to control the sequence relevant variable.

Sample

In the present research work purposive sampling technique was used. Five mild mentally retarded children were selected. The age range of the children was 15 - 18 years. They were the students of TEPSE Model School, Jai Narain Vyas University, Jodhpur.

Tool Used

A self constructed rating scale was used to assess the skills of the children. The scale was constructed on the basis of items in the respective areas of BASIC – MR of Peshawaria & Venkatesan (1992) and MDPS of Vimala (1992). The responses were taken on items if the child is independent or occasional cue, gestural prompt, verbal prompt or physical prompt is given.

Material required for making paper bags

For paper bag making newspaper and gum bottle were used.

Steps followed in making paper bags

In present vocational training of paper-bag making, the following steps were followed:

1. With the help of behaviour modification technique, desirable behaviour was encouraged and other behaviour was discouraged.
2. The confidence level of the children was boosted up and then training was started. Demonstration was given to the children for several times. During the demonstration the following precautions were taken – The whole process was made simple. In place of preparing more paper bags at a time it was preferred to complete one paper-bag first and then start the process for the second one. To motivate the children, they were practically assured that their paper-bags will be sold in the market.

Process of making paper bags –

It is a very simple process and in different steps the process of paper bag making was completed. Before starting the actual process, the following demonstration was given to the children:

Step 1: The researcher and the trainer took two pages of newspapers. Out of which, one was given to the children and the second one was retained with the trainer. The investigator asked the children to see and concentrate to the procedure that what the trainer is doing and instructing.

Step 2: The paper was put on the floor and then this paper was folded sideways.

Step 3: In this step the folded paper was now pasted with the help of gum and the children were also asked to do the same with their paper. After some trials the children were able to do this step successfully.

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Step 4: The investigator asked the children to repeat the procedure of steps 1 to 3. After this, the paper was folded three inches from downwards and the same was asked to do by the children. After few trials the children were able to do the same successfully.

Step 5: The folded paper of step 4 was now folded in a shape of triangle. Similar procedure was repeated for the second side of the bag. It was a difficult step, therefore four days continuous practice was given to the children.

Step 6: After two days rest, repetition of all the steps learned so far by the children was again done here. The bottom of the bag is taken in this step and half of the portion was folded inside and pasted and then the remaining half was also folded and pasted in similar way. The children were asked to do the same process. This was the last and final step of paper-bag.

In this way, the paper has taken the shape of paper-bag. The children showed the feeling of achievement on their face and had shown much more confidence in this vocational training program.

Procedure

The children were seated comfortably and rapport was established with them. Then they were assigned to the vocational training program. It was assessed that the children were not having any concept of paper-bag. They were having the knowledge of paper only. The investigator told to the children that with the help of these papers we can prepare such type of paper-bag (showing the paper-bag to the children). They were then shown the material required for making paper bags i. e., newspapers and gum bottle. The investigator with the help of assistant demonstrated the procedure of paper bag making several times in front of the children, then the children were asked to repeat the same steps. In this way, the process of demonstration and the exercise of children were continued till the errorless making of paper-bag was done by the children. By using various teaching strategies and continuous motivation they developed confidence and soon learned to make paper bags independently.

Scoring

The scoring was done for the pre test and post test sessions. The scoring system was – for independent (5), occasional cue (4), gestural prompt (3), verbal prompt (2) and physical prompt (1) was given.

Statistical Analysis

To find out the significant difference between the pre test sessions and post test sessions paired comparison students 't' was calculated.

RESULTS AND DISCUSSION

Table: M, SD and 't' values of pre test and post test sessions on paper bag making (N = 5).

		Gross Motor	Fine Motor	Social Interaction	Task Analysis
Pre Test Session	M	2.75	3.18	2.67	1.57
	SD	1.50	1.88	1.12	.77
Post Test Session	M	4.31	4.00	3.39	3.35
	SD	.65	.91	.80	.62
	t	2.73 NS	1.64 NS	5.16**	10.80**

**p<.01, *p<.05, NS = Not Significant.

The aim of the present research was to give training to the mentally retarded children in paper bag making. The above table clearly shows that in gross motor area for making paper bags the children have obtained higher mean scores in post test session (M = 4.31, SD = .65) as compared to pre test session (M = 2.75, SD = 1.50). No significant difference was found between both the sessions (t = 2.73, NS) on gross motor area. It indicates that the children showed more or less similar gross motor skills in both the sessions. They were able to sit and stand without support, was able to pull furniture for rearrangement and was able to stand on tip toe to reach for an object at a height.

Table reveals that in fine motor area for making paper bags the children have obtained higher mean scores in post test session (M = 4.00, SD = .91) as compared to pre test session (M = 3.18, SD = 1.88). In this area also significant difference was not found between both the sessions (t = 1.64, NS). This indicates that the children showed more or less similar fine motor skills in both the sessions. They were able to reach and grasp objects, uses both hands at the same time when handling an object, picks up small objects using thumb and fingers only, able to tear off a perforated sheet.

It is clear from table that in social interaction area for making paper bags the children have obtained higher mean scores in post test session (M = 3.39, SD = .80) in comparison to pre test session (M = 2.67, SD = 1.12) and differ significantly on both the sessions (t = 5.16, p<.01). It shows that the skills on social interaction were developed in the children after training such as responding when touched by reaching towards or moving away, look towards or otherwise and indicate a person in the immediate area, able to identify by pointing, naming, friends and acquaintances from strangers, wait for own turn in a group. They were now able to use words like 'please', 'thank you' and 'sorry' at appropriate places. They were able to interact with members of the opposite sex and members of different groups easily. They also like to participate in group activities taking the role of a leader.

Similarly, on task analysis for making paper bags the above table shows that the children have obtained higher mean scores in post test session (M = 3.35, SD = .62) in comparison to pre test

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session ($M = 1.57$, $SD = .77$). Significant difference was found between both the sessions ($t = 10.80$, $p < .01$). It reveals that the children were able to learn the task easily when it was broken down in small simple steps and arranged in sequential order. Now, they were able to do the task independently. They were able to identify newspaper and gum bottle, folding the newspaper sideways, opening the gum bottle, applying gum on the open edges of the newspaper sideways by overlapping each other, folding the newspaper two inches from downwards, opening the folded part upward and downward, folding the upward and downward part inside and then applying gum on the folded part upward and downward by overlapping each other. After the task was over they closed the cap of the gum bottle and placed the paper bags in pile under some weight.

The children learned to make newspaper bags with 80% accuracy which shows that if rigorous training is given to the mentally retarded children they can become useful member of the society and can learn their living independently.

A visit to special schools or special education centers having the facilities for vocational training show that they impart training on specific trades like candle making, chalk making, canning of chairs, basket making, weaving, book binding, printing, making of envelopes and greeting cards etc. Such programmes are described as craft activities rather than any serious effort to train adult person with mental retardation in a vocation leading to employment or job placement (Kutty, 2006).

Rao and Shiva (2004) emphasize that in order to provide and expand a systematic vocational training and placement for the persons with mental retardation, there is a need to pay attention to vocational climate, full complement of vocational phases in the vocational training centers, more beneficial functional training for employment success in the special schools.

Similar findings have been reported by Jain and Gunthey (2007). They are of the view that if one adumbrates the mentally retarded children with proper attention, guidance, sufficient time, explain things to them in simple mode of working by the trainer as well as the society, then many fruitful results can come out. They further reported that activities like paper mashie, envelopes, pot making, mehendi, candle making, canning, carpentry, manual printing can be carried out as rehabilitation measures and to develop eye-hand coordination.

The present results also reveal that there was remarkable improvement in the children's performance. As the trails increased, the number of errors decreased. Persons with mental retardation being allowed the opportunities to make choices and decisions, to explore and take risks and to learn from experiences of success and failure, they will develop the abilities and attitudes necessary to be self determined adults.

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On the basis of the study by Jain and Gunthey (2010) it could be said that a mentally retarded individual needs stimulation, repeated chances, supervision and training to develop proper skills. Vocational skill training should be started as early as possible in his/her life. During infancy the child should get maximum stimulation from the family members. The family members should talk to the child whenever possible, even if he/she does not talk. During childhood, give him chance to play with other children. Continue the training through adolescence and adulthood in necessary vocational skills.

Before training, it is also experienced by the researcher that there are certain steps to be taken in the process of vocational training including group interaction, give chance to learn the skills through regular selected activities, gradually reduce the number of repeated instructions and observe their performance in natural environments, include them as a group member, in groups get-together, give them chance to participate in social and religious functions. Outings help in enhancing social skill training. Accept the mentally retarded children as a member of the group and the community.

While training the children, instructions were given time to time in the process of training. The words like please, thank you, very well, sorry are often used by the trainer whenever and wherever it was required. The parents were also asked during the training programme to allow the child to participate in household tasks to gain his confidence. They were also asked to take the child to visit relatives and friend's places and participate in social functions.

The following studies are also supported by the above training program and its outcome. From the time the first settlers arrived in the United States, there has always been a strong belief that "Individuals should be free to earn their livelihood in whatever way that proves most profitable". However, this belief has not been applied equally for all people, neither in America nor in any other part of the globe. The children with mental retardation having access to vocational training and employment are negligible throughout most of the part of this country. Even today, many children with mental retardation are unemployed in spite of the dramatic increase in vocational research and development that has taken place in the 1970s and 1980s (Bellamy et al. 1985; Revell, Wehman, & Arnold, 1985). Vocational training programme for mentally retarded children have often been narrowly focused: that is, these programs are often predicted upon the development of only one or two specific skill areas. Some programmes have prepared their clients for a job market that no longer exists. In some extreme cases, there is no career and/or vocational program at all. Career education is a total education concept that systematically coordinates all school, family and community components, thus, facilitating the individual's potential for economic, social and personal fulfillment. Brolin (1982) suggested six areas of primary responsibility for special educators in developing occupational guidance and preparation for such children: 1. Knowing and exploring occupational possibilities. 2. Making appropriate occupational decisions. 3. Exhibiting appropriate work behaviours. 4. Exhibiting sufficient

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physical and manual skills. 5. Acquiring specific saleable job skill. 6. Seeking securing and maintaining satisfactory employment.

Rao and Siva (2004) emphasize that, in order to provide and expand a systematic vocational training and placement for the persons with mental retardation, there is a need to pay attention to vocational climate, full complement of vocational phases in the vocational training centers, more beneficial functional training for employment success in the special schools.

Often it is seen that mentally retarded children are not seen with an equal eye in comparison to the normal child of the society. As it is known that if a normal child is motivated then he or she will do the best, and if they are boosted up, then they can reach up to their parents' expectations. Previously mentally retarded children were debarred from the society, but now people of the society are trying to help them so that they can find some rehabilitation measures to hold up themselves for their betterment. Many NGOs, other organizations as well as child welfare societies are engaged with such type of activities for the mentally retarded children. Gunthey (2004) reported in his pilot study that if proper and rigorous training with patience is given to mentally retarded children their potential skills can be used in the promotion of environmental protection.

Table: Showing no. of paper bags made by the children in each session.

Sessions	Time in min.	Reinforcement	No. of paper bags made
Pre Test 1	60	4	0
Pre Test 2	60	4	0
Pre Test 3	60	4	0
Pre Test 4	60	4	0
Application (Treatment) of 30 days			
Post Test 1	10	0	6
Post Test 2	12	1	5
Withdrawal of 15 days			
Post Test 3	15	2	4
Reapplication (Treatment) of 15 days			
Post Test 4	10	0	6

CONCLUSION

The basic aim of this research work was to develop rehabilitation activities among the mentally retarded children and it was successfully done with the training programme. The training process was used which seems to be very effective for such type of work. Time to time verbal encouragement and positive reinforcement were given to the children. In the training programme, looking to the abilities of the child, procedure was broken-down into simple steps and the next step was not followed till errorless completion of the steps was not shown by the

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child. The interests were also observed in the marketing of paper bags they have prepared. Investigator has recommended that few shops should be contracted for the purpose of marketing. On the basis of evaluation of training programme, it is reported that skills for the task like making of paper bags are developed with the help of vocational training. Effect of training is clearly perceived in eye hand coordination, correct steps of tasks, concentration and production of the items among these children.

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Conflict of Interests

The author declared no conflict of interests.

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