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Manisha Jain
Research Scholar, Department of Psychology Jai Narain Vyas University Jodhpur, Rajasthan, India

Corresponding Author:
Manisha Jain
Research Scholar, Department of Psychology Jai Narain Vyas University Jodhpur, Rajasthan, India

Capacity building of intellectually disabled children for protection of environment

Manisha Jain

Abstract
The basic aim of this research work to develop capacity building among intellectually disabled children for protection of environment. For the present research work single group design was taken. A total of 30 children (mild and moderate intellectually disabled children) were selected through incidental purposive sampling technique & were placed in each category of different vocational activities. Only those intellectually disabled children were selected who are not suffering from any other disabilities and were taken from various institutions and special schools of Jodhpur City. Age range of all the subjects was 13-20 years. Sequence and time duration of the treatment was similar for all the subjects. Assessment tools like BASIC-MR of Reeta Peshwaria and S. Venkatesan, 1992 and MDPS of Jeyachandran, P. and Vimala, 1975 were used. Results reveal that these children learned to plant trees with 80% accuracy which shows that if rigorous training is given to the intellectually disabled children they can become useful member of the society and can work independently. This proves the hypotheses also.

Keywords: BASIC-MR, Peshwaria, treatment, Age

Introduction
Intellectually disabled 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) [4].
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) [8].
But a number of barriers contribute to the low employment rate of people with intellectual disability. They may not receive vocational training and work experience while in school. They may not learn about career options, have experiences to develop appropriate social skills required for successful employment and may not be encouraged to look forward to work.
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 intellectually disabled 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.

Concept of Vocational Training – Changing Scenario

Vocational training of persons with intellectual disability does not confine with just extending the skill training for enabling a person to enter into a vocation (Kutty, 2006) [7]. It begins with an elaborate evaluation in terms of the individual, family and the community to assess the strengths and weaknesses in the respective areas. This is followed by a job survey in the community where the person with intellectual disability comes from.

The training models most suited in this context are on-the-job placement (place/train/follow up). Other models of placement available for persons with intellectual disability are as follows – Sheltered Workshop and Open Employment.

Need for Developing a Strategy for Vocational Training

It is now a proven fact that persons with intellectual disability can be engaged in economically useful activities if systematic training and guidance are given. Systematic training and guidance lead towards empowerment. Empowerment means to promote appropriate and meaningful work attitude, behaviour and skill training, to enable them to become contributory members of society through numerous possible ways: like home based activities, co- operatives, enclave or sheltered employment, supported employment in private or public sectors, supported employment at community level – home based and local based trades, thereby enable them to work, earn wages and contribute to his or her well being, to promote inclusion of persons with mental handicap in the world of work and their empowerment through better quality of life.

Similar studies have been done by Kutty (2006) [7], Mathur and Mathur (2007) [8], Rao and Sivakumar (2004) [10]. Therefore, the present research work aimed to study capacity building of intellectually disabled children for prevention of environment. Rao and Shiva Kumar (2004) [10] emphasize that, in order to provide and expand a systematic vocational training and placement for the persons with intellectual disability, there is a need to pay attention to vocational climate, full complement of vocational phases in the vocational training centres, more beneficial functional training for employment success in the special schools.

Often it is seen that intellectually disabled 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 they are boosted up, so that, they reach up to the parents' expectations. Previously intellectually disabled children were debarred from the society but now people of society are trying to help them so that they can find some rehabilitation measures to hold up themselves for their betterment. Many NGOs organizations as well as child welfare society are engaged with such type of activities for the intellectually disabled children. Gunthey (2004) [2] reported in his pilot study that if proper and rigorous training with patience is given to intellectually disabled children, their potential skills can be used in the promotion of environmental protection.

Significance of the Research

Intellectually disabled children are good in their mechanical aptitude. Once the task is learned by them, they regularly do the same task without fail. To take the advantage of their mechanical aptitude for them as well as for the society, the present proposal is an attempt to explore the mechanical aptitude and regular habits of intellectually disabled children in the benefit of environment. The outcome of this project will be helpful to these children not only in Rajasthan but in other parts of the country for the enrichment of the environment. In this background the practical utility of the results of present research are: The other cities in Rajasthan State can also follow this programme and strategies can be used in the above projects for plantation. It will help in providing self employment opportunities to the intellectually disabled children. It will also contribute to the improvement of environment conditions. After follow up of the programme, gradually other states can also apply similar research strategies in their cities. The intellectually disabled children will be in the mainstream of the society as the society's attitude will change towards them.

Methodology

Problem

The problem can be further spelled out as to assess the level of intelligence and efficiency of the intellectually disabled children, to assess the current level of functioning of these children through BASIC-MR and MDPS Tests, to provide adequate training to these children in making clay pots, plantation of trees, paper bags, paper mache articles, chalks, cloth bags, and gardening at the main roads and gardens, to enable these children to have a feeling that they too can become useful members of the society and contribute in the presentation and protection of the environment and to enable these children to acquire skills like gross motor, fine motor, social interaction to make them self-sufficient.

Hypotheses

It was hypothesized that systematic and rigorous training of intellectually disabled children will be helpful in promotion of environmental protection. It can be further specified as self independence and social interaction will increase in all the children through vocational training, adaptive skills will be enhanced, repetitive and planned teaching strategies will improve the mechanical performance of these children, vocational training will empower these children towards the mainstream and follow up of these children will be helpful in their mainstreaming in the society.

Research design

For the present research work single group design was taken. Children were purposively selected. Rigorous & regular training of 1 hr was given to the children. In this training a series of demonstrations of plantation of trees and gardening at the main roads and gardens was given by the 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 plantation of trees and gardening at the main roads and gardens, 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 intellectually disabled children before the training as well as the assessment after the respective training.

Research Plan

Pre-Test Measurement of various skills on plantation of trees and gardening at the main roads and gardens for four days	Application (Treatment) 30 days	**Post Test 1** (immediately after application) Measurement of various skills on plantation of trees and gardening at the main roads and gardens	**Post Test 2** (after post test 1) Measurement of various skills on plantation of trees and gardening at the main roads and gardens	With drawal of 15 days	**Post Test 3** (immediately after withdrawal) Measurement of various skills on plantation of trees and gardening at the main roads and	Reapplication (Treatment) 15 days	**Post Test 4** (immediately after reapplication) Measurement of various skills on plantation of trees and gardening at the main roads and gardens

The difference between before and after training assessment will give the impact of 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 subject under similar conditions to control the situational relevant variable. The same sequence of task analysis was followed by the subject in both the sessions to control the sequence relevant variable.

Control

Only those intellectually disabled children were selected who are not suffering from any other disabilities and were taken from institutions only. Age range of all the subjects was similar. Sequence and time duration of the treatment was similar for all the subjects.

Tools

Screening tools and diagnostic tools were used to confirm the diagnosis by a specialized team of professional (psychiatrists, special educators and parents). Assessment tools like BASIC-MR – Behavioural Assessment Scale for Indian Children with Mental Retardation of Reeta Peshwaria and S. Venkatesan, 1992 and MDPS - Madras Developmental Programme Scale of Jeyachandran, P. and Vimala, 1975 were used.

Applied Behaviour Analysis

Intervention Strategies – Each student must have a programme that matches his/her strength and needs.

Task Analysis – Analyse a skill and task that need to be taught. Then break it downinto small components and steps that it would take to the task.

Discrete Trial and Prompting – Teach each step separately.

Reinforcement – Plan to reinforce each step with something that is highly motivating for the students.

Repetition and Prompt Fading – Practice each step repeatedly until the student will carry out that component of that skill with no prompting.

Material required for plantation of trees and gardening at the main roads and gardens - For plantation of trees and gardening at the main roads and gardens saplings of plants, manure, water, soil and gardening tools were used.

Steps followed in plantation of trees and gardening at the main roads and gardens

In present capacity building training of plantation of trees and gardening at the main roads and gardens, 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 were 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 planting more trees at a time it was preferred to complete the process in chain work. To motivate the children, primary and secondary reinforcement were used.

Process of plantation of trees and gardening

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

Step 1: The researcher and the trainer took two saplings of plants. 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 the trainer was doing and instructing.

Step 2: The floor was dug and the sapling of plant was put into it.

Step 3: The roots were covered with the soil and manure. Then water was poured on it. The children were also asked to do the same process. After some trials, the children were able to do this step successfully.

Step 4: The investigator asked the children to repeat the procedure of steps 1 to 3. After few trials the children were able to do the same successfully.

Step 5: Similar procedure was repeated for the second sapling of the plant. Here, 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 were again done here.

In this way, the plantation of trees was carried out. The children showed the feeling of achievement on their face and had shown much more confidence in this capacity building program.

Procedure

The children were seated comfortably and rapport was established with them. Then they were assigned the vocational training program. It was assessed that the

children were not having any concept of plantation of trees and gardening. They were having knowledge of plant only. The investigator told to the children that with the help of these saplings we can prevent the environment. They were then shown the material required for plantation of trees and gardening i. e., saplings of plants, manure, water, soil and gardening tools. The investigator with the help of assistant demonstrated the procedure of plantation of trees and gardening several times in front of 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 trials were done by the children. By using various teaching strategies and continuous motivation they developed confidence and soon learned the task of plantation of trees and gardening independently.

Sample

Initially a large number of disabled children were screened out of which approximately 30 children were placed in each category of different vocational activities. Intellectually disabled children were selected from various institutions and special schools. Children of only mild and moderate categories were selected. Age range of all the subjects was 13-20 years. All the subjects were selected from Jodhpur city. The target group (mild and moderate intellectually disabled children) was selected through incidental purposive sampling technique. Care was taken that no child had any other severe disability.

Scoring

Scoring of the tests was done as per the respective manual of the tests. The scoring was done for the pre test and post test sessions.

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 1: M, SD and 't' values of both the sessions on plantation of trees and gardening by intellectually disabled children.

		Gross Motor	Fine Motor	Social Interaction	Task Analysis
Pre Test Session	M	3.75	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	1.65	.91	.80	.62
	t	1.40 NS	1.64 NS	5.16**	10.80**

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

Table 2: M, SD and 't' values of errors done in both the trials by the intellectually disabled children in the process of plantation and gardening.

Intellectually Disabled Children (Trained)

*p<.05.

The aim of the present research work was to give training for capacity building of the intellectually disabled children in prevention of environment through plantation of trees and gardening. Table I clearly shows that in gross motor area for plantation of trees, the intellectually disabled children have obtained higher mean scores in post test session (M = 4.31, SD = 1.65) as compared to pre test session (M = 3.75, SD = 1.50). No significant difference was found between both the sessions (t = 1.40, NS) on gross motor area. It indicates that the intellectually disabled children showed more or less similar gross motor skills in both the sessions. They were able to stand without support, pick tools for gardening and stand on tip of the toe to reach for an object.

Table reveals that in fine motor area for plantation of trees and gardening the intellectually disabled 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 these 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 and picks up small objects using thumb and fingers only.

It is clear from table that in social interaction area for plantation of trees and gardening the intellectually disabled 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', 'thankyou' and 'sorry' at appropriate places. They were able to interact with members of the opposite sex and members of different groups easily. They also liked to participate in group activities taking the role of a leader. Previously, they either avoided the presence of others or escape from the situations.

Similarly, on task analysis for plantation of trees and gardening the above table shows that the intellectually disabled children have obtained higher mean scores in post test session (M = 3.35, SD = .62) in comparison to pre test 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 plant and soil, tools to be used for plantation, appropriate use of manure and water, and the method to be followed for plantation. After the task was over they placed the unused material at proper place.

These children learned to plant trees with 80% accuracy which shows that if rigorous training is given to the intellectually disabled children they can become useful member of the society and can work independently.

It is clear from Table II that when the intellectually disabled children were compared on errors i.e., Trial I (M = 2.11, SD = 0.94) and Trial II (M = 0.93, SD = 0.07). Significant difference (t = 2.18, p<.01) was found between both the trials. It shows that as the trials increased, the number of errors decreased. It indicated that as the practice hours increased the number of errors decreased. Hence, Thorndike's theory of trial and error is supported by

the 't' value mentioned in the above table. At initial stage this category of intellectually disabled children were committed a large no. of errors whereas in the feedback evaluation these errors decreased remarkably only because of practice and time to time reinforcement.

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 intellectual disability in a vocation leading to employment or job placement (Kutty, 2006) [7].

Rao and Shiva (2004) [10] emphasize that in order to provide and expand a systematic vocational training and placement for the persons with intellectual disability, 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) [4]. They are of the view that if one adumbrates the intellectually disabled 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, envelops, pot making, mehandi, 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 performance of the intellectually disabled children. As the trails increased, the number of errors decreased. Persons with intellectual disability 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.

On the basis of the study by Jain and Gunthey (2010) [5] it could be said that an intellectually disabled individual needs stimulation, repeated chances, supervision and training to develop proper skills. Capacity building 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 was also experienced by the researcher that there are certain steps to be taken in the process of capacity building 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 intellectually disabled 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 other tasks to gain their 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. Rao and Siva (2004) [10] emphasize that, in order to provide and expand a systematic vocational training and placement for the persons with intellectual disability, 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 intellectually disabled children are not seen with an equal eye in comparison to the normal children 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, intellectually disabled 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 intellectually disabled children. Gunthey (2004) [2] reported in his pilot study that if proper and rigorous training with patience is given to intellectually disabled children their potential skills can be used in the promotion of environmental protection.

Table A: No. of trees planted by the intellectually disabled children in each session.

Sessions	Time in min.	Reinforcement	No. of trees planted
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
Re-application (Treatment) of 15 days			
Post Test 4	10	0	6

Conclusion

The basic aim of this research work to develop capacity building among intellectually disabled children for protection of environment 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 children, procedure was broken down into simple steps and the next step was not followed till errorless completion of the steps were not shown by the children. The interest of the children was also observed for the task. On the basis of evaluation of capacity building programme, it is reported that skills for the task like plantation of trees and gardening can be developed with the help of vocational training. Effect of training is clearly perceived in eye hand coordination, correct steps of tasks, concentration and plantation of trees

by these children.

References

1. Bellamy GT, Rhodes L, Albin JM. Support employment. Unpublished manuscript. Eugene, OR: University of Oregon; c1985.
2. Gunthey R. Protection of environment through rehabilitation program for mentally retarded children. National Conference on Support to Children with Disabilities. Secunderabad: NIMH; c2004.
3. I.C.D. In: Prakash P, editor. Education of Exceptional Children. New Delhi: Kanishka Publications; c1994.
4. Jain M, Gunthey RK. Vocational training programme for mentally handicapped children – A psychological approach. In: Psychology in Use (Readings). Jodhpur: J. V. Publishing House; c2007.
5. Jain M, Gunthey RK. Card making training to a mentally retarded child. Disabilities and Impairments. 2010;24(2):132-136.
6. Jeyachandran P, Vimala V. Madras Developmental Programme Scale. Chennai: Vijay Human Services; 1975.
7. Kutty ATT. Principles of Vocational Training (Part – 2). DVTE (MR) Manual. New Delhi: Kanishka Publishers; c2006.
8. Mathur S, Mathur V. Parental counseling regarding self dependence for "Differently Abled" children. In: Psychology in Use (Readings). Jodhpur: J. V. Publishing House; c2007.
9. Peshawaria R, Venkateshan S. A Manual of Behavioural Assessment Scale for Indian Children with Mental Retardation. Secunderabad: National Institute of Mentally Handicapped; c1992.
10. Rao GL, Sivakumar TC. Re-engineering the vocational training for mentally retarded. Journal of Community Guidance and Research. 2004;21(1):5-20.