EFFICACY OF PSYCHOLOGICAL INTERVENTION IN SPECIAL EDUCATION FOR CHILDREN WITH MODERATE MENTAL RETARDATION

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In the current study the researcher has studied the Psycho-social development of children with moderate mental retardation from residential schools. The pre-testing was done by administering the Behaviour Assessment Scales for Indian Children with Mental Retardation by Reeta Peshawaria and S. Venkatesan. After pre-testing Intervention Program was planned. Approximately five sessions for every item from each domain for each student from experimental groups of residential school during the period of 6-7 weeks were conducted. After the intervention Program post-testing was done by administering the same scales stated above. The results in consolidated manner indicated that except on domestic-social domain, on remaining five domains, viz., motor, ADL, language, reading-writing, number-time, and prevocational, overall the MMRs show poor performance at pretesting level. To lift them up from that level, the intervention has to be more rigorous. It has also shown that no significant gender difference was found as a result of psychological intervention.

Key words- Moderate Retardation, Psychological intervention, Psycho-social development

Mental retardation is a term applied to a condition of retarded mental development present at birth or in early childhood as is characterized mainly by limited intelligence combined with difficulty in adaptation. It is an educational, psychological, and social problem.

As per DSM-IV-TR (2000) the criteria for mental retardation consist of three core features that describe this disorder in both children and adults:

a) Significantly sub-average intellectual functioning: an IQ of approximately 70 or below on an individually administered IQ test.

b) Concurrent deficits or impairments in present adaptive functioning in at least two of the following areas : communication, self-care, home living, social/interpersonal skills, use of community resources, self direction, functional academic skills, work, leisure, health and safety.

c) The onset is before age 18 years. The AAMR, in contrast, has restructured its description of different degrees of mental retardation.

As a group, children with mild retardation typically develop social and communication skills during the preschool years (age 0-5years), perhaps with modest delays in expressive language.

Persons with **moderate mental retardation** (IQ level of 35-40 to 50-55) constitute about 10% of those with mental retardation. Individuals at this level of impairment are more intellectually and adaptively impaired than those with mild mental retardation, and are usually identified during the preschool years as a result of delays in reaching early developmental milestones. By the time they enter school, they may communicate through a combination of single words and gestures, and sow self-care and motor skills similar to those of an average 2 to 3 years old.

The first residential school specifically designed for the treatment of the mentally retarded was founded in Switzerland circa 1840 by Johann Jacob Guggenühl (Scheerenberger, 1975).

In 1934, the oldest existing facility in the form of psycho-medical rehabilitation was establishment at “the Central Nursing Home” at Ranchi in Bihar. Though this institution primarily provided facilities for the children with non-retardation, it also opened the doors to the children with moderate retardation as well. In 1941, a home specially for the mentally retarded known as the “Home for the Mentally Deficient Children” was established by Children’s Aid Society in Mumbai. This was the first home of its kind in India.

Goldfarb’s (1955) study of children who spent their early infancy in an institution. The institutional children received significantly lower test scores, showed immature speech development, and in general presented many more indications of malajustive behaviour.

Quaytman (1953) found that social maturity tended to be greater than expected

for mental age – a difference of about 1 year – for his sample of clinic-referred children with Down's syndrome living at home rather than in institutional settings.

Mundy (1957) in a study done in Britain supplied evidence that the stimulation provided by community living resulted in more intellectual gain than residence in institutions for the mentally retarded.

Mitchell & Smeriglio (1970) on the basis of their study concluded that moderately and severely retarded children, when institutionalized in an environment providing only routine nursing care, failed to make any noticeable progress in overall absolute level of social competence during the first three years of institutionalization.

Landesman and Butterfield (1987) indeed, demonstrated success of these environmentally based programs contributed to the movement of deinstitutionalization those with mental retardation. It is encouraged mainstreaming and the formation of sheltered workshop and group home settings for this population.

Sen and Gururani (1988) in a study conducted in Delhi found that in an institutional set up, no extra effort was made by the staff members to train the mentally retarded members, even though they might be capable of learning at least some skills.

Perry and Felce (2005) gave evidence of considerable variability in the quality of residential services and a tendency for residents' quality of life to co-vary with ability level.

Kozma, Mansell, Beadle-Brown (2008) surveyed research from 1997 to 2007. Sixty-eight articles were found. In 7 of 10 domains, the majority of studies show that community-based services are superior to congregate arrangements.

STATEMENT OF THE PROBLEM

Effect of Psychological intervention on Psychological and Social Development Residential School Children with Moderate Retardation.

SIGNIFICANCE OF THE PROBLEM

At the national conference on "families having individual with chronic problems" held at TISS, Mumbai, Sen and Tuli (1991) highlighted the agony of mentally handicapped.

The child's intelligence level is affected by the psychological climate of the

house. According to Baldwin (1955) "Homes showing large gains in the IQ are those marked by warmth, freedom of exploration and acceleratory pressure from the parents".

The thoughts, feelings, and behaviour established by teacher form a foundation of adult happiness and effectiveness. It is the result of living and learning. There is no other place where mental matters are so important as in the home where the lives of children are taking the shape that will adumbrate future joy or disappointment and will mould destiny.

HYPOTHESES

1. Intervention strategies will facilitate the performance of children with moderate retardation of Residential School.
2. There would be no gender difference with respect to psycho-social development of the children with moderate retardation.

DESIGN OF THE STUDY

To verify the hypotheses, a quasi-experimental research design using pretest, post test two group design (Experimental and Control) was decided for the present study.

Table 1- Design of the Study

IV-II (Type-E) Presence or Absence of Intervention		**IV –I (Type S) Type of Institution**
	CG	RS MRs Pre-Post – No Intervention
	EG	RS MRs Pre-Post – With Intervention

SAMPLE & SAMPLING METHOD

Table 2- Distribution of Sample

Type of School	Experimental group		Control Group		Total
	Male	Female	Male	Female	
Residential School	10	9	9	7	35
Total	10	9	9	7	35

The main purpose of this research is to explore the various aspects of psycho-social development of the moderate mental children in residential schools and to study the effects of intervention.

TOOLS

1. Self structured questionnaire consists of 18 items comprising Name, date of birth, I.Q., sex, name of the school, date of admission, etc.
2. "Behaviour assessment scales for Indian Children with mental Retardation" (BASIC-MR) was used for the assessment of D.V.

   BASIC-MR has been developed in two parts

a) **PART A:** The items included in part A of the scale helps to assess the current level of skill behaviours in the child. It consists of 280 items grouped under the following seven domains.

1. Motor (M) 2.Activities of daily living (ADL) 3.Language (L) 4.Reading-Writing (RW) 5.Number-Time (NT) 6.Demestic-social (DS) 7.Prevocational-Money (PV) There are forty items under each domain.

   All items in the scale have been written in clearly observable and measurable terms in order to avoid confusion in understanding each item.

1. Reliability –A high degree of positive correlation between the two independent assessments for the overall scores (r=0.835) as well as within each domain of the scale.
2. Validity- The concurrent validity of the BASIC-MR Part A, was established

against social quotients of the mentally retarded children as derived on the Vineland Social Maturity Scale, Indian adaptation by Malin. Construct validity of BASIC-MR Part A was also measured for the differences between the mean scores on pre and post test levels. The scores were found to be statistically significant at the highest level (p=0.001). Besides the face validity for the BASIC-MR Part A as obtained from teacher rating was found to be high.

OUTLINE OF INTERVENTION PROGRAM

Intervention Program was designed on the basis of functional level of each of the respondents and somewhat common achievements of the respondents.

Six step sequence:

Successful application of behavioural technique followed a six step sequence.

Step I : Simply involves defining the target behaviour. In the current research the target behaviour was according to the domains selected and the items within it. For example, in the domain I motor domain the target behaviour was students should be able to turn the pages singly. Within step-I the researcher had to observe each student with the following questions in mind and accordingly give rating to the particular behaviour of the student.

a. What observable behaviour do you want to increase or decrease
b. Has the behaviour been defined in objective terms
c. What do you want the child ultimately to do?

Step II :

Deciding on an appropriate measurement procedure. The target behaviour selected will influence the types of measurement used. Questions related to this step include the following:

a. What is the time/ period/ interval required for measuring the target behaviour?
b. What type of material will be used in data collection? (e.g. books, letters etc.)
c. How will be the data charted? (Ratings on the observation sheet)
d. What evaluation design should be used? (E.g. Baseline design, rating on the basis on observation.)

Step III:

Baseline is taken and an ABC analysis is developed.

An ABC procedure involves analyzing the antecedent stimuli (A) and consequences (C) maintaining the target behaviour (B).

Step- IV :

The researcher implements the training strategy. After that the training was divided into sessions.

Session I: the students were demonstrated with proper method according the domains for example, to turn the page.

Session II: review of the homework was taken. The next days also the same task was repeated, presented the same book, on completion of the task, without considering the number of responses with variable intervals reinforcement was provided.

Session III: in this session the review was taken and continued with the same task. But this time after correct response only verbal reinforcement was provided

Session IV: students were introduced with the new book than the one used in the training phase and the responses were recorded.

Session V: No reinforcement was provided and the responses were recorded.

The sessions as well as intervention strategies were planned on the basis of the domain as well as significance of the strategies for the students.

Step-V: The researcher evaluates the effectiveness of the intervention. Essentially step V asks the question, "Did the intervention strategy substantially affect the baseline score?" (On the basis of the post-test ratings)

Step-VI: The researcher develops a generalization and / or discrimination procedure.

Discussion - In the present study after pre-testing the students from residential schools were subdivided into control group and experimental group. The experimental group was provided with the intervention strategies where as no intervention was provided to the control group participants.

Table 3- Mann-Whitney U test Values for the Items on Various domains of Adaptive skills for Residential School (RS) children with moderate mental retardation

Domain name	**Motor**			
←Item no →	**17**	**21**	**22**	**29**
'U'	109.00	124.50	109.000	131.50
'Z'	1.473	1.040	1.473	0.731
Domain name	**Activities of Daily Living**			
	13	**19**	**28**	**29**
	131.50	102.50	120.50	139.00
	.732	1.869	139.00	.498
Domain name	**Language**			
←Item no →	**8**	**9**	**28**	**29**
'U'	149.00	139.00	123.00	138.00
'Z'	.107	.502	1.057	.519
Domain name	**Reading-Writing**			
←Item no →	**8**	**9**	**30**	**31**
'U'	135.00	107.000	96.000	142.00
'Z'	.584	1.583	1.905	.383
Domain name	**Number-Time**			
←Item no →	**10**	**11**	**26**	**27**
'U'	102.50	133.500	114.500	128.50
'Z'	1.688	.661	1.295	.844
Domain name	**Domestic-Social**			
←Item no →	**3**	**5**	**29**	**30**
'U'	113.00	153.000	114.500	85.000
'Z'	1.469	.000	1.368	2.338*
Domain name	**Pre-Vocational**			
←Item no →	**4**	**5**	**24**	**25**
'U'	130.50	146.000	136.000	117.50
'Z'	.772	.248	.546	1.212

* - Significant at 0.05 level

** - Significant at 0.01 level

Considering the sample size, it was decided to apply the Mann-Whitney U Test (MWU) instead of 't' test to compare the difference between the performances of CG and EG from the residential school. The item wise performance on each domain was analyzed with the help of Mann-Whitney U test.

As per the domains stated in the table no.3 various techniques such as shaping,

chaining and reinforcement schedules were used. Hence though it has been seen that there was no significant difference between the pre-test and post-test scores, but there was increase in score from pre-test to post test.

However, while thinking about all the domains and all results in consolidated manner, a thought arises in the mind that except on Motor, ADL, language, reading-writing, number-time, domestic-social and prevocational domain, overall the MMRs show poor performance at pretesting level. To lift them up from that level, the intervention has to be more rigorous.

The Second hypothesis was stated as there would be no gender difference with respect to psycho-social development.

After post-testing the ratings of all females and males from RS were taken together to form the male and female groups.

After reviewing the statistical analysis it was noted that there were not many gender differences except a few with respect to psycho-social development in residential school. For RS participants on item 9 (carries out two sequential verbal or gestural commands) on domain III – language ($\square^2$ (1) = 3.883, $p<0.05$) and on item 3 dusts or wipes table, chairs etc. on domain VI – domestic social ($\square^2$ (1) = 6.045, $p<0.05$) significant relationship was found. Hence on the basis of the statistical results the third hypothesis stating that there would be no gender difference with respect to psycho-social development was proved.

Conclusion-

1. The first hypothesis stating at residential schools, intervention strategy will facilitate performance of children with moderate retardation can be accepted to a very small extent.
2. The Second hypothesis stating that there would be no gender difference with respect to psycho-social development, was proved.

Application :

To apply the intervention strategies for the residential school children with mental retardation, what seems to be needed is nothing short of a new theory of learning and

instruction, a theory that will provide, on the one hand, principles for guiding authentic inquiry, knowledge construction and learning for retarded students.

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