ORIGINAL RESEARCH PAPER

Psychology

KEY WORDS: Autistic Mentally Challenged Children, Psychoeducational Interventions and personal and academic domains and functional assessment

BEHAVIOURAL INTERVENTIONS TO IMPROVE PERSONAL AND ACADEMIC DOMAINS OF AUTISTIC MENTALLY CHALLENGED CHILDREN

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ABSTRACT

The role of psychological interventions in promoting personal and academic domains in a sample of 12 Autistic Mentally Retarded children were examined in the age group of 6-9 and 9 –12 years living in urban and rural areas of Chittoor and Tirupati of Andhra Pradesh. Personal and academic domains were measured through the Functional Assessment Check List for Programming (FACP). A module of psychoeducational interventions were planned to improve the personal and academic domains among Autistic Mentally Retarded children. Policy implications in promoting functional skills have been discussed.

Introduction:

Autistic spectrum Disorder is a heterogeneous and complex disorder impacting many areas of development including intellectual, communication, social, emotional, and adaptive functions (Makrygianni & Reed, 2010) which also present considerable challenges to both the individual and their family across their lifespan."Autism is a neuro behavioral syndrome marked by qualitative impairments of social interaction, communication and restricted repetitive and stereotyped patterns of behavior" (Kanner, 1943). It is important to distinguish autism from other conditions, since an accurate diagnosis can provide the basis for building an appropriate and effective educational and treatment program. The existing research suggests that a number of interventions have been promoted as providing breakthrough in the treatment of autism. Those therapies are sensory motor therapy, facilitated communication, auditory integration training, sensory integration therapy (Gardner, 2001; Jacobson, Mulick, & Schwartz, 1995) and several other forms of psychotherapy such as Psychoanalysis, Holding therapy, and Options therapy (Beratis, 1994; Bromfield, 2000).

Behavior modification is based on careful observation and recording of behavior (rather than subjective interpretation) and the application of psychological techniques to promote desired behaviors and extinguish behaviors causing problems for the person or others. Behavioral approaches are useful for teaching new skills and highlighting specific environmental factors, acting as triggers which may then be amenable to change. But changes in patterns of behaviors learned in one setting are rarely transferred to another situation ("generalization"). The implication is that many behavioral interventions should be in the individual's normal environment (Rogers, 1998).

Psycho-education is a specialized form of education aimed at helping to learn and creating awareness about the range of emotional and behavioral difficulties, their effects and strategies to deal with them. Having demonstrated success in the treatment of schizophrenia, psycho educational approaches were subsequently extended to the treatment of a wide range of disorders like autistic mentally retarded children (Kaufman, 1979). Since their inception as family-focused intervention in schizophrenia, psychoeducational approaches have been extended not only to a broader range of disorder, but also to a primary focus on educating the individual patient (Kaufman & Kaufman, 1983; Steinglass, 1987).

The functions of psychoeducational intervention are Counseling, consultation, testing, provision of information through training and in service training. The aforementioned introduction clearly demonstrates the dearth of researches in the Indian context on psychoeducational intervention targeting children with Mental Retardation having Autism Spectrum disorders. In view of this the present study has been contemplated.

Objective:

1. To examine the efficacy of behavioural interventions on personal and academic domains of functional checklist programme in a select sample of children with mild MR having Autism.

Method:

Participants of the study

For purposes of the present study subjects were selected from the rural and urban areas of chittoor and tirupati. Door to door survey was carried out and a total sample of 120 cases were identified by using purposive sampling techniques. These 120 children were screened to identify cases with mental retardation by administering Developmental screening test (DST), Vineland Social Maturity Scale (VSMS) and Binet Kamat Test of Intelligence (BKT). Compiling the scores of DST, VSMS and BKT, the IQ was obtained .IQ above 70 were ruled out and below IQ 70 were administered Indian Scale for Assessment of Autism. Total 12 mild MR children having ASD were identified consisting of 9 males and 3 females and included for the interventional study.

The intervention sample (N=12) consist of 9 males and 3 females of which 7 were in the age group of 6-9yrs and 5 were in the age range of 10yrs-12yrs. For purposes of convenience these two age groups are considered throughout the report i.e. children between 6 years (6+) and 9 years (below 9 years) and the other age group between 10 years i.e. (10+) upto 12 years. In the intervention sample of 12 subjects, all were with mild MR having mild autism.

Measures used

To realize the objectives of the present study following tools were used.

Department of Special Education at NIMH (1995) has developed educational assessment checklist for children from preprimary to prevocational levels. Grouping is done based on the ability and chronological age into different levels such as Preprimary, Primary-I, Primary-II, Secondary, Pre-vocational-I, Pre-vocational-II, and Care group. The areas to be trained are grouped under the following areas or domains: Personal, Social, Academic, Occupational and Recreational. All the items listed are activity based so that setting teaching goals and evaluation are easy for about three academic years. In the present study only two domains were considered viz., personal and academic in Functional Assesment checklist programme.

Results and Discussion

As the aim of the present study is to examine the efficacy of psychoeducational interventions towards behavior modification of MR children having Autism, the execution of intervention program for different skills are explained in detail.

Goals reported in FACP domains viz. personal and academic (Table-1).Analysis of results on domains of FACP domains of FACP in pre and post intervention sessions are reported in Table-1.

FACP has developed in children at preprimary to prevocational levels. Grouping was done based on the ability and chronological age into different levels such as pre primary and primary-II. Out of 5 areas or domains only personal and academic domains are considered in this study. Accordingly the format is designed in such a way that the programmes can enter assessment information and to monitor progress periodically.

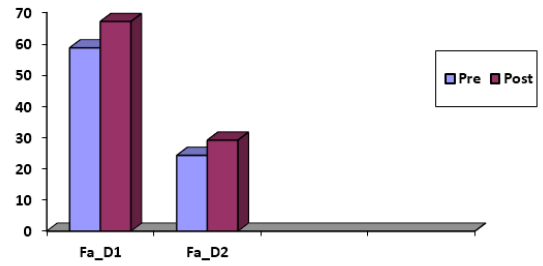
Table-1: Psychoeducational Intervention in the Sample

	Intervention					
	Pre (n=12)		Post (n=12)			
FACP Domains	Mean	Std. Deviation	Mean	Std. Deviation	t - Value (df=7)	Significance level
Fa_d1Per	60.085	18.98	67.54	17.04	7.42	P<0.01
Fa_d2acd	25.46	17.97	30.22	17.32	9.6	P<0.01
Fa_d1Per :FACP Domain 1- Personal ; Fa_d2acd : FACP Domain 2- Academic						

FACP domains in the age group - 6 to 9yrs

The scores of personal and academic domains in FACP (Table-1) were tested between 6-9 and 10-12 yrs age groups. An analysis of results shows (Table-1) that there is an increase in performance in personal and academic domains after interventions and are statistically highly significant. After execution of multiple behavioral programs that have been developed as explained earlier it was noticed there was a significant improvement in personal and academic domains. For instance a study by Cicero and Pfadt, (2002) investigated the effectiveness of a reinforcement-based toilet training procedures including the combination of positive reinforcement, graduated guidance, scheduled practice trails and forward prompting. Findings suggest that the proposed procedure was an effective and rapid method, which can be implemented within a structured school setting with generalization to home environment. The above results highlighted the effectiveness of psychoeducational interventions for children with mental retardation having autism. Combination of special educational strategies like physical prompting (PP), verbal prompting (VP), fading, token economy, response cost, positive reinforcement, modeling and cueing were used to bring improvement in personal and academic domains in the present study and were found to be effective. Figure-1 illustrates the efficacy of psychoeducational intervention towards improvement in personal and academic domains of FACP.

Figure-1: Psychoeducational intervention and Functional Assessment Check list of programming (FACP) in pre and post intervention sessions in 6-9 Yr children



Fa_D1: Personal ; Fa_D2: Academic

Effectiveness of Psychoeducational Intervention on FACP in pre and post interventions in 10-12yrs children

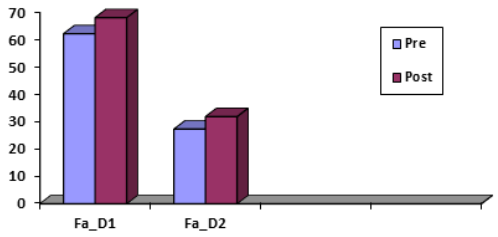
The target goals in the intervention stage were the target goals reported in FACP domains viz., personal and academic in MR children having autism with age group of 10 to 12 years. Based on the progress of the child, quantitatively and qualitatively, by using FACP on periodical basis, the effect of interventions in pre and post intervention sessions were evaluated in 10-12Yr MR Children having autism.

Table-2: Psychoeducational Intervention and FACP Domains in Pre and Post Intervention Sessions in the Age Group 10-12yrs

	Intervention					
	Pre(n=5)		Post(n=5)			
FACP Domains	Mean	Std. Deviation	Mean	Std. Deviation	t - Value (df=4)	Significance level
Fa_d1Per	62.28	12.04	68.18	11.58	16.82	P<0.01
Fa_d2acd	27.36	11.69	31.92	9.80	5.28	P<0.01
Fa_d1Per :FACP Domain 1 Personal; Fa_d2acd : FACP Domain 2 Academic						

An analysis of the results on FACP (Table-3) among 10-12 years shows that there was increase in personal and academic domain scores which indicates improvement after intervention. The improvement is more in 6-9 year children compared to 10-12 year children. The reason could be because of introduction of behavioral intervention at an early age may produce positive results compared to the introduction of intervention in late childhood i.e. 10-12years. This needs to be examined through further research. These findings are in accordance with the study of Ben-Itzchak and Zachor, (2007) reporting that intensive behavior intervention have produced positive out come in young children with autism in their personal skills.

Figure -2: Effect of Psychoeducational Intervention and Functional Assessment Check list of Programming (FACP) in 9-12 year children.



Fa_D1: Personal ; Fa_D2: Academic

With regard to academics or teaching skills (cognition, socialization and communication). Jennifer and Ann (2010) in their educational programs for adolescents with autism (age 12-16 yrs) in inclusion and non inclusion settings as reflected in their individual education plan (IEP) goals, it was noted that most IEP goals addressed core symptoms of autism (e.g., communication skills) as opposed to academic skills development along with fewer overall goals and more curricular adaptations as students enter adolescence. The results pertaining to academic and personal domains of FACP in children between 10 to 12 years are illustrated in Figure-2. These findings highlight the need for psychoeducational intervention in improving functional and academic domains.

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