

THE EFFECTS OF MULTIDISPENSARY PROGRAM ON CHILDREN WITH AUTISM

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ABSTRACT: The aim of the present work is to evaluate the role of multidispensary program in improvement of children with autism. The sample of the study was 15 autistic children. The children were subjected (before and after the program) to evaluation of motor skills, languages behaviour, social skills, and life skills. There was a significant important change in motor skills, language skills, and social skills after the program. The nature of autistic spectrum disorder has significant implications for approaches to education and intervention.

INTRODUCTION

Autism and the pervasive developmental disorders are neuropsychiatric disorders characterized by patterns of delay and deviance in the development of social communicative and cognitive skills. Autism is characterized by impairment in reciprocal social interaction, impairment in verbal and non-verbal communication, lack of imaginative play and a pattern of repetitive serotypical behaviour, and interest.⁽¹⁾

The onset of the autism starts in the first years of life, disrupt diverse

developmental processes, and is often associated with mental retardation. This condition differs from primary mental retardation and flow in the language and other development disorders in that the behavioral features and patterns of development are observed in multiple areas, highly distinctive, and not simply manifestations of developmental delay.⁽²⁾

Autism like most other behaviour system, seems to be etiologically heterogeneous disorder.⁽³⁾ Although a link between autism

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and environmental exposure is plausible, little evidence exists to support associations with specific environmental exposures. In rare situation autism is strongly associated with agents that cause birth defects.⁽³⁾

Preschool education lays the foundation for individuals to develop fully. It contributes to their communities in ways that foster economic growth, social stability, and prosperity. Child development experts and brain researchers continually studied a duration of an understanding of the magnitude and critical nature of learning during preschool period.⁽⁴⁾ Current research supports the need for early identification of children with autism spectrum disorders and the provision of appropriate education at program. Physicians and family care providers have primary role in assisting families to identify the needs of their children in order to obtain appropriate supports.⁽⁵⁾

Evidence shows that early intervention results in dramatically positive outcomes for young children with autism. While various pre-school models emphasize different program components, all share an emphasis on early, appropriate, and intensive educational interventions for young children. Other common factors may be: some degree of inclusion, mostly behaviorally-based interventions, programs which build on the interest of the child, extensive use of visuals to accompany instruction, highly structured schedule of activities, parent and staff training, transition planning, and follow-up. Because of the spectrum nature of autism and the many behavior combinations which can occur, no single approach is effective in alleviating symptoms of autism in all cases. Various types of therapies are available, including applied behavior analysis, auditory integration training, dietary interventions, discrete trial teaching, medications, music therapy, occupational

therapy, physical therapy, sensory integration, speech/language therapy, TEACCH, and vision therapy.⁽⁶⁾

Studies show that individuals with autism respond well to highly structured, specialized education programs tailored to their individual needs. A well designed intervention approach may include some elements of communication therapy, social skill development, sensory integration therapy, and applied behavior analysis, delivered by trained professionals in a consistent, comprehensive, and coordinated manner. The more severe challenges of some children with autism may be best addressed by a structured education and behavior program which includes a one-on-one teacher to student ratio or small group environment. However, many other children with autism may be successful in a fully inclusive general education environment with appropriate support.⁽⁶⁾

Teaching children with autism can be

the most challenging to preschool teachers because of the complexity of their brain disorder. The child life is affected, in the areas of communication and language, social, and play skills activities of daily living, self regulation behaviors, and no sensory improvement.⁽⁷⁾

Preschool teachers and programs should provides two dimensions of quality for best practice approach. Process quality is the materials learning opportunities, safety routines, interactions, and activities. Structural quality is the size of the group education and training of the staff.⁽⁸⁾

THE AIM OF THE PRESENT WORK

Is to evaluate the efficacy of multidispensary program in improvement of autistic children.

MATERIAL AND METHODS

The study was conducted between November 2006 and June 2007 on 15 children (6♀ and 11♂) referred to educational center in the Kindergarten Collage diagnosed as autism. The

diagnosis was confirmed using specific test.⁽⁹⁾ All the sample was subjected to the following:

1. Motor evaluation test with the following subdivision,⁽¹⁰⁾
 - Gross motor evaluation.
 - Fine motor evaluation.
 - Body image.
2. Language evaluation test.⁽¹¹⁾
3. Observation checklist to assess the social skills⁽⁷⁾ and self care skills.
4. Behaviour test.⁽¹²⁾

Objectives of the program

1. Improvement of life skills in autistic children.
2. Improvement of motor skills in autistic children.
3. Development of social skills and language skills.
4. Behaviour therapy.

Materials used in the program

Several materials were used according to the type of training such as balls, tools casate, toys with some clothes, shoes,...., ect.

The main components of the program

I- Development of social skills which include

- 1- Readiness for learning which include.
 - a- Visual communications.
 - b- Increase attention span.
 - c- Follow simple orders.
- 2- Learn simple social skills
 - a- Knock the door.
 - b- Say good bye.
- 3- Play in groups.
 - a- Play with one or two adults.
 - b- Play in regular way.
 - c- Wait the turn.

II- Development of social skills which include:

- 1- learn how to wear and remove clothes.
- 2- Learn how to care of himself/herself.

III- Development of motor skills

- 1- Development of gross motor skills.
- 2- Development of fine motor skills.

IV- Development of body image

- 1- Through actions.

2- Through feelings.

VI- Behaviour therapy: two sessions/week

VII- Speech therapy: two sessions/week

VIII - Parents therapy

The program is continued from November 2006 until May 2007 then the children resubjected to the preview evolution tests (post test).

The results were tabulated and statistical analyses were carried out using relevant statistical tests to compare the pre and post results.⁽¹³⁾

RESULTS

Table (1) shows the main demographic features of the sample as regional age, sex, socioeconomic status, family history of

autism, and consanguinity. Table (2) shows evaluation of gross motor, fine motor, and body image before and after the program. There were significant improvement in the post test ($p < 0.001$) in gross motor, fine motor, and body image.

Table (3) shows the evaluation of social skills and self care skills before and after the program. There was significant improvement in post test ($p < 0.01$) in social skills and self care skills. Table (4) shows the evaluation of language skills and behaviour disorders before and after the program. There were significant improvements in language skills and behaviour after the program.

Table (1): The main demographic features of the sample

	n=15
Age	
3-4	11
4-5	4
Sex	
♂	10
♀	5
Socioeconomic	
Law	1
Middle	12
High	3
Family history of autism	
+ve	3
-ve	12
Consanguinity	
+ve	6
-ve	9

Table (2): The evaluation of gross motor, fine motor, and body image before and after the program.

	Mean of the Pre-test	Mean of the post-test	Percentage of change	t (p)
Gross motor skills (n= 15)	5.13 ± 1.13	11.20 ± 1.42	118 %	19.215* (<0.001)
Fine motor (n= 15)	2.93 ± 1.03	6.80 ± 1.52	132 %	8.286* (<0.001)
Body image (n=15)	3.20 ± 0.86	7.73 ± 1.75	142 %	22.381* (<0.001)

Table (3): The evaluation of social skills and self care skills before and after the program.

	Mean of the Pre-test	Mean of the post-test	Percentage of change	T (p)
Social skills	3.40 ± 0.91	7.73 ± 1.75	127 %	10.564* (<0.001)
Self. care skills	2.80 ± 1.26	6.67 ± 1.63	138 %	7.250* (<0.001)

Table (4): The results of languages evaluation before and after the program

Skills	Mean of pre-test	Mean of post-test	% Change	Test
Language skills	3.53	11.53	226.63%	65.970*
Behaviour test	4.82	29.24	506.64%	75.927*

* Significant

DISCUSSION

Autism is a communication disorder characterized by a child's inability to relate to the world physically and emotionally.⁽²⁾ These children are usually hypersensitive to environmental stimuli and seem to be withdrawn into the inside world. Only they have Autistic children need special and individualized care from their parents and caregivers.^(2,3) 10,000 children approximately. Recent studies have reported much higher prevalences of 30 to 50 per 10,000 children.⁽⁵⁾ A large body of research has demonstrated substantial progress in response to specific intervention techniques in relatively short periods of time (several months) in many specific areas, including social skills, language acquisition, numerical

communications, and reductions in challenging behaviors.⁽¹³⁾ Studies from the 1980s and early 1990s reported a prevalence of 4 to 10 per

The consensus across program is generally strong concerning the need for: early entry into an intervention programs; active engagement in intensive instructional equivalent of a full school day including services that may be offered in different sites, for a minimum of 5 days a week with full year programming, use of planned teaching opportunities, organized around relatively brief periods of time for the young children.⁽¹⁴⁾

Difficulties with social relationships and interactions have been one of the hallmarks of autism and efforts to understand the nature of difficulties in autism, and to find effective treatment, have driven research and clinical and educational practice for the post 40 years.⁽¹⁵⁾ By definitions, children with autism demonstrate impairments in relationship to peers, the use of non-verbal communicative behaviors within their social exchanges, the use of initiation, and symbolic or drastic play.⁽¹⁵⁾

Our study revealed significant

Improvement in social and life skill in autistic children after the program.

Although the basic motor skills of children with autism are often reported to be an area of relation strength, numerous studies also provide evidence that motor problems may sometimes be quite significant-specific defects which have been reported, such as hypotonia and in coordination.⁽¹⁶⁾

Developmental modes of communication and speech in young children with autism are a primary focus of many interventions but the development of receptive language abilities has generally received for less targeted attention.⁽¹⁷⁾ Steven and Kairtym, 2006 investigate the clinical efficacy of a computer-based training program for teaching-used comprehensive skills to young non-verbal and minimally verbal children with autism.⁽¹⁸⁾

The goal of autism speech language therapy should be to improve useful communication is a realistic goal. For others, the goal may be gestured

communication skills. Other children may have the goal of communicating by many of a symbol system such as picture boards.⁽¹⁷⁾

A large percentage of people with autism doesn't use language functionally that is, to communicate basic needs and wants even those who speak will likely have difficulties with the pragmatic or social use of language, which includes understating social uses, and understanding age-appropriate humor. Whither a child is more verbal or has a large vocabulary speech and language therapy can be a valuable piece of therapy.⁽¹⁸⁾

CONCLUSIONS

The nature of autistic spectrum disorders has significant implications for approaches to education and intervention.

Children on the autism spectrum develop most successfully and rapidly when their special social, educational, and biomedical needs are met within an individualized program.

RECOMMENDATIONS

Appropriate educational objectives for children with autistic children spectrum disorders should be observable, measurable behaviors, and skills. They should include the development of:

- a. Social skills to enhance participation in family, school, and community activities.
- b. Expressive verbal language, receptive language, and non-verbal communication skills.
- c. Fine and gross motor skills used for age-appropriate functional activities as needed cognitive skills, including symbolic plays and basic concepts as well as academic skills.

REFERENCES

1. William B, Mina D. Practice parameters for the assessment and treatment of children, adolescents and adults with autism and other pervasive developmental disorders. *Journal of American Academy of Child Adolescent Psychiatry.* 1999; 3-15.
2. Williams JG, Hygiene JPT, Bnayne CEG. Systemic review of prevalence studies of autism spectrum disorders. *Arch Dis Child.* 2006; 91(1): 8-15.
3. Newschofer CJ, Croen LA, Daunels J. The epidemiology of autism spectrum

- disorders. *Immu Rev Public Health*. 2007; 28: 255-8.
4. Johon S. Preparation for learning preschool education. Third National Forum on Education. Canada: Council of Ministers of Education. May 1998: 20-30.
 5. William J, Slavica K, Rober L, Amy L, Steven J. The incidence of autism in Olmsted Country Minnesota, 1976- 1997. *Arch Pediatr Adolesc Med*. 2005;179(1): 37-44.
 6. The Autism Society of America. The definition of autism – page 2. what are people with autism like? Available from: www.ourspecialkids.Org/autism/moder/2.html. Accessed at 9/23/2006.
 7. Kliss J. Teaching children with autistic spectrum disorder. A preschool teacher survey to determine best practical approach. *Journal of American Academy of Special Education Professionals*. 2006; 5: 16-9.
 8. Espinosel M. High quality preschool; why we need it and what it looks like? National Institute for Early Education. Research. New York: Plenum Press; 2003: 27-30.
 9. Charman T, Baired G. Practitioner review: Diagnosis of autistic spectrum disorder in 2 and 3 year old children. *Journal of Child Psychology and Psychiatry*. 2002; 43: 289-305.
 10. Ulrich DA. Test of gross motor 1 Development. 2nd ed. Austin TX: Prof-Ed: 2000;18-22.
 11. Jellinuk M, Murphy M, Comer D, Kelleher K. Use of the pediatric symptom checklist to screen for psychosocial problems in pediatric primary care. *Arch Ped Adol Med*. 1999; 153: 254- 60.
 12. Glogowska W, Roulstora S, Enderly P, Peterst J. Randomized controlled trail of community based speech and language therapy in preschool children: *BMJ*. 2000; 321: 923-6.
 13. Salvin S. Practical biostatistical methods. Belmont CA: Duxbury Press; 1995. 49-56.
 14. Catherine L, Jaws M. Educating children with autism. Committee and educational interventions for children with autism national research council. Washington: National Academy Press; 2001.
 15. Kasari C. Assessing change in early intervention programs for children with autism. Los Angelus: National Research Council; April 12, 2000.
 16. Rapin S. Neurological examination in preschool children developmental language disorder. *Autism Low IQ: Ropin, ed. London, England: Macheith Press; 1996.*
 17. Pannos S. Speech and language therapy. A key intervention for individuals with ASD community. First published at a web project of Kennedy Kriger Institute. Accessed at 1/31/2007.
 18. Steven K, Kaitrymn W. Creating comprehensive programs for children with autism-spectrum disorder. Autism programs training in Lausanne, Switzerland; September 2006. 19-22.