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Research Article

BENEFITS OF AN INTERVENTION PROGRAMME ON FUNCTIONAL SKILLS TO PARENTS OF CHILDREN WITH AUTISM

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ABSTRACT

Background: Children with autism need assistance from their parents or caretakers in performing their day to day living activities as they lack in their functional skills. Having difficulty in functional skills may lead to problems not only in their day to day life, but also affects their parents' quality of life.

Aims and Objectives: To assess the benefits of an intervention programme on functional skills to parents of children with autism.

Materials and Methods: Purposive random sampling technique was used to select the samples. A self-structured scale developed by the investigator was used to collect the data from the parents of children with autism attending special schools in Bangalore city. The sample consisted of 120 parents of children diagnosed with autism between 5 to 10 years of age. The research design included a pre and post method with an intervention programme.

Results: The post assessment data revealed that the intervention programme had a positive influence on the functional skills of children with autism.

Conclusion: The study highlighted the need for training the parents on the functional skills of children with autism in order to help their child/children become independent in their day to day routine and develop a sense of identity.

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INTRODUCTION

Autism is one of the most common developmental disorders and it is a life-long disability. Children who are diagnosed with autism have difficulties with social interaction, display problems with verbal and nonverbal communication, and exhibit repetitive behaviours or narrow, obsessive interests (National Institute of Neurological Disorders and Stroke [NINDS], 2017). According to American Psychiatric Association [APA], (2013) many of the autistic children never develop speech; some of them often respond inappropriately in conversations, they have difficulty making friendships appropriate to their age. In addition, they are also overly dependent on their parent's for their daily routine and are extremely sensitive to changes in their environment. The symptoms of children with autism falls on a continuum in which some of them may show mild symptoms and others may have much more severe symptoms. It may also go unrecognized for those who are mildly affected (NINDS, 2017). Maladaptive behaviours, such as aggression, self-injury,

and destructive behaviours are common among children with autism (McTiernan, Leader, Healy, & Mannion, 2011; Murphy, Healy, & Leader, 2009).

Most of the children with autism have poor functional skills due to an overall developmental delay. Functional skills are the skills that an individual requires in order to live independently (Webster, 2017). It includes self-care skills, functional academic skills, pre vocational skills, social skills and community living skills (Teaching Students with Autism Spectrum Disorders, 2003). According to Olivié, (2012) autistic children usually have eating problems, such as difficulty in solid uptake and food restrictions due to the sensory issues or communication difficulties. Many of these children are difficult to toilet train (Wu, 2010); and have irregular sleep patterns (Dominick, Davis, Lainhart, Tager-Flusberg, & Folstein, 2007). Some children with autism do not consider how they look in front of others. Because of all these issues in functional skills, children with autism need help from their parents in performing these skills in their everyday life

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(Eapen, & Guan, 2016; Ministry of Health and Welfare and Korea Institute for Health and Social Affairs, 2011). They place a set of extra demands, challenges and burdens on the family system that leads to parental stress (Kirk, Gallagher, and Anastasio, 2000). Parents of autistic children have less time for themselves as well as for other household chores (Ravindranadan, & Raju, 2008); since their child needs extra time from them to go for various therapies e.g., speech and language therapy, occupational therapy (Sawyer, Bittman, La Greca, Crettenden, Harchak, and Martin, 2010). Parents face many challenges in raising their children with autism. It also affects the parents' life as well as makes their child become dependent on others. Thus, an attempt was made to assess the benefits of an intervention programme on functional skills to parents of autistic children.

METHODOLOGY

Objectives: The objectives of the present study were:

1. To assess the functional skills of children with autism
2. To conduct an intervention program to train the parents of children with autism on functional skills
3. To assess the influence of intervention program

Sample: A total sample of one-twenty parents of children with autism between the age group of (5 to 10) years old in which sixty parents belonged to experimental group and the another sixty of them belonged to control group.

Tool used: A three-point Likert type scale on functional skills of children with autism was developed by the investigator to obtain data about the functional skills of children with autism from their parents. The scale consisted of two sections- Demographic details of the respondents and specific information related to the functional skills of their children with autism. The scale has 94 items; the items were further divided into 5 dimensions. The response options were given as "Never=0", "Sometimes=1" and "Always=2". The five dimensions of the scale are given in table 1.

Table 1 Dimensions of functions skills of children with autism and its number of items

Sl.no.	Dimensions	No. of items
1	Self-care skills	28
2	Functional academic skills	24
3	Pre vocational skills	10
4	Social skills	18
5	Community skills	14
	Total	94

METHOD

Experimental design with pre- test, post-test method with an intervention program was used.

Pre-test: The investigator identified and visited special schools catering to the educational needs of autistic children. The consent letter was submitted to the school principals. Permission was sought to conduct the study in their esteemed schools. The investigator met the parents and explained the purpose and objective of the study to them. Investigator established rapport with the parents and assured that the data obtained from them will be kept confidential. The data was collected from the parents who were interested to participate in the study and the intervention programme by using the self-structured functional skills tool. The data were scored, analysed

and tabulated using the SPSS (The Statistical Package for the Social Sciences) software.

Intervention program: The intervention program was provided to the experimental group of parents of autistic children. It was aimed to educate the parents on the need and importance of functional skills to their autistic children as well as to train the parents on how to teach these skills to their children with autism. The investigator conducted the intervention program over a period of 16 weeks for the duration of 3 hours per session and twice a week. The investigator addressed various topics using different techniques during the intervention program. The schedule of the intervention program is given in table 2:

Table 2 Topics covered and method used for the intervention program

Sl.no.	Topics covered	Technique used
1	About children with autism, functional skills, Need for functional skills for children with autism.	Power point presentation, Lecture and group discussion
2	Self-care skills: brushing, toileting, bathing, eating, grooming, washing hands, bed time.	Power point presentation, flash card, activities, short videos, models, posters, action songs, etc.
3	Functional academic skills: concepts of alphabets, numbers, identify colours, recognize shapes, identify body parts, calendar concepts, time and money concepts.	Power point presentation, flash card, activities, models, posters, etc.
4	Pre-vocational skills such as beading, drawing, stacking, paper folding, counting, preparation of files (using handmade papers), greeting cards envelopes, greeting cards, flowers, key chains, flower vase decoration, paper bags, diya decoration and candle making etc.	Hands on experience, activities, demonstrations and models.
5	Social skills: making eye contact, telling name, making friends, emotions, behaviours, helping others, greeting or praising others and apologising to others	Power point presentation, flash card, activities, short videos, models, posters, role play, story-telling, score card, lego blocks etc.
6	Community living skills: following instructions, using public transportation, following rules in school, to know the role of community workers, to identify and recognise public places (post office, medical store, school, hospital, etc.).	Power point presentation, flash card, activities, short videos, posters, stories, lego blocks etc.

In addition score card was also used to teach and train parents on how to reinforce the concepts taught to them at home for their autistic children.

The investigator also gave home assignments for the parents to ensure that they begin to teach their child skills by using the techniques that they learnt at the time of intervention programme. This was done with a purpose to enable their autistic child to perform his/her daily tasks with less support.

Post-test

After the intervention program, functional skills scale that was used at the time of pre-test was re-administered to the parents of both the control and experimental groups. The investigator re-administered this in order to assess the impact of intervention program in terms of changes in the functional skills of children with autism.

The data collected were consolidated, scored, tabulated and analysed using t-test. Findings of the study are interpreted under results and discussion:

RESULTS

For the control group, most of the children (36%) were from the age group of 7 to 8 years old, 35% of them were belonged

to the age group of 5 to 6 years and the remaining 29 % were from 9 to 10 years old. For the experimental group (38%) of the children were from 5 to 6 years and the remaining 35% and 27% were from 7 to 8 years and 9 to 10 years respectively. A majority of the children from both the control and experimental groups (78% and 87%) were male and 22% and 13 % of them were female child. Most of the children (77% and 93% form control and experimental groups) were first born then continued with (23% and 7%) were second born. The data also revealed that majority of them 93% and 85% (control and experimental groups) were from nuclear type of family and the remaining 7% and 15% were from joint family.

Table 3 Pre-Post Test of the Control Group

Dimensions of functional skills	Pre-test (60) Mean ± SD	Post-test (60) Mean ± SD	Significance of t value
Self-care skills	21.35 ± 7.10	24.58 ± 6.45	2.6096**
Functional academic skills	11.23 ± 7.65	12.52 ± 6.94	0.9679 ^{NS}
Pre vocational skills	6.77 ± 3.78	7.98 ± 3.10	1.9185 ^{NS}
Social skills	8.88 ± 3.83	9.68 ± 3.48	1.1981 ^{NS}
Community skills	6.18 ± 2.97	6.40 ± 2.48	0.4407 ^{NS}
Overall	54.42 ± 19.87	61.17 ± 17.81	1.9604*

** Significant at 1% level * Significant at 5% level NS Not significant

The mean scores and ‘t’- value of pre-test and post-test of functional skills of children with autism for the control group is depicted in table 3. The table shows that there was a highly significant difference between the scores of pre-test and post-test of self-care skills of children with autism. And, no significance difference between pre-test and post-test of the remaining dimensions of functional skills were observed. This could be due to the fact that parents of children with autism mainly focus on teaching only self-care skills such as brushing, eating, bathing, toileting, etc. since these are the basic necessities that need to be done every day at home for their autistic child.

Table 4 Pre-Post Test of Experimental Group

Dimensions of functional skills	Pre-test (60) Mean ± SD	Post test (60) Mean ± SD	Significance of t value
Self-care skills	19.42 ± 6.85	27.53 ± 6.65	6.5838**
Functional academic skills	9.42 ± 5.76	13.28 ± 6.13	3.5566**
Pre vocational skills	6.07 ± 3.29	8.85 ± 3.20	4.6943**
Social skills	8.40 ± 3.26	11.37 ± 3.60	4.7398**
Community skills	5.55 ± 2.83	8.22 ± 3.13	4.9044**
Overall	48.85 ± 17.78	69.25 ± 17.87	6.2717**

** Significant at 1% level

Table 4 indicates the mean scores and ‘t’- value of pre-test and post-test of functional skills of children with autism for the experimental group. According to the table, The ‘t’ test value of 6.2717** indicated that there were highly significance differences between the pre-test and post-test in all the dimensions of functional skills of children with autism at 1% level. It also revealed that children with autism have lower scores for all the dimensions of functional skills. But after the intervention program, improvements were observed in all the dimensions of functional skills of the autistic children.

DISCUSSION

Based on the data from 120 parents of children with autism, the study examined the benefits of an intervention programme on functional skills to parents of autistic children. The finding of

the post-intervention data for the control group revealed that there was an improvement in the self-care skills of children with autism. But, there were no significance differences between the pre-test and post-test of functional academic skills, pre vocational skills, social skills and community skills of children with autism. In other words, there were insignificant improvements in the dimensions of functional skills of children with autism except for the self-care skills in the control group which clearly reflects the need for training.

Although for the experimental group, results identified highly significant differences between the pre-test and post-test of all the dimensions of functional skills of children with autism (i.e. Self-care skills, functional academic skills, pre vocational skills, social skills and community skills). The post-intervention data for the experimental group showed significant improvements in all the dimensions of functional skills of autistic children which clearly indicates that the intervention program was effective.

Eprilisanti, Pulungan, Utami, and Bayani, (2018) stated that when the child is diagnosed with autism, parents do not accept their child’s disorder and they are often shocked, feel sad, disappointed, guilt, angry and declined these leads to conflict in the family system. Many parents are experiencing doubts and confusions on certain symptom exhibited by their child. In addition, children with autism are impaired in functional skills (Jasmin, Couture, McKinley, Fombonne, & Gise, 2009). But, due to the inadequate information and lack of knowledge about autistic disorder (Eprilisanti, *et al.*, 2018); parents are not aware of the techniques of teaching functional skills to their autistic child, and these makes the child more dependent on their parents in performing the daily living activities. However, after the intervention program was given to parents of the experimental group, they gained more knowledge on how to handle their child’s behaviours and teach functional skills to them compared to that of control group parents. Ultimately the goal is to improve the functional skills of the autistic children and reduce the parental issues. Parents of experimental group were happy and satisfied with the gradual improvement in the functional skills of their children with autism.

The following studies show the evidence of the effectiveness of the intervention program on functional skills among children with autism.

Kasari, Paparella, Freeman, and Jahromi, (2008) conducted a study on 58 children (46 boys) with autism between 3 and 4 years of age. Children were randomized to a joint attention intervention, a symbolic play intervention, or control group. They received the intervention program daily for 30 minutes 5-6 weeks. Results indicated that expressive language gains were greater for both treatment groups compared with the control group.

The research by Belser and Kurt (2016) examined whether mothers of children with autism can learn to prepare video recordings and implement video modelling with treatment integrity, and whether such video modelling is effective in teaching a play skill to the children. Results showed that mothers were able to implement video modelling with high treatment integrity. All the children (3 boys with autism, aged 4-6 years) who participated in the study were able to learn the

target skill. Results also showed that the intervention had an acceptable level of social validity.

Miyajima, *et al.*, (2017) designed intervention programme on improving selective eating behaviour for parents of children with autism and evaluate its effectiveness. The sample consisted of 23 parents of children (aged 3-6 years) with autism. Significant differences were observed before and after the intervention in the degree of difficulty perceived by parents, their degree of self-efficacy, the number of recommendations conducted by them, their subjective view of the degree of dietary imbalance, and the number of food items consumed by their children. The interventional programme was found to be useful.

Mahoney and Perales, (2003) investigated the effectiveness of relationship-focused intervention on the social and emotional well-being of children with autism spectrum disorders. Relationship-focused intervention is a general approach to developmental intervention that encourages and supports parents to enhance their use of responsive interactive strategies during routine interactions with their children. The participants were 20 young children with autism and their parents. The intervention program was conducted weekly for 8 to 14 months. The results indicated that the intervention was successful at encouraging mothers to engage in more responsive interactions with their children. Increase in mothers' responsiveness was associated with significant improvements in children's social interaction, as well as in standardized measures of their social emotional functioning.

CONCLUSION

Based on the findings of the study, it can be concluded that there is a need for an intervention program in order to train the parents on how to teach functional skills to their children with autism in order to help their children become less dependent in doing their day to day tasks and thereby reducing the parents care giving burden.

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