

Impact of Intervention Program on Functional Skills of Children with Autism: Its Influence on the Social Adjustment of their fathers and mothers

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Abstract

Autistic children need assistance from their parents in performing their day to day activities. Parents have multiple roles, demands and duties to be discharged in the family, community and society as well. In addition, they have very little time for themselves and for the other members of family and friends due to the increased amount of caregiving time that their child with autism requires, which in turn affects their social adjustment.

Hence, the purpose of this study was to assess the impact of intervention program on functional skills for parents of children with autism on their social adjustment. The sample consisted of 190 parents of children with autism between 5 to 10 years of age. The pre-test and post-test method was used with an intervention program. The data was collected by the investigator using a self-structured rating scale from the parents of children with autism attending special schools in Bangalore City. The pre-test data showed that mothers of children with autism reported significantly low level of social adjustment and fathers had an average level of social adjustment. An intervention program was conducted by the investigator as a part of the study. The t-test was computed to compare the mean scores of Pre and Post-tests. The results of post-test data showed that there was not much of statistical difference in the social adjustment of fathers of children with autism. However, there was a highly significant improvement in the social adjustment of the mothers of children on the autism spectrum. The study highlighted that when parents are introduced to the techniques of teaching functional skills to their autistic children it will help their child develop identity; and which in turn reflects on the social adjustment of the parents.

Keywords

Autism, Children with Autism, Functional Skills, Social Adjustment, Intervention Program

1. Introduction

Autism is a complex neurodevelopmental disorder that affects more than 10 million people in India and the disability has shown an increase over the last few years [1]. On the global front, a median of 62 cases per 10,000 people were estimated to be on the autism spectrum [2]. The three core characteristics of autism are impairments in social interaction, problems with communication skills, and restrictive, repetitive and stereotypical patterns of behaviour, interests, and activities [3]. However, the severity and display of these characteristics may manifest differently for each child. Children with autism need assistance from their parents or caretakers in performing their day to day activities [4]; since they are often limited in their independence with daily living skills which is referred to as functional skills [5-7]. This causes a major concern with reference to family life context, where there is additional pressure on the

parents. According to Collins (2008) [8], functional skills are defined as —skills that are used every day, in different situations at home, school and community. It includes domestic or self-care skills, functional academics skills, vocational skills, social skills and community living skills. Parent as a primary caregiver plays an important role in dealing with the issues related to the functional skills of their children. They have multiple roles, demands and duties to be discharged in the family, community and society as well. In addition, they have little or no time for themselves and for the other members of family and friends. This could be due to the increased amount of caregiving time that their child with autism requires, which in turn affects their social adjustment. Social adjustment can be defined as “the manner in which an individual fulfils his/her roles in social relationships and the individual's well-being within these relationships” [9]. Meeting the high care demands of their autistic children needs extra time, effort and patience. This often causes psychological distress, depression, anxiety and other mental or physical health issues among their parents [10-13].

2. Methodology

Objective: The objective of this study was to assess the impact of intervention program of functional skills of children with autism on the social adjustment of the fathers and mothers.

2.1. Sample: The sample comprised of one-hundred and thirty four mothers and fifty-six fathers with a total sample of one-hundred and ninety parents of children who were diagnosed with autism between 5 to 10 years of age were identified for the study. Special schools catering to the educational needs of the children with Autism in Bangalore city was considered for identifying the sample.

2.2. Tool used:

1. A five point Likert type rating scale was developed by the investigator to assess the social adjustment of the parents of children with autism before and after the intervention program. The response options given to the respondents were “Never”, “Rarely”, “Sometimes”, “Often” and “Always”. It contained 14 items, of which 8 items were positive and the remaining 6 items were negative. Positive items were given a score of 1, 2, 3, 4, 5 and negative items were reverse scored.
2. Checklist to assess the functional skills of children with autism was developed which consisted of five dimensions such as Self-care skills, Functional academic skills, Pre-vocational skills, Social skills and Community skills. The response options given as “Never=0”, “Sometimes=1” and “Always=2”.

2.3. Method:

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

2.4. Pre-test:

Permission and consent was sought from principal of various special schools requesting them to encourage the parents to participate in the study. Those schools which granted permission was finalised for the study. Further a rapport was established with parents of autistic children and they were informed about the objective of the study. Parents were told that the information procured from them will be kept confidential and used only for the research purpose. A self-developed checklist on functional skills of children with autism and a social adjustment scale of their parents were administered to assess the impact of intervention program on functional skills of children with autism and its influence on the social adjustment of their parents. The pre-test data collection was followed by the intervention program for the parents of experimental group.

2.5. Intervention Program:

The objective of the intervention program was to train the parents on how to teach functional skills to their children with autism. Also to help the parents understand the need and importance of functional skills, in order to make their autistic child to become independent in

performing their day to day activities. The intervention program was conducted for a period of 16 weeks for the duration of 3 hours per session. Following topics was covered during the intervention program:

- a) Understanding children with autism; its characteristics, and causes, prevalence.
- b) Understanding functional skills, “why it is important for a child with autism?” and “how it affects their parent’s adjustment?”
- c) **Tips of teaching functional skills to children with autism. Functional skills includes:**
 - **Domestic or Self- Care skills** such as brushing, toileting, bathing, dressing, eating, wash hands and night routine
 - **Functional academic skills** such as to identify and read alphabets, number concept from a book, magazine or a paper, identify colours, recognize shapes, time concept, money concept, identify body parts and to identify the days, months and date from the calendar.
 - **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.

- **Social skills** such as learning to make eye contact, telling name, making friends, emotions, behaviours, helping others, greeting or praising others and apologising to others.
- **Community living skills** such as 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.).

The investigator employed various teaching techniques and strategies such as power point presentations, flash cards, video clips, lectures, posters, models, group discussions, role play, hands on experience, etc. to explain the above mentioned topics to the participants.

2.6. Post-test:

After the completion of the intervention program, post-test data was recollected from the experimental group using the tools that was used at the time of pre-test. This was done to check the improvement in the functional skills of children with autism and in their parents' social adjustment.

The data collected was scored, analysed and tabulated using 't' test and correlation analysis. The findings of the study are discussed below:

3. Result and Discussion

Specifically, demographic variables for parents consisted of age, educational qualification, occupation, household monthly income, type of family, family size and religion. Parent-reported demographic variables for their offspring with autism which consisted of the child's age, date of birth, gender of the child, ordinal position of the child, name of the school. Most of the fathers (45%) were working for private job, 41% of them were business men, 11 % were government employees and 3% were labourers. 67 % of the mothers were homemakers and only 33% of the mothers were working. Functional skills of children with autism with regard to the fathers and mothers are presented in table 1A and 1B.

Table 1A: Comparison of mean scores of Pre and Post tests for Functional Skills of Children with Autism with regard to the Fathers

Dimensions of Functional skills	Pre test (n=56)	Post test (n=56)	Significance of paired t value
	Mean ± SD	Mean± SD	
Self-care skills	21.50 ± 10.30	28.03± 8.94	3.6666**
Functional academic skills	12.01 ± 8.86	14.69± 8.67	1.6559 ^{NS}
Pre vocational skills	6.14 ± 4.04	8.08 ± 3.74	2.7883**
Social skills	9.53 ± 4.18	11.33± 4.27	2.4213*
Community skills	6.66 ± 3.28	8.05 ± 3.40	2.3166*
Overall	55.85 ± 27.23	70.21± 25.51	2.9675**

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

Table 1B: Comparison of mean scores of Pre and Post tests for Functional Skills of Children with Autism with regard to the Mothers

Dimensions of Functional skills	Pre-test (n=134)	Post test (n=134)	Significance of paired t value
	Mean ± SD	Mean ± SD	
Self-care skills	23.48 ± 8.58	28.97 ± 7.84	5.3948**
Functional academic skills	10.87 ± 6.74	12.72 ± 6.76	2.4219*
Pre vocational skills	7.27 ± 3.71	8.82 ± 3.50	3.3789**
Social skills	8.94 ± 3.79	10.17 ± 3.78	2.6940**
Community skills	6.37 ± 3.22	7.67 ± 2.97	3.4247**
Overall	56.94 ± 19.89	68.37 ± 18.79	4.9097**

** Significant at 1% level * Significant at 5% level

Table 1A and 1B reveals that at the time of pre-test, functional skills of children with

autism based on their fathers and mothers responses had lower scores in all the dimensions. Studies have shown that children with autism have poor daily living skills [14]. Daily living skills include personal hygiene and grooming, eating, and getting around the community [15, 16]. Studies have reported that children with autism experienced difficulty in their development of self-help skills which are critical for maintaining physical health and well-being and form the foundation for other essential skills [17]. A highly significant difference between pre and post tests for all the dimensions of functional skills of their children with autism was observed. There was an improvement in the functional skills of their children after the influence of intervention program. The ‘t’ test value divulges that mothers have shown interest in understanding the meaning of teaching functional skills to their autistic children in order to help their child perform the day to day tasks with little or no support. While, fathers are making a sustain effort in supporting their autistic child to be independent in performing their day to day routine.

Table- 2A: Comparison of mean scores of Pre and Post tests for Social Adjustment of Fathers

Dimension of Social	Pre test (n=56)	Post test	Significance of
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Adjustment	(n=56)		paired t value
	Mean ± SD	Mean ± SD	
Related to public life	18.08 ± 2.61	18.57 ± 2.54	0.9836 ^{NS}
Related to support system	11.82 ± 2.36	12.64 ± 2.36	1.8925 ^{NS}
Related to family and relatives	15.28 ± 2.63	15.69 ± 2.16	0.9584 ^{NS}
Overall	75.10 ± 10.60	78.12 ± 10.27	1.5936 ^{NS}

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

It is discerned from **Table 2A** that at the time of pre-test, fathers of children with autism had average scores for all the dimensions of social adjustment. Some of them expressed that they were hesitant to take their autistic child for an outing and also they were less likely to seek out social support from their relatives and friends because they felt that their relatives and friends may not be able to relate to their challenges of raising a child with autism. This sometimes makes them to be isolated from their relatives, friends, and the community [18, 19]. Additionally, they also faced difficulties in their

marital and family relations [20- 22]. On the whole; fathers had an average mean score of 75.10 at the time of pre-test. But after the influence of the intervention program, they did not improve much in their social adjustment. Nevertheless, there was a notable improvement between pre and post tests for social adjustment of the fathers of children with autism, with an overall mean score of 78.12.

Table 2B implies that at the time of pre-test, mothers of children with autism were in their average in their scores on all the dimensions of social adjustment. According to Hoefman et al. (2014) [23], most of the mothers of children with autism expressed that they felt unhappy when the relatives or guest visited their house because they did not have much time to spend with them due to their autistic child’s high care demands.

Table-2B: Comparison of mean scores of Pre and Post tests for Social Adjustment of Mothers

Dimensions of Social Adjustment	Pre-test (n=134)	Post - test (n=134)	Significance of paired t value
	Mean± SD	Mean± SD	
Related to public life	13.79± 2.81	14.43± 2.81	2.0483*

Related to support system	10.38± 2.01	11.32 ± 2.01	4.3743**
Related to family and relatives	13.52± 2.75	13.67± 2.54	0.4845 ^{NS}
Overall	61.70± 10.31	65.19± 10.58	3.0896**

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

Study by Farrugia, (2009) [24], also found that parents had less time to spend with their relatives and friends and; hence their social circle decreased. Children with autism have difficulty in expressing their own needs; some of them are unable to communicate verbally. This can often result in aggressive behaviour for children diagnosed with autism. Parents felt anxious and concerned that their child may be misunderstood or ill-treated by member(s) of society because of their ignorance about the disorder [19]. They usually experienced weariness and the tendency to become reserved and disengaged from their social life [25]. On the whole, mothers had an average mean score of 61.70 at the time of pre-test. But after they were given the intervention program, there was an improvement in the social adjustment of the mothers of children with autism. The paired ‘t’ test value of 3.0896** indicated a highly significance difference between pre and post

tests for social adjustment of their mothers at 1% level.

Relationship between functional skills of children with autism and social adjustment of the parents has a tremendous influence on one's life style and the analysis has shown in table 3A and table 3B.

Table 3A and 3B reveals the correlation coefficient between functional skills of children with autism and social adjustment of their mothers and fathers. There is a positive correlation between the level of self-care skills of autistic children with their mothers' and father' social adjustment in all the dimensions.

Table-3A: Relation between Functional Skills of Children with Autism and Social Adjustment of their Mothers

Social Adjustment Related to-	Functional Skills				
	Self-care skills	Functional academic skills	Pre-vocational skills	Social skills	Community skills
Public life	0.3389*	0.1687	0.2051*	0.0241	0.1086
Support system	0.2397*	0.2449*	0.2174*	0.0373	-0.0099

Family & Relatives	0.2455*	0.1917*	0.1648	0.0734	0.0961
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** Significant at 1% level * Significant at 5% level

It means that when the child is able to perform their daily living activities such as brushing, toileting, bathing, dressing etc. with minimal support then their mother's and father's social adjustment will also be increased. When children with autism improve in daily living skills, their parent's well-being has also been improved [26]. Increases in daily living skills leads to better outcomes for children with autism [27] as well as lower parenting stress [28, 29].

Table-3B: Relation between Functional Skills of Children with Autism and Social Adjustment of their Fathers

Social Adjustment Related to-	Functional Skills				
	Self-care skill	Functional academic skills	Pre-vocational	Social skills	Community skills
Public life	0.0306	0.0603	-0.0132	0.2348*	0.1433
Support system	0.1983	0.2341*	0.0312	0.3514**	0.1769

Family & Relatives	0.10	0.0761	0.105	0.149	0.293
	58		3	2	2*

** Significant at 1% level * Significant at 5% level

A positive relation between the levels of social skills of autistic children with both the parents' social adjustment in all the dimensions was observed. Parents reported that sometimes they felt hesitant to go out for social gathering due to their child's inappropriate problem behaviours that they may be exhibited in the public places. Parents of children with autism also experienced higher stress levels while adjusting with behavioural problems [30-33]. Negative correlation was observed with aspect of support system of the mothers and community skills of their children which indicates that there is need to sensitize the public about autism, so that a better support can be extended when required. Likewise negative correlation was also observed with aspect of public life of the fathers and pre vocational skills of autistic children, which could be attributed to the fact that acceptance of the family with autism plays a pivotal role in encouraging the child/children to hone the pre vocational skills.

4. Conclusion

It can be concluded that there is a need for intervention program in order to educate or

train the parents about the importance of functional skills and techniques for teaching functional skills to their children with autism. When parents are given the intervention program it will aim to increase their knowledge on caregiving skills and self-efficacy. It will also provide them an insight to read and learn more about the disorder in order to simplify the teaching –learning process, which can result in better social adjustment of the parents. Further the use of visuals like charts, books, models, puppets, drawings, hands on experience and through story telling the functional skills can be taught in a very effective manner.

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