

Effect of Occupational Therapy Intervention in Training Toileting Skills of Autistic Children

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Abstract: **Aim:** The aim of the study is to find out the effect of occupational therapy intervention in training toileting skills for Autism. **Objectives:** a) To assess the toileting skills of autistic children using Toilet training skills checklist. b) To assess the Activities of Daily Living skills of autistic children using Weefim. c) To evaluate the effect of occupational therapy intervention on toileting skills of autistic children. **Methodology:** There are 5 subjects included on the basis of convenient sampling method. The ABA study design was used. The subjects were evaluated using toilet training checklist and Weefim to analyze their skills. The intervention period is eight weeks. The toileting skills are scheduled in their daily routines. **Result:** Statistical analysis shows that there is significant improvement ($t = 9.40$) in toileting skills of autistic children. **Conclusion:** The conclusion of the study indicates that an occupational therapy intervention has a significant effect on improving toileting skills of autistic children.

Keywords: Autism, Toileting skills training, ADL, occupational therapy

1. Introduction

Autism is a neurodevelopment disorder characterized by qualitative impairments in social interaction and communication skill, along with restrictive, repetitive and stereotypic behaviour. Autism children have marked difficulty in gross motor movement and they may show obvious problems with balance, walking, running, getting up or down, imitating action, getting strike in repetition, etc.

Autism is characterized by disturbance of social relationship and limited use of language to communicate and fixed repetitive interest and routine [Kenner 1943].prevalence of motor symptoms in autism children is 54% (MING WAGNERGC brain development 2007),in which Autism children have more difficulty in gross motor, fine motor and ADL skills.ADL Training issues is a obvious problems during their daily routines like brushing , bathing and toileting hence delay or lack of their skill is mostly seen among autistic childrens which impact their daily routines and faces more deficit in working independently. The occupational therapy that describes how to generate and modify their skill in the daily routine which present a dynamic open cyclic system of human action. The occupational therapy usually works with MOHO by scheduling their activity to Perform independently.

Toileting is the process of training a child to use the toilet for bowel and bladder Use (wees and poos).so toilet training may start with a potty or simply begin with the toilet (pad sense). many kinder garden and pre-school have a policy that children attaining the center must be toilet trained,if not being toilet trained may not only limit a child from assessing the academic setting but also from other school settings. This is not always a hard and fast rule but toileting independently is a desired goal at this age in readiness for school transience.

The children with autism have poor social and communication skill in which unable to perform independently. Hence attempt has been made to see the effect of occupational therapy skills for autism. Toileting refers to the accomplishment of various unprompted behaviours, including recognizing the need to go to the toilet, and waiting before eliminating (Keen, Brannigan, & Kuskelly, 2007).

Therefore, there are two fundamental goals in toilet training; to recognize the need to go to the toilet and the ability to independently complete the sequence of behaviours necessary for successful healthy toileting (Lott Kroeger, 2004). In the typically developing population, these skills are usually acquired by the age of four (Schum et al., 2002; Chang, Lee, Chou, Chen, & Chen, 2011). However, individuals with developmental disabilities such as Autism Spectrum Disorder (ASD) are more likely to experience toileting problems such as enuresis, encopresis, soiling and other toileting problems more so than the general population (Matson & Lovullo, 2009). Szyndler (1996) reported that 82% of children with ASD experienced toileting difficulties, as identified through parent reports. Dalrymple and Ruble (1992) identified the most common toileting difficulties in a survey of 100 parents of children with ASD. Forty- three percent of their sample urinated in places other than the toilet, and 26% had bowel movements in places other than the toilet. The most commonly reported location for out-of-toilet urinations and bowel movements was outdoors. Independent toileting can improve an individual's quality of life through improved hygiene and improved self-confidence, as well as reduced stigmatism and reduced physical discomfort that comes from soiled clothes and Ben linen (Cicero & Pfadt, 2002, Lott & Kroeger, 2004).

1.1 Need for the study

Toileting is the most important skill needed to live independent among young children. A Child with autism has

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poor social skills and communication skills. They completely depend on the parents to do all their ADLs. The most important skills are which they failed to correct as early is toileting. Most of the children has an issue in toileting. Hence attempt has been made to show the effectiveness of toilet training using occupational therapy based scheduled session.

1.2 Aim

The aim of the study is to find out the effect of occupational therapy intervention in training toileting skills for Autism.

1.3 Objectives

- To assess the toileting skills of autistic children using Toilet training skills checklist.
- To assess the Activities of Daily Living skills of autistic children using Weefim.
- To evaluate the effect of occupational therapy intervention on toileting skills of autistic Children .

2. Reviews of Literature

Kristianna Ferrier (2017) The child in this study was chosen based on a toilet training readiness checklist. it is the combination of the scheduled sitting protocol by AZRIN and FOXX (1971).An enuresis alarm was used so accidents could be immediately detected. The child had an average of one accident during the three hour school day. Sitting on the toilet was scheduled in 30 minute intervals and was increased by 10 minutes every third day with no accidents.A5- second full-physical prompt was used for every step in the bathroom. It is expected that the intervention will decrease the frequency of urination accidents and will increase the child independence in the classroom setting. This study used a single-subject AB design. The intervention was implemented while the child was at school, approximately 15 hours week, and a simplified version was followed at home. The results showed that toilet training a child with autism at school can be done in a relatively short amount of time which helps the child to follow the protocol.

Gonul Kircaali Iftar (2009). The intensive toilet training program presented in this report used the scientifically supported principles of ABA to teach to 5 and 3 year old boys, autism to stay accident free between schedule toilet visits. The program consisted of pre-training, intensive training and post training activities. The children attained day-time toileting skills rapidly and consistently throughout the program. Two children were selected as participants according to two pre-requisites: receiving intensive behavioural intervention for at least six months and progressing on basic imitation, matching, and receptive language skills in the intervention program. Five year- and three-year-old boys with autism respectively. They received intensive early intervention at a university center while received similar services at home in Turkey and received instruction for four hours during week days on basic imitation, matching and sorting, receptive language, and Picture Exchange Communication System (PECS) programs when the toilet training was initiated. The teachers and

mothers of the participation were very pleased to observe the children training. Hence the study believe that implementing the intensive training is better than teaching.

Sri Intan Rahayuningsih, Mula Rizki (2012). The objective of this research was to find out the correlation between child readiness and the success of toilet training for under-five-year old children at Early Child Education and Kindergarten of Bungong SeuleupoeK at Syiah Kuala University in Darussalam, Banda Aceh, in 2012. The design of this research was descriptive qualitative and the sample was selected by using a total sampling technique, resulting in the selection of 53 respondents. The instrument of data collection was a set of questionnaires. The data were analyzed by using a chi-square test. Based on bivariate analysis, it was found that there was a significant correlation between the child readiness and the success of toilet training (p -value = 0.043), physical readiness and the success of toilet training (p -value = 0.002), psychological readiness and the success of toilet training (p -value = 0.006), and intellectual readiness and the success of toilet training (p -value = 0.023) at Early Child Education and Kindergarten of Bungong SeuleupoeK at Syiah Kuala University in Darussalam, Banda Aceh. Therefore, it is recommended that parents are expected to be able to recognize the signs of readiness before the parents decide to start toilet training her child so that the child quickly managed to use the toilet properly.

Abdul Haris&A.Haris (2019). The purpose of this study was to find out the development of pictorial media as a learning method for mothers in training toilet training in children aged 2-5 years. The design of this study is "Pretest-Posttest, Control Group Design". The object of the study was 80 mothers who had children aged 2 - 5 years. Data were taken using the checklist sheet. To find out the results of the development of pictorial media as a learning method for mothers in training toilet training in children aged 2-3 years, the Wilcoxon test was performed by statistical tests. The results showed that the knowledge of mothers before toilet training through pictorial media was 29 people (72.5%) lacked the knowledge and 11 people (27.5%) had enough knowledge, after training, there were significant changes, 37 people (92.5) good knowledge and 3 people (7.5%) enough knowledge. The conclusion of the pictorial media development training can increase maternal knowledge about toilet training in children aged 2 -5 years.

Keen (2007). The study assessed the effectiveness of an animated toilet training in video for teaching day time urinary control with autism. A between design was used to monitor. Children in the treatment condition received video modelling plus operant conditioning strategies where as children in the control condition received operant conditioning strategies frequent of his toilet urination was found to be greater for children to watcher video that who didn't six week follow up in the video was done. Results indicate that children with autism who are resistant toilet training. Acquisition of urinary control may be facilitated by use and animated toilet video in conjunction with operant conditioning strategies.

3. Methodology

The purpose of the study is to find out the effect of occupational therapy intervention in training toilet skills for autism.

Research Design

This study involves ABA design.

Population

The study involved autistic children between the age group of 2 to 8 years.

Sample Size

The study includes only 5 subjects.

Sampling Technique

Convenient sampling technique was adopted.

Study Place

The study was conducted at Occupational therapy foundation, erode.

Independent Variable

Occupational Therapy intervention

Dependent Variable

Toileting skills of Autistic children

Duration of Study

Duration of the study was 6 months.

Inclusion Criteria

- Age between 2 to 8 years
- Samples diagnosed as autism by Developmental Pediatrician.
- Only Male Children were involved

Exclusion Criteria

- Age below 2 years and above 8 years
- Autistic children with seizure
- Autistic Children with other associated medical conditions
- Female Children

Tools

- Toilet training skills checklist
- Wee-FIM

4. Procedure

Convenient sample of 5 subjects were selected between the age group of 2-8 years. ABA design was used in the study. The students are evaluated using toileting skills checklist and wee FIM. Occupational therapy based activity scheduling was done and the intervention was carried out for 8 weeks in which the session starts from morning 10 AM to 3 PM, which incorporated to their school daily routines. We planned an intervention program to toilet training for 5 children with autism who demonstrated no prior of success in the home or school settings. Intervention focused on a removal of diapers during school hours. Scheduled time intervals for bathroom visits a maximum of 3 minute sitting

on toilet. Reinforces delivered immediately contingent on urination in the toilet and gradually increased time intervals between bathroom visits as each participant met mastery during the preceding shorter time interval. After completion of intervention post data were collected and statistically analyzed and the results were tabulated.

5. Data Analysis and Interpretation

Table 1: Comparison between pre and post- test Scores of Toilet training skill checklist and Wee FIM

Tool	Test	Mean value	S.D	"t" value	"p" value
Toilet Training Skill Checklist	Pre test	46.2	3.96	9.4076	>0.0001
	Post test	28.6	1.34		
Wee FIM	Pre Test	47.2	14.1	4.1943	>0.003
	Post Test	81	11.22		

Table 1 shows the comparison of pre- test and post- test scores of toilet training skills checklist and wee FIM. The mean values of Toilet skills training Check list are 46.20 and 28.60 respectively and "t" value is 9.4076 and p value is > 0.0001 which shows it is statistically extremely significant.

On Wee FIM mean values are 47.20 and 81 in pre and post test respectively, "t" Value is 4.19. It also indicates the significant difference between Pre and Post Test.

6. Discussion

Toileting is a process of teaching young children to control the bowel and bladder and use of bathroom for elimination. A child is considered to be toilet trained when he or she initiate going to bathroom and adjust clothing necessary to urinate or have a bowel movement. Toilet training is sometimes called toilet learning or potty training. Toileting is the process of training a child to use the toilet for bowel and bladder use (wees and poos).so toilet training may start with a potty or simply begin with the toilet (kids sense). Many kinder garden and pre-school have a policy that children's attaining the center must be toilet trained, if not being toilet trained may not only limit a child from assessing the academic setting but also from other school settings. This not always a hard and fast rule but toileting independently is a desired goal at this age in readiness for school transience. A Child with autism has poor social and communication skill in which he or she is unable to perform independently. The study was centred on exploring the effect of toileting skills for autism using toilet training skills checklist and Weefim.

Table 1 shows the comparison of pre- test and post- test scores of toilet training skills checklist and wee FIM. The mean values of Toilet skills training Check list are 46.20 and 28.60 respectively and "t" value is 9.4076 and p value is > 0.0001 which shows it is statistically extremely significant. On Wee FIM mean values are 47.20 and 81 in pre and post test respectively, "t" Value is 4.19. It also indicates the significant difference between Pre and Post Test. This finding also supported by Gonul Kircaali-Iftar(2009) "Intensive day time Toilet Training of two children implementing and monitoring systematically guarantees success". This study examined effect of toilet training children with autism. This study tested 2 children

with autism. PECS programs were used to train the toileting skills. The intensive day time toilet program was successful for two children with autism.

7. Conclusion

From this study it was concluded that there is significant improvement in toileting skills of autistic children after occupational therapy intervention. The results of the study indicate that the activity scheduling is an effective method of treatment in improving the ADL skills which make them initiate and trained successfully in toileting.

8. Limitation

- Sample size is small.
- Only boys are selected.
- Not compared with other intervention method.
- Only autism was selected.

9. Recommendations

- Study can be compared with genders.
- Study can be done with other conditions.
- More samples can be included.

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