



Article

Improvement of Teaching Effectiveness for Autism Children

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Abstract: Autism is a developmental disorder that affects communication and interaction ability negatively. There has been an increase in its prevalence in current statistics. Consequently, NASOM teachers have also increased the need to teach children with autism. The purpose of this study is to investigate how autism teachers in NASOM can improve their education strategies in terms of knowledge, formation, and competencies. The study's location is in Malaysia. The research data were obtained by means of the questionnaire quantitatively. 55 teacher interviews who teach autistic children in NASOM received the questionnaires. Issues were divided into sections like knowledge and competence. They showed, however, an interest in taking advanced courses to increase their skills and strategies for autistic children. There is thus a need to improve the training of trainers (ToT) and the module by adding more autism components. NASOM teachers also had to be given access to autism training because autism learning has progressed, and several scientifically effective strategies are now available. Several proposals were proposed by the researchers to improve the studies, training, skills, and ToT course presences of autistic students. Analysis was again analysed using t-test, correlation and Regression using SPSS version 20 software for the raw data obtained. The results showed that with their presence at the ToT course there was a difference in knowledge, training, and competency. The ToT course has been found to be effective but still, the strategies for teaching autistic children need to improve since the results showed moderate and low.

Keywords: autism children; communication; teaching effectiveness; intervention.



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1. Introduction

Autism is a developmental condition marked by limited, repetitive, and stereotyped behavioural patterns, as well as poor communication and social functioning (American Psychiatric Association, 2003). Autism prevalence estimates have grown substantially over the previous two decades, from 4 to 5 out of 10,000 children to current estimates of 1 out of 110 children afflicted by autism (Charman et al., 2001). The rise in autism diagnoses, as well as the resulting rise in autism-positive children, has created a greater demand for instructors to understand and use effective autism-specific training techniques (Al-Smadi & Bakar, 2019). Children with autism are autistic children. Autism is one of the most prevalent neurological diseases known to include social, behavioural, and nonverbal communication issues, such as the inability to maintain eye contact. Autism, often known as autism spectrum disorder, is a neurological disorder (ASD). The term spectrum refers to a variety of anxiety expressions such as the severity of autism disorders, developmental stage, and chronological age. ASD is a complicated developmental and neurological condition. It includes the anatomy and function of the brain and nervous system.

Depression has an impact on a person's social and communicative abilities. Some of the most noticeable characteristics of ASD youngsters include repetitive behaviour and poor attention (American Psychiatric Association, 2003). It is critical to identify the number of children with developmental difficulties since many students with ASD are initially handled under the developmental disability category. Given the number of young children with ASD who require special education and the requirements of the Individuals with Disabilities Education Improvement Act (Juane Heflin & Simpson, 1998), the number of community-based early intervention programs serving infants, toddlers, and pre-schoolers with ASD has increased significantly (Juane Heflin & Simpson, 1998). Autism spectrum is a neurological disease that affects at least 60 children under the age of six out of every 10,000.

Lock et al. (2006) stated that 1 in 59 children born under the age of eight were diagnosed with ASD, representing a 15% improvement over the previous year, according to the Centres for Disease Control and Prevention (CDC, 2018), with the diagnosis of ASD at the age of 8 years (CDC). According to the Rice (2009), men are more susceptible to this condition than women. Studies have shown that 1 in 166 children worldwide have autism. However, it has not yet identified the cause of this autism. The mother's infection during pregnancy is one of the causes of this. It is estimated that in Malaysia 47 000 children are autistic (Kaur et al., 2015). Some children exhibit early autism signs. As a result, as a teacher, they must be prepared with the skills necessary to manage autistic children's behavioural issues. This is because autistic children's behavioural problems must be taken seriously (Sumrah et al., 2008). In the absence of solutions to these children, problems arise as education and learning continue. Teachers therefore need to be able to respond to children with autism in their problematic behaviour.

Nevertheless, in an act of educating autism children, Al-Smadi & Bakar (2019) stated that the need for a suitable strategies and skilled attitude in doing the job is imperious because progenies are hard to comprehended and be cultured. As a result, there is a higher need for experienced or more specialised educators, particularly for autistic children, to assist them in overcoming or mitigating the negative impacts of autism on their life. Training, on the other hand, is the weakest link in the chain of delivering efficient services to autistic children (Council, 2001). In 2003, the COPSSE, Centre for Personnel Studies and Specific Education, reported that, there is a deficit of special education teachers for impaired kids, notably in the fields of emotion or behaviour, as well as general disabilities, learning impairments, and mild or moderate inadequacies (Hay et al., 2004).

Moreover, upbringing a child is one of the most sacred gifts and a tasking endeavour that every parent face (Al-Smadi & Bakar, 2019; Aseri et al., 2022). In Alabama, educators report that they are unfit to teach autistic in inclusive environments to children (Norsuhaily Abu Bakar et al., 2021). Many general educators took only exceptional survey courses and thus have little specialised training in autism. In a state-wide random sample of the population 63 percent said that more support for schools that serve children with autism is needed and about 70 percent of the public report no knowledge about community services for people with autism. Although the survey did not specifically address the rural areas of Alabama, 55 of 67 counties in Alabama are rural. The autism teachers in the USA lack the skilled training of autistic children and an adequate international training of all professors in ASD students are also a critical factor in (Morton & Campbell, 2008).

Although a number of teachers are able to teach, adequate training is not available to hinder the provision of adequate and qualified autism teachers (Scheuermann & Webber, 2002). A domestic focus should be increased investment in high-quality, intensive training. To fulfil the needs of ASD classroom students, all teachers who work with autistic children require training and theory (Scheuermann et al., 2003). Training is defined as the systematic development of a person's knowledge, credentials, attitudes, or conduct for a desirable job (Abu Bakar & Baijuri, 2020). The Manpower Services Council, according to the Glossary of Training Terms, is a method that transforms attitudes, knowledge, or ability via learning experiences to attain efficient performance in a variety of jobs (Glossaries of Training Terms). The goal is to improve individual abilities while also meeting the organisation's present and future personnel demands. Training is defined as the systematic development of a person's knowledge, credentials, attitudes, or conduct for a desirable job (Abu Bakar & Baijuri, 2020).

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Cascella and Coella (2004) conducted research in 2004 on language pathology information on university school training in Connecticut, as well as ongoing education, autism, and the incapacity to speak about autism. In conclusion, even though they are speech language pathologists, the entire study concluded that they had less persuasive expertise. Therefore, (Cascella & Colella, 2004) proposed that further training is necessary to prepare for autism student pathologies. The study's findings supported Schwartz and Drager's contention that speech-language pathologists must be more aware of the common characteristics of autism than the diagnostic criteria. They advised conducting more research focusing on assessing knowledge of speech pathology in a variety of aspects. They also advised that university studies focus on autism-related knowledge and how to develop confidence in speech pathology. There is currently no obvious or defining aetiology for the symptoms seen in ASD. Some of the causes that have been proposed to contribute to ASD include genetic, family autoimmunity, metabolic derangement, and environmental factors (Buie, 2013).

A North American repository was used to perform a study on parents' perceptions on the causative causes of ASD in their children (Nowell et al., 2014). Their findings revealed that parents were aware of the causes of ASD, with most parents (90.0 percent) believing that various etiologist were implicated in ASD. The most common causative assumption (42.6 percent) was genetic or inherited, followed by external influences (22.1 percent). Vaccines, poisons, food, pollution, allergies, and infections are examples of external causes. According to Simpson (2004), in order to provide a successful education for autistic children, teachers should be educated with core early childhood skills as well as special education, including autism-specific abilities. Understanding of autism characteristics, examination, diagnosis, and assessment of autistic children are among the information and competencies necessary. Teachers who work with autistic children must also work closely with current mainstream teachers who provide inclusive education, parents, and other specialists such as speech therapists, occupational therapists, and others (Scheuermann & Webber, 2002).

In 2008, Schwartz and Drager investigated the impact of autism training and knowledge among U.S. speakers, and their findings indicated that people with excellent autism awareness were nonetheless confused about their diagnosis. The data also indicated that these speech therapists had insufficient training and had low confidence in their present skills to provide services to autistic children. The results were supported also by several previous studies in which ASD teachers were less confident about teaching children due to limited autism knowledge (Mohd et al., 2010). More research has revealed that instructors who work with autistic children as pupils must not only be confident in their teaching abilities, but also in their ability to manage behavioural difficulties (Nungesser & Watkins, 2005). While (Philips, 2005) investigated and researched the present level of understanding about autism by teachers in primary schools in Malaysia, the cognitive, social, and emotional components of autistic kids were less understood by instructors in Malaysian primary schools. 84,3 percent of respondents couldn't name the types of support services or expert persons that these children needed.

1.1 Educational Interventions

Education is described as the development of skills and information to help a kid grow independence and personal responsibility; it includes not just academic learning but also socialisation, adaptive skills, communication, and better behaviour. Specialists and other clinicians are often able to help families learn empirically and evaluate the adequacy of the educational services offered. Previous study indicates that special education instructors, or more particularly, NASOM, should be aware of ASD, since teachers have been less confident in teaching ASD kids owing to a lack of awareness of autistic children. As a result, this study indirectly aided teachers in better understanding their own behaviour, helping them to create and organise suitable teaching and learning techniques. Three questions have been identified to guide the study on the basis of (Schwartz & Drager, 2008): Do the knowledge, skills and skills of teachers who participate in ToT differ and those who do not participate in ToT? Does the impact of teacher participation on ToT programs have any relationship with non-teachers? What is the main impact of teachers attending ToT on the knowledge, skills, and competencies?

2. Materials and Methods

According to Norsuhaily Abu Bakar & Som (2016), theory of learning that supports analysis of participation in social activity where participants work towards social goals within a view of learning being based on a cultural and

collective foundation. It is often seen as a visual representation of resistance and support in a time frame. Application of trend line can be traced to area of social science (Bakar & Radzali, 2019). A set of surveys were adapted by Schwartz and Drager to determine the level of knowledge, skills, and skills of educators in children with autism (2008). Pilot data study questionnaire ensures that the respondents involved in this study can be clearly understood. Education is a very dynamic field, with new projects, foci, and ideas being presented on a regular basis with the goal of improving both teaching and learning. According to Awwal et al. (2021), the underpinnings of most educational ideas appear to be behaviourism and, later, constructivism (2010). As a result, this assignment will focus primarily on these two learning theories.

In this questionnaire, certain teacher qualifications items were amended to make them appropriate for NASOM teachers. There are five main sections of the questionnaire: Part A: Respondent demographics, Part B: Teacher Knowledge Levels Part C is about the teacher, Part D is about the teacher's faith in autistic children, and Part E is about the teacher's engagement in the ToT program. Part C: The teacher's level. For this survey, a total of 26 items covering five areas were recorded. The elements in Section A are related to the demographics of the respondents. The primary goal of population data collection is to identify factors that may impact respondents' responses in other portions of this survey. The questions in this area concern gender, age, and experience as a teacher of autistic children. Section A has three questions with multiple-choice responses for each. The following questions are included in the following sections, Part B, C and D and all of them questionnaire was self-developed and used as the survey instrument (Supp file). The questionnaire was divided into 5 sections and consists of questions based on Likert scale, multiple choice questions (MCQ) and open-ended questions. Section A comprised demographic questions which include type of respondent with strong disagreement 1 = strong disagreement, 2 = strong disagreement, 3 = unsure, 4 = disagreement and 5 = strong agreement. Part E contains a question regarding the attendance, frequency, and effectiveness of ToT teachers.

2.1 Procedure

In addition to the actual sample counts needed to avoid damage, the process used to collect the data carried out by the researchers was to distribute 55 questionnaire forms. During the training of trainer's sessions, the questionnaire was handed to the participants. Before enrolling respondents in the study, they were given an information sheet about the study and needed to sign a written permission form. The questionnaire was self-administered and took around 10 minutes to complete. The data was then gathered and descriptively analysed to determine the degree of awareness among parents and special educators regarding the recommended dietary and nutritional intake for children with ASD. A sample of teachers who teach autistic children at NASOM in all of Malaysia were provided with questions. The researchers first asked the faculty for permission to conduct the study. After a confirmation letter was obtained, it was emailed to NASOM's headquarter in Ara Damansara via info@nasom.org. Later, it was distributed to NASOM teachers staying around the town centre of Kuala Lumpur. The researchers ensured that all teachers in each NASOM's branch received the questionnaire.

Therefore, to check whether the teachers received the questionnaire or otherwise, they would call the headquarters daily. Such a measure ensured that all the teachers completed all the questionnaires. The data collection took two weeks, and later there were analysed using Statistical Package for Social Science (SPSS) version 20. The interventions were classified as follows: antecedent package, behavioural package, modelling, peer training package, and further established EBP. The preceding package treatments included environmental enrichment, the utilisation of special interests, choice, prompting/cueing, stimulus familiarity, and errorless learning. The behavioural package comprised interventions such as contingency contracts, contingency mapping, token economies, Discrete Trial Training, shaping, task analysis, functional communication training, behavioural toilet training, and generalisation training. Modelling procedures included both live and video modelling.

3. Results

3.1. Demography Profile of Information

This study involved a total of 55 NASOM respondents. Of these, 5 (9.1%) were men, and 50 (90.9%) were women. Their number was 8%. In terms of age, 25 interviewees (45%) were between 20 and 30 years old, 18 (32%) between 31 and 40 years, 10 (18.2%) between 41 years old and 50 years old and 2 respondents (3.6%) between 51 years and 60 years old. As a teacher of autism in NASOM, 27 participants (49.1 percent) had 1-5 years of experience, 19 participants (34.5 percent) had 6-10 years of experience, 4 respondents (7.3%) had 11 to 15 years' experience and 5 (9.1%) were experienced over 16 years. Table 1 provides demographic information, the result as seen as below:

Table 1. Respondents' Demographic Profile

Demography	Category	Frequency	Percentage
Gender	Male	5	9.1
	Female	50	90.9
Age	20 years to 30 years	25	30
	31 years to 40 years	18	40
	41 years to 50 years	10	50
	51 years to 60 years	2	60
	1 to 5 years	27	49.1
Experience as an Autistic teacher	6 to 10 years	19	34.5
	11 to 15 years	4	7.3
	16 years above	5	9.1

3.2. The level of autistic child teacher knowledge in NASOM

The study's findings on the instructors' knowledge level on the basis of attendance and frequency were evaluated by analysing the relationship of differences. This study investigated instructors' abilities through frequency or ToT attendance and the link between differences. This part was scrutinised. Teachers' knowledge, both present and missing from ToT, was limited if $p > 0.05$. This data was analysed and indicated a $p < 0.05$ significant relationship between the expertise of NASOM teachers who taught autistic children and those who did not engage in ToT. Table 2 demonstrates that there are substantial variations in teacher knowledge levels.

Table 2. Differences in Teachers' Knowledge Levels Attending and Not Attending ToT

Attendance	N	Mean	Standard Deviation	t-value	Sig.
Present	8	1.281	0.088	2.163	0.035
Absent	47	1.168	0.143		

3.3. Level of teaching skills for children with autism at NASOM

The results of the statements in this section revealed that $p > 0.05$ implied that teachers at NASOM still had a poorer level of ability to educate children with autism, whether or not they attended ToT. Despite having to attend more courses and training, they were (54.5 percent) interested in becoming an autism specialist. Table 3 showed significant variations in teacher abilities.

Table 3. Differences in Teachers' Competency Levels Attending and Not Attending ToT

Attendance	N	Mean	Standard Deviation	t-value	Sig.
Present	8	4.653	0.391	1.211	0.231
Absent	47	4.487	0.353		

3.4. Difference in the correlations of knowledge, competence, and skills

The correlation test was utilised to assess the effect of ToT attendance on the relationship between the three expected aspects of knowledge, credentials, and skills as perceived by instructors. It was discovered that taking the course affected their knowledge and abilities but not on their trust. The study revealed a significant relationship between the degree of knowledge in the NASOM and their existence in the SCT, $r = 0.146$, $p < 0.05$. In the study, there was also an important association for teacher skills, with a value of $r = -0.354$, $p < 0.05$. Finally, in the confidence analysis, there was no significant relationship to the value $r = -0.164$, $p > 0.05$. Table 3 illustrated the differences in relation between these three aspects.

3.5. Dominant factors affecting teacher attendance ToT

To investigate the main variables in the three predictor features, regression tests were performed. ($F(3,51) = 4.464$, $p < 0.05$) was the regression formula. The value of p is 0.007. The findings revealed that one component dominated the ToT, with a significant correlation of 0.010. The outcomes were present. As indicated in Table 4, a high beta of 0.367 indicates that skills are the major element in the benefits of ToT training.

Table 4. Multiple Levels of ToT Effectiveness on Autistic Child Teachers Regression Coefficients Value at NASOM

Model	B	Standard Coefficient Beta	t	Sig
Constant	0.741		5.814	0.0000
Knowledge	0.310	0.289	-2.339	0.0230
Skills	0.096	-0.339	-2.660	0.0100
Competency	0.126	-0.097	-0.761	0.4500

4. Discussion

The first goal of this study was to evaluate the link between autistic children's teachers' knowledge, skills, and talents in NASOM based on ToT attendance. The results indicated that NASOM instructors educating autistic children differed in their knowledge and abilities depending on their attendance at ToT courses, but there was no variation in the levels of competence for teachers based on ToT participation. Furthermore, the second study's goals revealed that the degree of knowledge and skill of instructors who teach autistic children at NASOM is linked to their involvement in ToT. According to the findings of the study, instructors who participated in ToT had a higher understanding and capacity to recognise and diagnose autism, as well as create teaching and education approaches. According to the findings, they are well-versed in numerous aspects of autism but are perplexed by critical facts such as autism diagnosis. This is supported by the data. As a result, there was no significant link between the level of teacher competency and their involvement in ToT in the NASOM.

The final goal of the study is to determine how one major factor influences the impact of ToT, which is the skill element. A beta of -0.339 suggested that skill is the major factor in the impact of ToT, and that the skill component and the existence of ToT are dominant. Overall, the knowledge of autism teachers at NASOM continues to be moderate. Hasnah and her research colleagues supported the findings from this study (Buie, 2013). During this time, (Abu Bakar & Baijuri, 2020) found that teachers of special education had a high level of autism and students' autistic characteristics. The participants were familiar with ASD. The study showed that the respondents had good understanding of communication problems in children with autism (83.6 percent), problems with social interaction (83.6 percent), over-sensitivity and pain susceptibility among children with autism (100%), a higher prevalence of autism in children (100 percent) (67.3 percent). Some of the characteristics of autism were, however, also confused. 54.5% of those respondents said they disagreed, although social interaction problems were not a diagnostic criterion, that children diagnosed with autism should be facing social problems.

Autism is not a diagnostic criterion, but 54.5 percent agree that autism is a criterion for self-damaging. autism. The same was true of recurring stereotypes; however, autism was not diagnosed, 83.6 percent agreed that autism was diagnosed. The results of this study showed indirectly that respondents lacked a thorough knowledge of the diagnostic criteria for autism children. The respondents also expressed confusion (69.6 percent) that even if these autistic children had eye contact, they had never had eye contact. Respondents were also able to recognise autism symptoms, evaluate autistic pupils, give successful solutions, actively instruct autistic kids, and interact with experts and parents, according to the study's findings. Contactants may have a weak understanding of autism pupils. But autistic students could be identified. The answer was that they lacked confidence in setting adequate educational and learning goals for autistic children and less comfortable counselling for parents and careers of autism children. While people feel less self-confident, they still want to be an expert on autism, despite additional training and courses.

5. Conclusions

Although autistic children suffer during their lifetime from mental illness, they are very special people. The increasing number of autistic kids and the growing number of autistic classroom students should give NASOM teachers the skills and knowledge they need to provide them with as much guidance and support. These results and results show that they match the results of a study by (Schwartz & Drager, 2008). Their findings indicate that in Greece there is an incomprehension of autism knowledge among teachers of special education, and speech therapists have poor knowledge of autism. Autism teachers on NASOM should be required to receive training and professionalism courses to be more informed about the most recent ASD information. As a result, NASOM teachers can design teachings and learning to satisfy simultaneously the needs of autistic learners, enabling them to continue to teach autism to children on NASOM, which can increase their number in the future. It can help autistic students to participate actively in teaching and learning.

One suggestion is that autistic teachers must improve their teaching quality. This education is irrespective of formal training or in-service training. Viewed from secondary sources via reading materials or the web, most of the exercises or training programs focus not only on ASD but are generally co-taught by teachers from specialised education. Children with visual or hearing impairments are included in special education. In the event of courses or training with

special education teachers, no emphasis is placed on the training and knowledge on ASD. The next suggestion is to enhance practical training so that trainees can have direct or practical experience with autistic children. As everyone knows, for example, speaking slowly and developing language skills are key features of autistic children. Therefore, the activity can be done outside the school area to visit and study (Charlop-Christy et al., 1999).

The researcher's recommendation is to take this Trainer training on a regular basis. Each 3 months, for instance. In a dialog with a NASOM manager, he said that he was not obliged to take the course regularly on the date set in his appointment Management schedule, but a month or two is sometimes scheduled before they even go to school with other specialist educators who sometimes have uncertain or unexpected attendance. The final suggestion is to add to the content of teaching courses that teacher autistic children can teach these special children with confidence. Learning and teaching is ineffective because they only have the knowledge and skills if they are not confident that most autistic parents expect educators to assist them. Yee & Ali (2008) is also informed that, once their children are diagnosed autistic, parents will send them to the early intervention training centre.

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