

International Journal for Research in Education

Volume 43 | Issue 2

Article 9

2019

Reducing The Rate of Behavioral Problems for Students with ASD & ADHD using the Techniques of FBA

lina mahmoud maharmeh
Amman Arab University, l_maharmeh@yahoo.com

Nabil Salah homedan
Amman Arab University -Jordan, Nhomedan3@hotmail.com

Wafaa Ayed Aleid
Amman Arab Universit, , Jordan

Follow this and additional works at: <https://scholarworks.uaeu.ac.ae/ijre>

Recommended Citation

maharmeh, lina mahmoud; homedan, Nabil Salah; and Aleid, Wafaa Ayed (2019) "Reducing The Rate of Behavioral Problems for Students with ASD & ADHD using the Techniques of FBA," *International Journal for Research in Education*: Vol. 43 : Iss. 2 , Article 9. Available at: <https://scholarworks.uaeu.ac.ae/ijre/vol43/iss2/9>

This Article is brought to you for free and open access by Scholarworks@UAEU. It has been accepted for inclusion in International Journal for Research in Education by an authorized editor of Scholarworks@UAEU. For more information, please contact fadl.musa@uaeu.ac.ae.

Reducing the Rate of Behavioral Problems for Students with Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) Using the Techniques of Functional Behaviors Assessment (FBA)

Lina Maharmeh, Nabil S. Homedan, Wafaa Aleid

Amman Arab University, Jordan

Author Note

Correspondence concerning this paper should be addressed to Lina Maharmeh, PhD,

Department of Special Needs and Gifted Students,
Amman Arab University, Amman, Jordan

Abstract

The study aimed to examine the effectiveness of the Functional Behaviors Assessment (FBA) process to identify the function behavioral of the students and establish a Behavioral Intervention Plans (BIP) in the educational facility and special needs for the students with Autism Spectrum Disorder (ASD) & Attention Deficit Hyper Activity Disorder (ADHD). Using individuals- subject design approach to clarify the challenges facing teachers in the implementation process. The researcher used the FBA strategies to achieve the goals and purposes. Planned teacher's interviews before and after interventions to examine the effectiveness of interventions on the behavioral problems of the student.

Utilizing the BIPM process the qualitative data analysis showed the applicability and the effectiveness of the BIPM as a tool to manage the student's behavioral problems in different educational locations in the country. The recommendation outcome was to replicate such process and methodology in all over the country school system.

Keywords: behavioral, intervention, plans, autism, spectrum, attention, deficit, hyperactivity, disorder

Reducing the Rate of Behavioral Problems for Students with Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) Using the Techniques of Functional Behaviors Assessment (FBA)

Behavioral problems have an essential role in delaying the educational and instructional process. It affects the classroom environment; and agitates the school stability, system and security, and drains the teacher's time and ability and functions to control. This might lead to a reduction in the overall educational benefits and lessen learning outcomes. In addition, it is one of the most debatable concerns in terms of the goal that students achieve through it and the best method to deal and handle it.

The Study

The Importance of the Study

It is considered one of most effective and easy to apply and used by the educational teams and it is the first one dealt with the activation of functional behavioral assessment strategies in building well organized plans for behavioral intervention in a manner fits the needs of those effected students.

The Study Problem

The study problem is summarized with the following questions:

- How effective are functional behavioral assessment (FBA) strategies in reducing the level of behavioral problems for students?
- The following sub-questions stemmed from the main one: Or on the other hand; how effective are FBA strategies in reducing the level of behavioral problems for students with Autism Spectrum Disorder (ASD) and ADHD at specialized centers and integration programs in Amman's public schools?
- What are difficulties that may face teachers in applying FBA assessment strategies?

Study Objective

This study aims to identify the extent to which FBA assessment strategies are effective in reducing the level of behavioral problems; for example, a sample number of students with ASD and ADHD identified in a specialized public schools and educational centers. The study will require to identify the problems encountered by teachers and to suggest recommendations to overcome these difficulties.

Theoretical Background

Behavioral problems inside the classroom include interruption, refusal to perform tasks, inappropriate laughing, harassing colleagues, and verbal abuses. These interruptions will obstruct the progress of the daily educational process. They will also delay the teaching process in the class rooms, and might provoke a teacher's anger and frustration and will take time and effort to reset the classroom climate and re-establish control. Their impact reaches to the extent of limiting learning for the rest of students in the classroom and students experiencing repeated incidents might be led to weak academic performance and will result in increased of lack of attention (Johnson, 2006; Weerman et al, 2007).

Traditionally, the teachers deal with behavioral problems using a series of direct strategies. They assess the problem, and analyze the results to develop a list of remedial actions which often include disciplinary consequences. However, those strategies may not be useful with all students where they fail to achieve desired results and serve as a factor that aggravates the problem. Some research evidence suggests that using negative procedures in dealing with undesired behaviors participates in increasing the level of intransigence and authority resistance or subversive behavior of school properties leading many members of school staff to employ and activate the use of FBA assessment techniques which are based on a simple principle stating the notion that the defect cannot be fixed until the reasons behind it happening are understood. (Gable, et al 2004, 2005).

Buschbacher and Fox (2003) defined behavioral problems as: those behaviors that obstruct the student's or other colleague's ability to respond to instructions or teaching. The functional behavioral analysis history goes back to the first fundamental research in applied behavior analysis. These researches aimed at limiting the frequency and intensity of inappropriate behaviors and facilitating the gaining of adjective skills. Although, much research has proved that managing behavioral consequences can simply and

effectively reduce inappropriate behaviors. Behavior analysts had fears about using unnecessary punishment procedures. Skinner and other scientists alerted that those procedures may lead to undesirable side effects. They also call for enhancing control over behavior by using positive reinforcement. The procedural view assumes that different behaviors have different functions for various people in addition to numerous functions within the person themselves. This prior understanding for the behavior's function helps in designing effective treatment (Dennis et al 2012). Researchers conducted several reviews to indicate the effectiveness FBA in the treatment of behavioral problems. As mentioned in the (Acker's et al ,2005) critical reviews of Wisconsin's schools' practices in developing and implementing BIP based on functional behavioral evaluation an indication to the best practices in this field.

Results indicated that most applied plans showed significant errors concentrated around unclear procedural definitions and failure to investigate assumed behavioral function before starting intervention. In addition, those groups that included experienced members in developing intervention plans based on behavioral functional evaluation achieved better results than those who did not consider the intervention plans. Most outstanding recommendations included the necessity of providing sufficient training for teachers and supervisors and taking advantage of experts to conduct functional behavioral assessment in order to construct successful behavioral intervention plans.

Waguespack (Waguespack, et al; 2006) conducted a review of studies that used functional behavioral evaluation with (students with behavior and emotional disorders in the school system knowledge the year 1997. Studies concluded that activating the use of FBA inside the school system participates in developing students. As a result of the researchers, the recommendation outcome is a need for more studies in the following areas:

Identifying problems in implementing processes; highlighting the necessity training intervention teams to facilitate therapy interventions application; developing administrative flyers related to the use of FBA that assist the evaluation process and constructing positive therapy interventions within the context of regular schools.

In her review of published researches, Brosnan (2011) handled the aggression behavior and the effectiveness of behavioral interventions between 1980 and 2009. She indicated that most researches focused on the predominance of

aggression for people suffering from a severe level of intellectual disability in addition to autistic spectrum disorder and the effect of that behavior on individuals' development especially in intellectual abilities and social adjustment. Results also indicated that previous literature in applied behavior analysis offer overflowing examples of interventions that proved its effectiveness in limiting or eliminating aggressive behavior. The review concluded by (Kasari and Lawton (2010)) at California State University included the analysis of (68) studies that handled positive behavioral intervention for autism spectrum individuals during the years 2008- 2009.

Results indicated that it was promising new remedies (play, music, horseback riding that employ child's interests with the aim of enhancing their abilities and minimizing disability. Results also indicated the concentration and breadth of intervention strategies. In addition, most of those studies used One case study design.

Ingram et al (2005) conducted a study at Oregon University entitled "planning for intervention based on functional assessment" aiming at comparing between the effectiveness of intervention plans which are based on functional assessment and those which are not in affecting the level and rate of behavioral problems demonstrated by two students at the middle stage. Results show that plans based on functional behavior assessment strategies achieved a remark progress in lowering the level and number of undesired behaviors compared with other intervention plans.

Michael and Heather (2001) also conducted a study entitled "Functional Assessment for the behavior of hand fluttering at public education schools" aiming at controlling the fluttering behavior for a five years old child at kindergarten Mississippi State USA. FBA applied to identify variables related to maintain the consistency of behavior. Results indicated that; the correlation behavior directly related to teacher's tasks. Behavior increases when the given tasks are low, while the level of behavior decreases and improved when given tasks are at a high level. This indicates the reverse correlation between behavior and the level of difficulty for the required task.

Lane et al (2007) carried out a study entitled "Intervention based on the functional assessment to lower distraction behaviors and to increase academic involvement". This study aimed at investigating the effectiveness of using interventions based on FBA in limiting distracting behaviors for a six years' child affiliating in a regular kindergarten in Mississippi State, USA

through employing self-monitoring strategies and differential reinforcement. The child became more involved in learning tasks which can predict the improvement of his school performance.

Hawkins and Shannon (2012) conducted a study entitled “Technical and applied features for functional evaluations and behavioral intervention plans” at Georgia State University, USA. The study aimed at investigating technical characters for functional evaluations and BIP to evaluate the ability to relay on functional evaluation results in developing behavioral intervention plans. Randomly selected sample included 134 functional evaluation and behavioral intervention plan for students with disability (behavioral disorders and autism) who received services through Georgia Network of Educational and treatment Services (GNETS). Results indicated that probably few interventions in the behavioral intervention plans are connected to the function and that a large number of behavioral intervention plans are developed without considering the behavior’s function or it was selected wrongly. Results also showed that approximately 25% of the intervention plans contained strategies connected to the behavior’s function and that behavioral intervention plans which were based on the actual function of the behavior was more successful.

Valdivia (2006) in a study entitled “Classroom management strategies for students with “autism spectrum disorder (ASD)” at Wien in Michigan State, U.S.A pointed to the protective role that behavioral intervention plans -which are based on understanding the nature and function of children’s with ASD may perform. Results showed a strong relationship between effective classrooms management and positive student’s behavior. In addition, using positive behavior support such as reinforcement minimizes and limits the occurrence of behavior problems among students.

In a case study of a three years and six months old child with ASD, Buschbacher and Fox (2003) conducted a study “Understanding and Intervention of behaviors which are challenging for children with autism disorder”. They pointed out that the positive behavioral intervention is very effective in minimizing the behavior of anger attacks and increasing the ability to respond to instructions and therapy at school. In addition to the obvious decrease in the intensity and frequency of behaviors such as throwing self on the floor, screaming, hitting arms and legs and aggression toward others.

Benner et al (2010) conducted a study entitled “The effect of intensive positive support on behavior performance for students with emotional disorders: How important is the accuracy of the application?” in Washington state, U.S.A. This study aimed at investigating the effect of using intensive positive support strategies on behavior performance of a sample consisting of (37) students with emotional disorders at regular schools. It also aimed at investigating the accuracy of teachers (8 teachers whom underwent intensive training on how to use intensive positive support strategies) in implementing intensive positive support strategies during the school year. Results showed obvious reduction in students’ behavior problems. Also, Results indicated an important role of teachers in changing and enhancing students’ behaviors through training and accuracy in application.

Hawkins and Axelrod (2008) carried out a study entitled “Increasing the ability to stay within the task of behaviorally disturbed adolescents using functional behavioral assessment” in the U.S. on four males with behavior problems and ages ranging from 11 and 16 years. The study aimed at exploring the possibility to use functional behavioral assessment evaluation as a fast technique to make behavioral changes in staying at the required task. Results showed an increase in participants’ abilities to stay for longer periods within the required task.

Previous reviews and studies clearly indicate the effectiveness of FBA in dealing with students’ behavior problems. Thus, based on this, scientists and researchers developed models that serve this purpose aiming at assisting educators to understand the significance of functional behavioral assessment and how to identify and evaluate students’ behaviors; Moreover, studies clarify how the effective behavioral intervention plan is developed and written using information gathered through functional assessment using many forms designed for this purpose.

In the first place, the behavioral functional assessment is a systematic procedure to try explaining why behavior occurs through analyzing that behavior then generating hypotheses regarding its function and purpose. These hypotheses should assist specialists to identify interventions that make a difference in the student’s behavior. In addition to documenting suggested interventions in a plan that will be circulated to everyone dealing with the student (the behavioral intervention plan, (BIP). For those students who are eligible receiving special education services, the behavioral intervention plan is a part of the individual educational plan (IEPs).

Behavioral functional assessment procedures and intervention plan are based on joined work between all intervention team members. The intervention plan is characterized with a number of key features among which are: it includes positive intervention techniques and it focuses on it more than punishment, forms are organized and sequent making it easy to use and follow up, intervention usually include using techniques that alter undesired behaviors with desired ones or that change the curriculum and educational environment. Moreover, it aims at increasing and expanding students' capabilities and skills and providing them with motivation to behave adequately. Finally, the plan should be circulated among all those involved in taking the lead in education process and should participate (Fitzsimmons, 1998; McConnell et al, 2006; Riffel, 2005).

Some references suggest that functional behavioral assessment involves ten steps including: identifying the behavior, describing the behavior, gathering data on the behavior, describing the environment and followed rolls, finishing the functional behavioral assessment interview form, putting hypotheses, writing the intervention plan, applying the intervention plan, gathering data on the behavior and holding periodic meetings for the team to follow up the plan (McConnell et al, 2001).

Vincent and Gina (2009) indicated that functional behavioral assessment include five main steps: functional interview and filling formal functional behavioral assessment forms, gathering information, formulating hypotheses, testing hypotheses, summarizing the behavioral functional analysis and finally developing the behavioral intervention plan based on the behavioral functional analysis outcomes.

Neitzel and Bogin (2008) suggested seven main steps to apply the functional behavioral assessment in the behavioral intervention planning. First: building a multidisciplinary team. Second: identifying and procedurally defining targeted behavior. Third: gathering information that forms behavior's base line. Forth: developing hypotheses based on behavioral functional assessments outcomes. Fifth: testing hypotheses, as long as the behavior does not involve any dangers or harms. Sixth: developing therapeutic interventions suitable for the behavior's function aiming at limiting it and using proven practices such as Functional Communication Training (FCT), stimulation, adjusting the environment, increasing learning and social participation opportunities. In this context, McConnell et al (2006) and Johnson (2010) suggested a group of interventions and behavior strategies within four fields as follow: supportive positive environment

(removing distractions, adjusting academic requirements, using visual cues and gestures). Organized strategies including: (clarifying laws and regulations, strategically planning to adequately place the child, writing a contract between the student and his teacher or his parents, self-monitoring). Positive reinforcement including: (using verbal reinforcement, using the point system, using tokens). Using the behavior consequences when are possible. The intervention should be supportive and positive at start then punishment procedures are used such as using reminding or verbal reprimand, organized ignorance, written assignments and response's coast.

Seventh: monitoring the effectiveness of intervention though monitoring and following up students' behavior regularly to identify the efficacy of intervention. McConnell et al (2006) and Johnson (2010) suggested a group of means by which the effectiveness of behavioral plans and interventions used are evidenced: behavior observation forms, scores assigned to tasks, note taking, recording occurrences or duration of behavior, progress reports, records and work samples, evaluation or the student's self-evaluation, individualized educational plan review forms, rating scales for teachers and parents and graphs.

Sugai and Horner (2002) defined the behavioral intervention plans an affective therapeutic intervention based on information derived from functional behavioral assessment, focusing of strengths and important social skills for both the student and his family. In addition to the therapeutic role of the behavioral intervention strategies based on functional behavioral assessment, many studies and researches including the study of Valdivia (2006) pointed to the preventive role that behavioral intervention strategies based on understanding the nature and purpose of students may play especially positive behavior support (PBS) and effective classroom management in limiting and minimizing behavior problems for students.

Durand and Rost (2005) suggested that positive support of behavior as one of behavioral intervention strategies works effectively through identifying suitable circumstances for using this strategy. Warger (1999) defined the following procedures used by many teachers as preventive strategies in classroom management to avoid the occurrence of behavior problems and to limit them: 1. Individual response to students' performance, their strengths and needs. 2. Adjusting the environment. 3. Providing students with alternative skills that enable them of having their needs adequately. 4. Reinforcing all positive behaviors consistently.

Finally, Manente et al (2010) summarize the functional assessment describing it as a process of data gathering to generate and test hypotheses related to relationships between environmental events and behavior. In other words, the functional assessment is a tool to help in identifying factors that maintains the continuity of behavior. By identifying these factors, the best interventions which can be applied are defined. Strategies based on behavior adjustment aim to answer the question “What is happening?” while strategies of functional behavioral assessment focus on answering the question “why this behavior happens?”

Discussion

Participants

The study sample was selected intentionally consisting of four students with ASD and ADHD from various educational environments. (20) Female teachers from general and private education were also included. The sample distribution is shown in Table 1.

Table 1

Study Sample Distribution Table

Category	Public/General Schools	Private/Specialty School/Center
ADHD Students	1	-
ASD Students	1	2
Teachers	10	10

Instruments

Behavioral Intervention Planning Manual (BIP), 3rd edition

Developed by McConnell, Patton and Pollock (2006) to comply with the American law for the education of disabled individuals (IDEA, 2004) aiming to assist educators to understand the mechanism and strategy of functional behavioral assessment and to help in developing a write effective behavioral intervention plan. The manual comprised of four forms to document the intervention process consequence that provides a review of reasons that led to intervention in an easy way that document all information. Including the functional behavioral assessment (FBA): aiming at providing a contextual review and a precise description to the nature of behavior and behavioral patterns. In addition to the Behavioral Intervention Plan (BIP): includes general objectives, therapeutic interventions, and people responsible for implementation and evaluation methods. Also, the manifestation or determination aims at determining whether the behavior of interest is connected to the student's disability.

Homedan (2015) translated the manual to Arabic and investigated validity indications through displaying it on specialists in educational translating and a specialist in proofreading. The manual was make available and shared with a group of practiced referees in general education schools and specialized centers, and for those participating teachers and prior to the implementation and interview had been conducted with all teachers to identify their opinions regarding its effectiveness in reducing behavioral problems for their students and to identify difficulties and the challenges that faced during implementation. This study adopted the one case study methodology where each student's development was studied individually by comparing his/her performance at the start of the study based on the base line for his/her behaviors before the application and measuring the behaviors after the

application. In addition, the effectiveness of the program was evaluated through interviewing teachers. Graphs were also utilized as an illustration tool to indicate the manual's effectiveness.

Procedures

The study was carried out using the following process:

1. Identifying the study topic, viewing the theoretical literature and previous studies related to the subject.
2. Sample by identifying study tools represented in the comprehensive manual for behavioral intervention planning (BIPM) and teachers' intervention form.
3. The tool was applied on the suggested sample by the researcher through training teachers on how to implement the manual and use functional behavioral assessment strategies.
4. Information analysis and results extraction: a graph was made for each child separately and the rate of improvement was calculated through chart analysis.

Results and Analysis

This study aimed at investigating the effectiveness of functional behavioral assessment strategies in reducing students' behavioral problems, for instance to clarify refer to the following questions developed and discussed; how effective are functional behavioral assessment strategies in reducing the level of behavioral problems for students with autism spectrum disorder and hyperactivity and attention deficit disorder in specialized centers and existence programs at general education schools in Amman?

To investigate this purpose, intentional samples of four student's three males and One Female have been diagnostic with ASD & ADHD were selected, the student (M) who is (11) years old has autism spectrum disorder currently is affiliated with general education school at the fourth level classroom. His behavioral problems are rejecting performing educational tasks especially in reading expressing that by singing and making musical tunes, weak concentration, attention and visual communication compared with peers. The treatments were adopted to accommodate the student's behavior and adjusted according to the manual's steps and in agreement with sequence of models as a first step was to identify the and motive of the selection as follows:

- Identifying the behavior and stating the reasons of selection and the rejecting of performing educational tasks and expressing that by singing and making musical tones form a priority in being an obstacle of the

student's learning and directly affects other students' learning at the classroom and obstructs the progress of learning.

- Observing the student (for two months) by the researcher and the student's teacher (the shadow teacher), and through meeting the classroom teacher, the private teacher and the student's parents.
- Evaluating the behavior functionally, defining the base line for the behavior and putting hypotheses for the behavior's function through directly observing and evaluating the student.

In the case of student (M) rejecting following instructions and singing came after directly requesting him to perform a specific task (reading) especially when this task is difficult and when he looks tensed and frustrated, in addition, his behavior follows the teacher asking the student to leave the classroom because of his loud singing making it difficult to continue teaching in the class; the purpose of this behavior is to avoid instructions and assignments especially if it was difficult to read. The base line was defined through measuring time duration the behavior takes in the first fifteen minutes of the reading class and the percentage of observers' agreement was 98.6%.

The behavioral intervention plan aimed at using positive interventions and strategies with the purpose of raising the level of student's abilities especially in reading and other academic skills including:

- Conducting a training program for the student to raise the level of his academic skills in the resource room at specific times of the day. In addition to following up those lessons at home.
- The Student's private teacher playing the role of the assisting partner in performing the tasks using direct reinforcement after the end of the tasks (five minutes of music after the end each class or playing with the computer).

These strategies general participated in reducing the stress of tension for the student. Motivation and skills in addition to reducing the level of difficulties that they faced especially in reading which minimized the behavior of rejection and avoidance. The student uses to encounter their difficulties. The decline in the duration of behavior is estimated at about 70%.

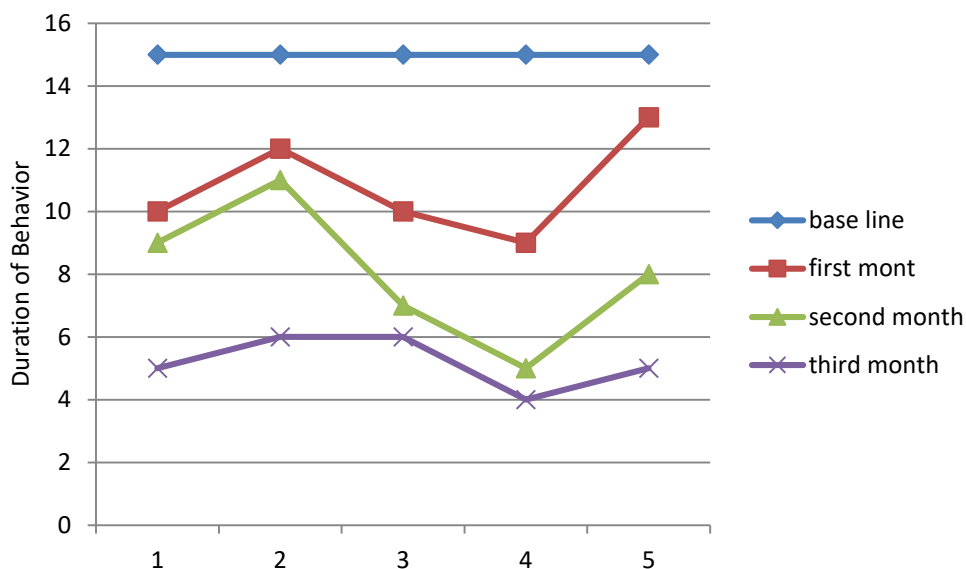


Figure 1. Comparing the Behavior During Therapeutic Interventions with the Baseline.

The student (S) with an age of (4, 6) years, diagnosed with hyperactivity and attention deficit disorder. She is affiliated to regular school at the level of Kg2. She has the following behavior problems: general weakness in communication skills, rejection of performing expressing that with screaming loudly and trying to leave her seat, weakness in concentration, attention and visual communication compared with other children at the same age in addition to hyperactivity. The behavior was chosen and adjusted according to the manual's steps and consequence of models by identifying the behavior and stating the reasons behind its selection, the behavior of rejecting to sit down on the chair and participating with other colleagues in classroom activities especially in the morning class forms a priority because it hinders student's learning and directly affects the learning from others. The behavior was identified through directly observing the student for two months by the researcher and the student's teacher (the shadow teacher) in addition to meeting with the classroom teacher, the private teacher and the student's parents; functionally evaluating the behavior and putting special hypotheses for the behavior's function through directly observing and evaluating the student. In the case of student (S), rejecting following instructions to

participate in social activities is due to reasons related to obvious weakness in communication and social skills required for those skills. Her behavior is followed with the teacher trying either to direct the student outside the classroom because of the movement and screaming loudly making it difficult to continue the class or to allow her to isolate within the classroom which in turn clearly reinforce the student's behavior.

The base line was defined through measuring time duration the behavior takes in the first fifteen minutes of the reading class. The percentage of observers' agreement was 100%.

The therapeutic plan and interventions was aimed to use positive interventions and strategies aiming at the purpose behind the student's behavior rather than the behavior itself. Thus, the concentration in the plan on trying to raise the level of student's basic abilities though a group of strategies including:

- Conducting a training program for the student to raise the level of her perceptual and social skills in general and her functional communication skills in specific.
- The Student's private teacher playing the role of the assisting partner in performing the tasks using direct reinforcement after the end of the tasks (five minutes of music after the end each class or playing ball of jumping) and using songs that the child likes during the activity.

The previous activities reduced the student's stress resulting from participating others in Classroom activities because she lacks necessary communicating and interactive skills that support those participation situations. It reinforced those skills which in turn reduced difficulties that she faced by interacting with her peers. This led to minimizing the rejection and avoidance behavior the student's use as shown in the following graph which shows a clear reduction in the time duration the behavior takes with a percentage of approximately 80%.

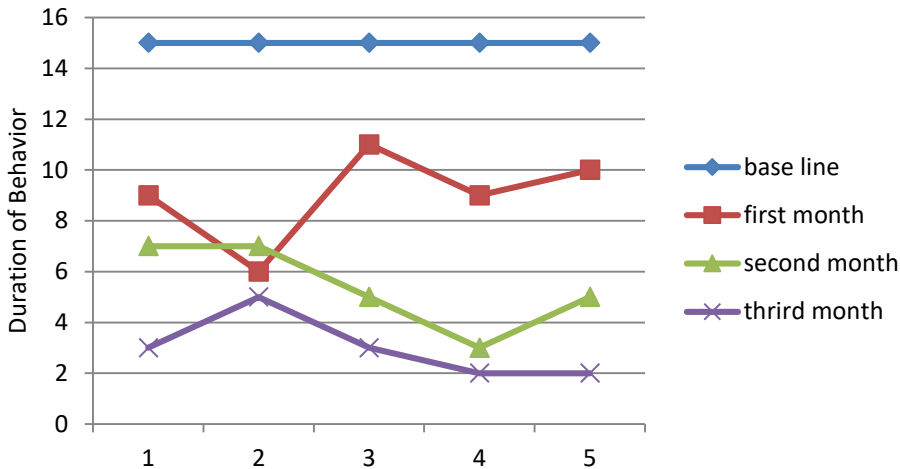


Figure 2. Comparing the Behavior During Therapeutic Interventions with the Baseline.

Student (A) is 7 years old. He has ASD and he is currently affiliated in a specialized center to educate children with autism spectrum disorder. He has many behavior problems including: a general weakness in communication and social skills, hand fluttering, a weakness in concentration, attention and visual communication, walking on toes tips and biting hand. The behavior was chosen and adjusted according to the steps mentioned in the comprehensive manual for behavioral intervention planning as follows:

- Identifying the behavior and stating reasons behind its selection: the behavior of hand biting is a priority because it is the most frequent for the student and it is with intensity that wounds and cracks hand's surface. In addition, it frustrates student's learning because he rejects responding to instructions during the time of behavior occurrence. The behavior was identified through directly observing the student for one month by the researcher and the student's teacher, in addition to meeting with the classroom teacher, the supervisor and the student's parents.

Functionally evaluating the behavior and putting special hypotheses for the behavior function through directly observing and evaluating the student. In the case of student (A), hand biting occurs during performing tasks specially when those tasks are difficult, long and make the student feels tensed and frustrated leading him in most times to feel anger especially because he has a weakness in communication skills. In addition, this behavior

occurs during spare times. His behavior is followed with the teacher trying verbally or by using hands to direct the student to stop hand biting and isolating him in a corner at the classroom and thus stopping the task that was performed by the student and not completing the session. The base line was defined through measuring the daily frequency of behavior. The percentage of observers' agreement was 100%.

The therapeutic plan and interventions: It aimed to use positive interventions and strategies aiming at the purpose behind the student's behavior. Thus, the concentration in the plan on trying to raise the level of student's basic abilities through a group of strategies including:

- conducting a training program for the student to raise the level of her perceptual and social skills
- In general and her functional communication skills in specific.
- The student's private teacher playing the role of the assisting partner in performing the tasks.
- Using direct reinforcement after the end of the task (Chips, M &Ms).
- Identify favorite activities for the student (Beads) to perform during spare times.

The previous strategies participated in assisting the student to overcome stress and difficulties during long tasks and increased her skills especially the communicative, social and perceptual. Using continuous verbal and physical reinforcement and helping the student through the teacher being the associated partner assisting her during assignments participated in minimizing feelings of difficulty, frustration and anger making her more committed with required tasks. In addition, keeping the student busy at her spare times with a task that she likes Beads may form a base for future vocational rehabilitation. The graph shows an obvious reduction in behavior

frequency (hand biting) during the allocated period with the percentage of approximately (100%).

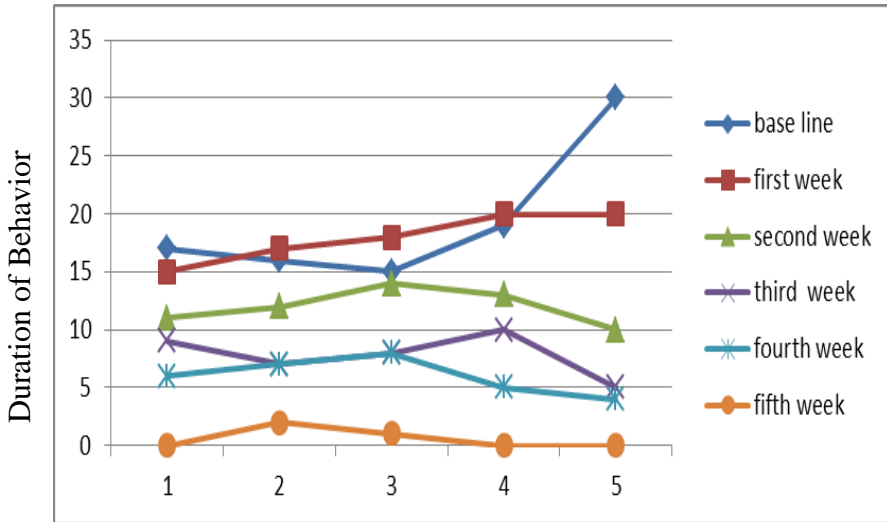


Figure 3. Comparing the Behavior During Therapeutic Interventions with the Baseline.

Student (S) is a (6) years old with ASD currently affiliated to a center specialized with educating and teaching children with autism spectrum disorder. This student has a number of behavioral problems including: a general weakness in communication and social skills, a weakness in concentration, attention and visual communication compared with children of the same age, he looks to things with the tip of his eyes, attached to routine and shaking tools.

The behavior was chosen and adjusted according to the steps mentioned in the comprehensive manual for behavioral intervention planning as follows:

- Identifying the behavior and stating reasons behind its selection: the behavior of tools or toys shaking is a priority because it is the most frequent for the student and it hinders his learning because he is occupied with this behavior and does not complete assignments. In addition, it is a priority for the family. The behavior was identified through directly observing the student for one month by the researcher and the student's teacher, in addition to meeting with the classroom teacher, the supervisor and the student's parents.
- Functionally evaluating the behavior and putting special hypotheses for the behavior's function stop the behavior and depriving him from the

reinforcement. The base line was defined through measuring the daily frequency of behavior. The percentage of observers' agreement was 100%.

- The therapeutic plan and interventions: It aimed to use positive interventions and strategies aiming at the purpose behind the student's behavior. Thus, the concentration in the plan on trying to raise the level of student's basic abilities through a group of strategies including:
 - a) Conducting a training program for the student to raise the level of his perceptual and social skills in general and his perceptual skills (concentration and attention) in specific in addition to functional communication skills.
 - b) The student's private teacher playing the role of the assisting partner in performing the tasks.
 - c) Using direct physical reinforcement after the end of the task.
 - d) Identify favorite activities for the student (beads, arranging classroom corners, returning tools and games to its places) to perform during spare times.

The previous strategies participated in assisting the student to overcome stress and difficulties.

He encounters during long tasks and increased his skills especially the communicative, social and perceptual. Using continuous verbal and physical reinforcement during the task and afterwards in addition to helping the student during assignments participated in minimizing feelings of difficulty, frustration and anger making him more committed with required tasks. In addition, keeping the student busy at his spare times with a task that he likes Beads, arranging classrooms corners and returning tools and games to its places participate in making the child busy from the behavior. The graph shows an obvious reduction in behavior frequency (things shaking) during the allocated period with the percentage of approximately (90%).

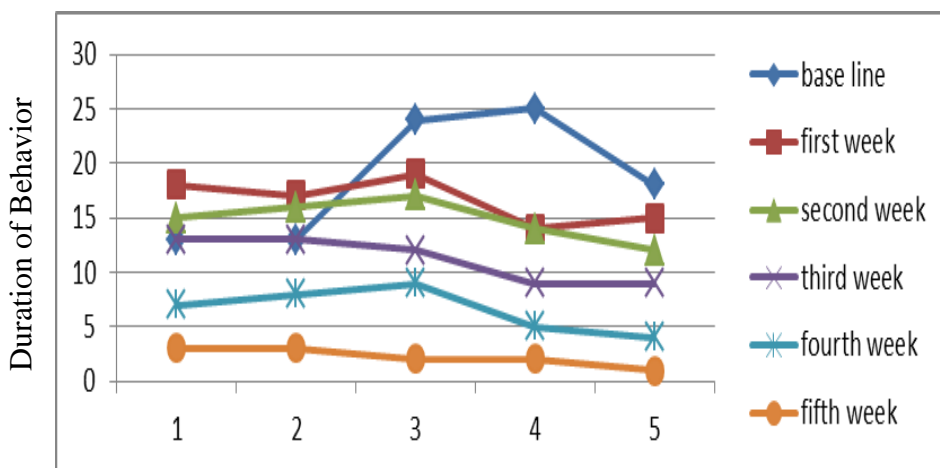


Figure 4. Comparing the Behavior During Therapeutic Interventions with the Baseline.

المجلة الدولية للأبحاث التربوية - جامعة الإمارات العربية المتحدة
المجلد (43) العدد (2) يوليو 2019

Graphs for the previous sample show how effective the comprehensive manual for behavioral intervention planning based on functional behavior assessment strategies in reducing and limiting the intensity of behavioral problems for students with disability integrated in general education schools. By focusing on supportive positive intervention plans for students which are targeted toward the behaviors function and its purpose through reinforcement and raising the level of students' abilities in order to reduce tension and difficulties they face at school in general and when performing tasks and activities in specific. This reflects positively on students' behavior making them more able to adjust, interact and compete with their peers in different educational environments.

The Second Question. What are the difficulties facing teachers in implementing functional behavioral assessment strategies?

To achieve this purpose, female teachers who were trained on the program and participated in the implementation of the models were interviewed (10 teachers in the general education and 10 special education teachers). The researcher used open ended specific questions in those interviews. Participants indicated that strategies form a quality transform in the field of classroom management and reducing behavioral problems for students. It also forms a positive trend towards students and their behavioral problems. From

the implementation and previous questions which reviewed participants' opinions regarding the application, we conclude most important advantages and limitations for these strategies and they are:

- Focusing on positive behavioral interventions and its easy application.
- The clarity and inclusiveness of models.
- Giving a qualitative base of behavior making it easy to define the base line.
- It offers a better understanding for the behavior and student's purpose.
- Implementing the interventions does not interrupt the educational process inside the classroom.
- It basically focuses on raising students' academic, communicative and social abilities.

And The most important limitations are:

- It requires the work of a trained team making it a challenge in some schools and centers.
- Lack of commitment by some families in implementing their part.
- Sometimes it is difficult to determine the purpose behind the behavior.
- Difficulty in positively facing behaviors that causes students' distraction at classroom (screaming, aggression, not responding to instructions,) without punishment as the first intervention.

Recommendations

Conduct further study with larger number of samples and educational Schools, but, because of the novelty of the subject, it may be inappropriate to conduct further studies on larger numbers of students. The researcher being present when applying the functional behavioral assessment procedures may have affected the study outcomes, making it desirable to conduct other studies in different circumstances that do not include the researcher.

Activating the use of functional behavioral assessment forms in public schools and specialized centers as a unified and organized procedure of measurement and behavior intervention to deal with behavioral problems that face students and limit their capabilities to learn.

References

- Acker, R., Boreson, L., Gable, R., & Potterton, T. (2005). Are we on the Right Course? Lessons Learned about Current FBA/BIP Practices in Schools. *Journal of Behavioral Education, 14*(1), 35–56.
- Benner, G., Beaudoin, K., Chen, P., Davis, C., & Ralston, N. (2010). *The Impact of Intensive Behavioral Supports on The Behavioral Functioning of Students with Emotional Disturbance: How Much Dose Fidelity Matter ? The Journal of Behavior Assessment and Intervention in Children, 1*(1), 85–100.
- Brosnan, J., & Healy, O. (2011). A review of behavioral interventions for the treatment of aggression in individuals with developmental disabilities. *Research in Developmental Disabilities, 32*(2), 437–446. <https://doi.org/10.1016/j.ridd.2010.12.023>
- Buschbacher, P. W., & Fox, L. (2003). Understanding and Intervening with the Challenging Behavior of Young Children with Autism Spectrum Disorder. *Language, Speech, and Hearing Services in Schools, 34*(3), 217–227. [https://doi.org/10.1044/0161-1461\(2003/018\)](https://doi.org/10.1044/0161-1461(2003/018))
- Dixon, D., Vogel, T., & Tarbox, J. (2012). *A Brief History of Functional Analysis and Applied Behavior Analysis*. https://doi.org/10.1007/978-1-4614-3037-7_2
- Durand, V., & Rost, N. (2005). Does It Matter Who Participates in Our Studies?: A Caution When Interpreting the Research on Positive Behavioral Support. *Journal of Positive Behavior Interventions - J POSIT BEHAV INTERV, 7*, 186–188. <https://doi.org/10.1177/10983007050070030801>
- Fitzsimmons, M. K. (1998). *Functional Behavior Assessment and Behavior Intervention Plans*. *ERIC/OSEP Digest E571*. Retrieved from <https://eric.ed.gov/?id=ED429420>
- Gable, A., Quinn, M., Rutherford, B., Howell K., Hoffman K., Butler J. (2004). *Conducting a functional behavioral assessment and developing a positive behavioral intervention plan*. Washington, DC: American Institutes for Research.
- Hawkins, R. O., & Axelrod, M. I. (2008). Increasing the on-task homework behavior of youth with behavior disorders using functional behavioral assessment. *Behavior Modification, 32*(6), 840–859. <https://doi.org/10.1177/0145445508318846>

Hawkins, S. (2012). Technical and Applied Features of Functional Assessments and Behavioral Intervention Plans. *Educational Psychology, Special Education, and Communication Disorders Dissertations*. Retrieved from https://scholarworks.gsu.edu/epse_diss/82

Homedan, Nabil. (2015). Evaluating the effectiveness of the comprehensive manual for behavior intervention planning in reducing the level of behavioral problems for students using functional behavioral assessment techniques. *Third Edition; Unpublished Study, The University of Jordan. Amman, Jordan*

Ingram, K., Lewis-Palmer, T., & Sugai, G. (2005). Function-Based Intervention Planning: Comparing the Effectiveness of FBA Function-Based and Non-Function-Based Intervention Plans. *Journal of Positive Behavior Interventions*, 7(4), 224–236. <https://doi.org/10.1177/10983007050070040401>

Johnson, C. (2010). Functional Behavior Assessment And Behavior Intervention Plans. *The School District of Palm Beach County Exceptional Student Education*. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6005a1.htm>

Johnson, H. L., & Fullwood, H. L. (2006). Disturbing Behaviors in the Secondary Classroom: How Do General Educators Perceive Problem Behaviors? *Journal of Instructional Psychology*, 33(1), 20–39.

Kasari, C., & Lawton, K. (2010). New directions in behavioral treatment of autism spectrum disorders. *Current Opinion in Neurology*, 23(2), 137–143. <https://doi.org/10.1097/WCO.0b013e32833775cd>

Lane, K. L., Smither, R., Huseman, R., Guffey, J., & Fox, J. (2007). A function-based intervention to decrease disruptive behavior and increase academic engagement. *Journal of Early and Intensive Behavior Intervention*, 4(1), 348–364. <https://doi.org/10.1037/h0100348>

Manente, C. J., Maraventano, J. C., LaRue, R. H., Delmolino, L., & Sloan, D. (2010). Effective behavioral intervention for adults on the autism spectrum: Best practices in functional assessment and treatment development. *The Behavior Analyst Today*, 11(1), 36–48. <https://doi.org/10.1037/h0100687>

McConnell, M. E., Cox, C. J., Thomas, D. D., & Hilvitz, P. B. (2001). *Functional Behavioral Assessment: A Systematic Process for Assessment and Intervention in General and Special Education Classrooms*. Love Publishing Company

Mueller, M. M., Sterling-Turner, H. E., & Scattone, D. (2001). Functional Assessment of Hand Flapping in a General Education Classroom. *Journal of Applied Behavior Analysis*, 34(2), 233–236. <https://doi.org/10.1901/jaba.2001.34-233>

Riffel, L. (2005). *Writing Behavioral Intervention Plans (BIP) based on Functional Behavior Assessments (FBA): Making Data Based Decisions to Change Behavior*. Retrieved May 12, 2019, from www.behaviordoctor.org.

Sugai, G., & Horner, R. (2002). Introduction to the Special Series on Positive Behavior Support in Schools. *Journal of Emotional and Behavioral Disorders*.

[Effects of Positive Unified Behavior Support on Instruction - ERIC - US https://files.eric.ed.gov/fulltext/EJ853217.pdf](https://files.eric.ed.gov/fulltext/EJ853217.pdf)

Valdivia, J. (2006). *Classroom Management Strategies for Student with Autism* (Master's Degree Study). Marygrove College, Michigan.

Vincent, L., & Gina, Z. (n.d.). *How To Conduct A Functional Assessment And Develop Behavior Plans To Reduce Problem*. Retrieved from www.armstrong.edu

Waguespack, A., Vaccaro T., Continere L. (2006). *Functional Behavioral Assessment and Intervention with Emotionally/Behaviorally Disordered Students : In Pursuit of State of the Art*. *International Journal of Behavioral Consultation and therapy*, vol2 , no.4 , pp. 463-474 .

Positive Behavior Support and Functional Assessment. (n.d.). *ERIC Clearinghouse on Disabilities and Gifted Education*, Reston VA, ERIC/OSEP Digest(E580).

Weerman, M., Harland, P., der Laan H., (2007). *Misbehavior at school and delinquency elsewhere: a complex relationship*. *Criminal Justice Review*, vol. 32, no. 4, pp. 358–379, 2007.