



## Play-based intervention for adolescents with autistic spectrum disorder (ASDs) and intellectual disability in a school setting: A case study

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### Abstract

Play therapy is a therapeutic dynamic process between the child that explores his previous and present difficulties that influence his behavior and the therapist. At the same time, the therapy itself can be a tool for dealing with the child's problems. The purpose of this study was to present a play therapy intervention program to adolescents with autistic spectrum disorder (ASDs) and behavior problems in developing their social-emotional-behavior skills in a school setting. In addition, the program emphasized on mobility difficulties, independence, self-care, social skills, the management of aggression and challenging behavior, as well as the recognition and managing aggression. This program illustrates a school class of 6 adolescents, 16-year-old, with ASDs and intellectual disabilities in a school setting. All students commonly have intense aggression and emotional and social skills difficulties. Information was collected by semi-structured observation reports, behavior reports, social skill reports and communication reports. The intervention program focused on anger management, independence, communication skills and emotional recognition. Free and guided play was used as well as brainstorming, role play, discussion and group therapy techniques. Furthermore, the materials we used were games, pictures, paintings, books, videos, music, cds, etc. and activities such as exercises, mobility games, imitation games, social stories, breathing and relaxation exercises, role models, etc. The program was completed in 2 years. The evaluation showed that the group was improved in communication, emotional and social skills, in school performance, self-care, communication, independence and anger management.

**Keywords:** intellectual disabilities, autistic spectrum disorder, play therapy, social communicative and emotional skills

### Introduction

Unstructured and structured play is very important for children's development as it is their way of expressing themselves especially their current feelings and issues (Landreth, 2012) <sup>[1]</sup>. Play therapy is a therapeutic dynamic process which offers children joy and pleasure and additionally helps them to express their problems and feelings while at the same time it allows them to overcome their daily worries (Vural & Saglam, 2022, 2022) <sup>[2]</sup>. Additionally, it develops imagination and creativity, it helps them grow cognitive abilities, it improves their literacy, it encourages their independence, and it promotes their physical fitness. There are six stages of play, a) Unoccupied Play: play involves random activities, b) Onlooker Play: children play watching other children, but they don't directly involve in play, c) Solitary Play: this play involves playing with a single toy d) Parallel Play: this stage involves independent play near-peers,, e) Associative Play: this play involves the engagement of a group of children in a mutual activity, f) Cooperative Play: this stage of play involves children to reach a common goal (Parten, 1932) <sup>[3]</sup>. Types of play therapy relate physical, manipulative symbolic exploratory, imaginative, creative, fantasy, object play etc. (Hughes, 2002) <sup>[4]</sup>.

Play therapy differs from regular play as through play the therapist helps the children to address and resolve their own problems. Association for Play Therapy (APT) defines play therapy as "the systematic use of a theoretical model to

*establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychosocial difficulties and achieve optimal growth and development."* A lot of research demonstrates the effectiveness of play therapy as a therapeutic intervention (Lin & Bratton, 2015) <sup>[5]</sup>. It is applicable to a variety of needs the children have, including, aggressive behaviors, withdrawn behavior, behavior problems, social problems etc. (Fye & Rainey, 2021) <sup>[6]</sup>. Also, it provides a perceptive into how a child interacts and engages with others and how he understands them (Parker & Stone, 2020) <sup>[7]</sup>.

Play therapy has been utilized as the primary intervention or as an adjunctive therapy for multiple cognitive, social, emotional, and behavioral disorders, such as external and inter problems, total problems, self-efficacy, academic and other behaviors (Ray, Armstrong, Balkin, & Jayne, 2015) <sup>[8]</sup>. Teachers, Occupational and Speech and Language therapists use play-based programs within School Settings to support children difficulties in play, language and social interaction (Wadley & Stagnitti, 2020) <sup>[9]</sup>. In addition, it supports children with special needs to develop qualities such as spiritual, moral, cognitive, emotional, imaginative, aesthetic, social, and physical qualities.

Play is needed to provide children with intellectual disabilities for their overall development that includes mind, body, and spirit. Children with intellectual disabilities lack in short attention and memory, and they have poor, eye-hand

coordination. Furthermore, they are inactive and uninterested, so through enjoyable activities they can easily concentrate, learn from their mistakes, to express their feelings verbally and taught team work, gain confidence and develop their thinking (Rathnakumar, 2022) <sup>[10]</sup>. Play activities should be used as an integral part of the classroom's activities in order to develop students' skills such as social, emotional, communicative and language skills.

Literature review shows that child-centered play therapy strengthens social and emotional behavior of children with autistic spectrum disorder (Hillman, 2028) <sup>[11]</sup>. Pivotal Response Treatment (PRT) is a therapy that is used for children with autism, and it is based on activities initiated by the child, and it focuses on play as therapy (West, 2016) <sup>[12]</sup>. The purpose of PRT is to develop communication skills, to increase positive behaviors, and to limit destructive behaviors. In addition, it focuses on developing language abilities through games and natural activities through games, which ultimately decreases other deficit skills. Occupational therapists use play-based sensory-motor activities to influence the way the child with autistic spectrum disorder responds to sensation, reducing distress, and improving motor skills, adaptive responses, concentration, and interaction with others (Randell, *et al.* 2019), <sup>[13]</sup> while the non-directive play therapy may enhance and accelerate emotional/social development of children with severe autism (Orit & Ryan, 2004) <sup>[14]</sup>. Additionally, structured play offers significant gain in cognition, socialization, and communication to the children with autistic spectrum disorder (Malika & Sutapa Guha, 2013) <sup>[15]</sup>.

Play therapy is one method that can be used to improve communication, social interaction, behavior, interests, and motor skills to children with intellectual disabilities and autistic spectrum disorder.

### Methods and Resources

This case study is about a second grade 8-year-student in Primary education, who has two elderly brothers and many family, school and social difficulties which influence him negatively. The parents are unemployed and the family lives in very difficult living conditions. The father consumes large amounts of alcohol, verbally and physically abuses his family and has recently abandoned them. The mother was using substances, she was diagnosed with chronic depression, and she was incapable of raising her children. In addition, the grandparents lived with them to support the family, but they found it difficult to support them decently due to their age and poverty. The family received social benefits from the government and church, but the child was underweight, suffered from constant fatigue, had poor physical hygiene, was isolated, had outbursts of anger and aggression, had communication difficulties and showed disinterest in learning and doing his schoolwork.

The assessment focused on the risk factors which was related with mental resilience of the family and the school context. Semi-structured observation was used to collect data at the student's home from a social worker who visited the home and advised the mother how to parent her children and how to cope with the difficult living conditions.

The observation axes focused on the individual's characteristics that are related to mental resilience according to literature. It aimed at empathy, cooperation, extroversion,

accepting experiences, value of socializing and interacting with others (Connor & Davidson, 2003)<sup>20</sup>. It also focused on communication skills with classmates and teachers, the ability to reveal emotions, solving problems, managing anger and quarrels. It also showed that the student didn't care about his school performance, he was introverted, he had lack of communication skills and he was less accepting new experiences. He easily got tired and generally he refused to engage in group work. He had little interaction with classmates. He was easily understood, and he was unable to manage his disagreement and anger which resulted him in his isolation. Even though the student showed interest in two classmates that also had behaviour problems, the class sociogram showed that his classmates did not select him for group activities, games or friendship engagement. The teachers were very supportive of him, but he had not developed a special relationship with anyone. According to the psychometric evaluation his IQ score had normal levels for his age. Even though he scored higher on practical tasks than on the verbal ones, there was no significant difference.

The purpose of the therapeutic intervention was to develop skills to manage stressful and adverse conditions. In particular, the goals of the intervention were: a) cultivating mindfulness such as recognizing and managing emotions and emotional states, undertaking and completing obligations b) cultivating self-efficacy skills such as creating conditions for personal development, education, dealing with difficulties and managing loss, c) developing social, communication and interaction skills, learning ways to manage difficulties and conflicts, anger control, learning appropriate ways of behaviour within groups and establishing and maintaining friendly relationships.

### Material and Methods

This case study is about a 16-year-old group of 6 students, with intellectual disability and autistic spectrum disorder, who attended a special school. They additional had other dysfunctions listed below; One girl had Rett Syndrome, Selective mutism, motor problems, self-care difficulties, lack of social and interpersonal skills. Her cognition developmental level was preschool age. The other girl had Down syndrome and couldn't speak or communicate in general and couldn't read or write. Also, two boys who couldn't speak or communicate, was at preschool level as well, but could write only when they wanted and had challenging behavior. The other two boys had Fragile X syndrome and autism, were verbal and could read and write with Sym Writer program (the second boy could read without the program).

The common characteristics of this group are intense aggression and lack of emotional and social skills. Semi-structured observation was used to collect data. The observation axes focused on the individual's characteristics that were related to the recording of impulsive and aggressive behavior, interaction and communication skills, ways of managing emotional situations and mobility and self-care skills. The evaluation showed weaknesses in these skills.

The purpose of this paper is to present an intervention program aimed at developing social, communicative and emotional skills in school-aged students with autistic spectrum disorder (ASDs) and intellectual disability. In particular, the goals of the intervention were: a) cultivating

gross and fine mobility, b) cultivating self-care skills, c) cultivating social skills and interpersonal relationships, d) recognizing and managing emotions, e) managing challenging behavior, g) managing aggression.

### Program implementation

The school's special needs teacher that was also a qualified psychologist implemented the program within the framework of the 6 students' class for 55 minutes once a week. The total duration of the program lasted two years. The program included 6 modules in order to improve in these areas: 1) Gross Motor Skills, 2) Fine Motor Skills, 3) Self-Care Skills, 4) Emotions: Recognition and Management, 5) Communication and Interaction, 6) Social Skills. The modules were chosen in relation to the assessment results that aimed to strengthen the student's personal characteristics.

The first module was about improving Grossing Motor Skills. It focused on improving fine motor skills, making movements and using the small muscles of their hands and wrists. Some activities were: walking, running, jumping, going up and down the stairs, climbing, crawling, playing ball games, trampoline, bike track, etc. The second module was about improving fine motor skills. Children dealt with wedges, painting, they made constructions with beads, straws and played with small objects. The third module was about acquiring self-care skills. Children learned to wash their hands, their teeth, get dressed, fold their clothes and arrange their things in their cupboards. Images, videos, real objects were used and practiced on real conditions. The fourth module was related on understanding and managing emotions. They learned to recognize and express feelings like joy, sadness, anger, surprise, fear, curiosity, jealousy and how to manage and associate them with social situations. Various materials such as pictures, books, videos, reading fairy tales etc. were used. They discussed their feelings and made constructions like the emotion thermometer which they used to show the intensity off their emotions. The fifth module aimed at learning communication skills. Children learned to ask whatever they wanted (through symbols and sign along the ones that couldn't speak). They also practiced on letting other people speak and not interrupt them or force them to do their own interests. In addition, they learned how to use polite manners and to participate in conversations accordingly. Furthermore, they worked well on managing their anxiety and stress. The sixth module was related to developing their social skills and manage their anger and conflicts, how to cooperate with the team, how to establish and maintain friendly relations etc.

A variety of teaching methods was used to provide the right amount of support and challenge for every student. Such methods differentiated teaching, individualized and collaborative methods. Cooperative interventions were used with free and guided play. The techniques chosen were discussion, brainstorming, role-play, drama and simulation. The resources that were used were painting, video, songs, stationery, books, fairy tales, colors, cd, etc. A lot of activities such as imitation games, mobility exercises, social stories for learning ways to manage emotions (anger, anxiety), viewing and imitating role models for learning techniques for managing anger, anxiety, communication, etc. were used. Also, a lot of games like sensory games, dolls, glove dolls, animals, soap bubbles etc. were also used.

By playing, they learned to ask for what they want to avoid challenging behavior and apply acceptable behaviors.

### Results

The modules of the program were completed in a two-year period. Collorated observation recording axes before and after the program showed that there was a significant improvement throughout the program. The final evaluation of the program showed positive results of behavior and school performance. The students learned to express their wishes, aggressive and challenging behavior was significantly decreased, and good relationships were developed among each other. They also learned how to cooperate in a better way, to interact, help and support their classmates. Moreover, they learned to take care of themselves in their daily needs, such as washing hands and teeth, dressing up, etc. Most of them learned how to manage their feelings and their relationship in the school setting was improved. The subjects regarding interdisciplinary approach increased the students' knowledge, skills and abilities. Differentiated teaching was adjusted according to the students' inclinations, interests and abilities and greatly helped them achieve the program's objectives. Using multi-sensory equipment helped the students understand the subjects better and enthusiastically engage in the tasks. Play was effectively used for teaching. Students enthusiastically presented their tasks and actively participated in the program. They learned through various sources of learning. The learning process became interesting. The atmosphere got more relaxed and informal. In and through play the children developed and expanded their physical, cognitive and emotional abilities.

### Conclusion

A case study regarding a group of 6 adolescents with autistic spectrum disorder (ASDs) and intellectual disability was the opportunity to design a program developing cognitive, emotional, social and self-care skills inside the school premises. Play therapy was used to achieve the pedagogical goals as play is the children's natural mode of communication and the materials are used to allow them to express and explore themselves (Landreth, 2012) <sup>[16]</sup>.

The results of this program are consistent with research results which demonstrate that play therapy has a therapeutic effect on children's problem behaviors, such as internalizing and externalizing problem behaviors, and academic achievement (Ray *et al.* 2015) <sup>[17]</sup>. Strategies such as video modeling, script training, promoting play skills to children with autistic spectrum disorder were chosen (Honglan, 2021) <sup>[18]</sup>. The use of a variety of methods, techniques, equipment and materials contributes significantly to improve goal achievements (Aksoy, 2019) <sup>[19]</sup>.

We suggest the program should be used to high-risk groups with special needs in order to help them overcome their difficulties. Furthermore, it would be interesting to adapt and implement this program to children with typical development with similar difficulties, to evaluate their results and make relevant comparisons. The development of communication, social and emotional skills, as well as self-care skills will help adolescents with autistic spectrum disorder (ASDs) and intellectual disability in their school and social integration.

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