

Importance of Game in Special Education and its Use in the Treatment of Children with Autism

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Abstract

Game takes place in school, in parks, in daycare places, early intervention programs, in therapeutic sessions and especially at home. It is an essential element of the development of all children and children with special needs. The use of game in the treatment and in the psychology of children with autism provides significant benefits for these children. Children with autism are extremely difficult to relate to others, especially to children of the same age in ordinary ways. Game is a wonderful tool that can help children with autism to participate in interactions. When it is used properly game can also allow children to discover their feelings, their environment, and their relationships with parents, siblings and children of the same age. Through play, children learn to communicate with others, express feelings, modify their behavior and develop problem-solving skills. They also learn various ways of building relationships with others. Game provides a safe psychological distance from their problems and allows them to express thoughts and emotions that are appropriate for their development.

Keywords: game, autism, treatment of children with autism, play therapy.

1. Introduction

Game is the mirror of life. For children, however, game is more than an image, it is their own life. Children have been playing for centuries, even before writing was invented. The history of games begins in the mists of time, from the ancient Egyptians and Greeks and up until today.

Game is a dominant and important activity during childhood and is essential for the development of children. From an early age children begin to explore the world through games. Game is an activity that stems from the child and not required or directed by others. It is free from external rules and usually there is no specific aim to be achieved. Game contributes significantly to the development of children, giving them the opportunity to learn about their environment and develop social skills. Moreover, it is a great means of education and development of their personality.

Game is vital for the normal development of children. Games contribute in the development and growth of skills of children (social, intellectual, creative, physical), which prepare them for entering social life.

The games of children with autism are completely different from games of non retarded children as the lack variety, spontaneity, make-believe or social game, similar to their developmental level. The result of this behavior is absence of great interaction with other children.

Children with autism usually have poor imagination, lack of interest in games and lack of spontaneity and creativity. What greatly influences their behavior in games is the lack of a creative mind to understand a communicative world. This may be the key to help children with autism. All these demonstrate the importance of symbolic and social play for children with autism.

Therefore, game should be a basic component of education of all children and teachers should encourage its development at school. The main goal of the game is the satisfaction it brings to children. So, incorporating it into the curriculum of every child, the learning process becomes an enjoyable process for every child. Nevertheless, games can also be used for their education from teachers.

2. The importance of game in special education

Game takes place in school, in parks, in daycare places, early intervention programs, in therapeutic sessions and especially at home. Game is an essential element of the development of all children and children with special needs. It is one way by which children learn. It contributes to the form of the child's identity. It is prerequisite for building relationships and friendships in the classroom. Game is not just an activity, but a meaningful process by which children are co-creators of their world with children of their own age and learn through interactions with friends (Avgitidou, 2001). The environment and the materials of the game need to match the child's developmental level and abilities in order to be effective (Paweni & Rubovits, 2000).

National Lekotek Center, a nonprofit organization that promotes access for children with disabilities to games, intended to make games accessible to all children and to provide developmentally appropriate games and learning opportunities for children with special needs and their families. In particular it provides ten tips for selecting games for children with special needs, regardless of their disability (Guddemi, 1990):

- The child must be given opportunities for multi-sensory stimulation,
- Easy and active participation should be encouraged,
- The environment of the game (indoor-outdoor) must be taken into account,
- Opportunities for successful game should be given,
- Self-expression of these children through games must be promoted,
- It must be appropriate for every child and fit its individual characteristics and interests,
- It should provide children with security and last long, and
- It must permit proper social interaction.

Also, when designing learning and game environments for children with special needs the following principles should be taken into account (Cohen et al., 1979):

- The environments should not be significantly different,
- The play areas and learning centers should be linked,
- The use of repetition and multi-sensory experiences is necessary,
- Rich, stimulating environmental stimuli should be provided, and
- Obstacles should be limited as much as possible.

The Beers and Wehman (1985) have differentiated four types of games that are cognitively and socially important for children with special needs:

- Exploratory game,
- Handle playing with various toys,
- Social game, and
- Structured game with rules.

When designing game opportunities for children with disabilities, appropriate experiences in each of these game categories should be designed. So, these children need many opportunities to explore their environment. They must be as kinetic as possible and move in their environment. They must use all their senses to experience the world around them. Young children learn through their senses. It is necessary to grasp, smell, taste, hear and see. That's why teachers should take their children outside classrooms and plan excursions.

Also, children with disabilities should be able to hold, handle and play with real objects and toys. Children construct knowledge when handling materials and toys; discover new ideas and physical properties of objects. So, the use of sand, water, puppet, doll, etc. is indicated. With handle game children have the freedom of movement and choice.

The social game can begin with the initiative of the teacher or another child, if the child with special needs hesitates to start on its own the social game. Once more the use of dolls and puppets is helpful for the creation of social games. As we have already mentioned social game helps the development of language, social skills, adaptability, self-control and thinking skills. As children acquire logical thinking skills they are ready for games with rules (board and card games).

But imaginary game is also very important for children with special needs. Usually teachers are planning a limited program for children with disabilities considering that they should give all their attention to the acquisition of basic skills. However, the experiences that are related to creativity and imagination refer in particular to children with special needs. These experiences encourage an open-ended approach to learning and enable them to use all their senses, including those that can work partially.

When children have a specific problem, such as autism, arts and music can become a means of self-expression and creativity, where the oral speech fails. The experiences that are associated with creativity and imagination can give children with special needs the opportunity to classify what they perceive by the external world, to internalize and share them with others. Music and dancing, for example, can express concepts beyond the need for words (Bernadette, 2003).

3. The game of children with autism

Games of children with autism, if they exist, have been described as simple, repetitive and stereotyped (Anderson et al., 2004; Honey et al., 2006). The study of Gillian et al. (2006) for children with autism, with normal verbal or non-verbal IQ has led to the same conclusion.

The game that is mostly observed is parallel - functional game and solitary functional game (Holmes & Willoughby, 2005). Rutherford et al. (2006), indicate that children with autism behave like they have lost the curiosity that children with normal development have. Stahmer (1999) says that although children with autism seem to lack spontaneous play, this is not the result of complete inability to play, but is due to the fact that they believe that the game is difficult. This consecutively can lead to frustration and lack of motivation to play. Children with autism do not have the necessary skills to play or to understand the symbolic meaning of "playing with the car." So whenever we give them a regular toy they do not know what to do with it, so they smell it or try to taste it (Bourma, 2001). So, their game is repetitive (Burack et al., 2001).

Autistic children and children with disorders in communication seem to prefer hard objects to play whereas children who have no handicaps choosing soft toys (Brodin, 1991).

In one of the studies about children with multiple disabilities, it was observed that the favorite items of children with multiple disabilities range from everyday objects, like balls, mirrors, objects made of hard plastic, empty matchboxes etc. These children often prefer hard objects. One explanation for this preference is that these objects have a rigid surface and cause noise if the child hits it on the floor or table (Brodin, 2004). The children receive in this way a clearer stimulus.

Lack of game in autistic children is mainly a result of behavioral deviation of these children (Demeyer et al., 1967; Rendle & Clancy, 1971; Rutter, 1978; Webster et al., 1980). The behavior of these children while they play is not just retarded but differs in complexity from the development of normal children (Boron & Cohen, 1987). There is lack of symbolism in games of children with autism (Boron & Cohen, 1987; Mundy et al., 1987; Wulff, 1985).

Other studies were conducted about methods of education using games for autistic children. Education through play for these children showed to decline deviant behavior (Quinn & Rubin, 1984; Stahmer & Schreibman, 1992), and developed many game types, among which is the symbolic game (Rogers et al., 1986; Stahmer, 1995). Autistic children can be taught even to participate in play with children of the same age, a skill which is necessary in order to adapt and participate in socio-dramatic games. Stahmer (1995) proved that autistic children can learn new, continual and symbolic games which are prerequisite for socio-dramatic play.

Results of study conducted by Thorp et al. (1995) reveal that the socio-dramatic games of autistic children of appropriate levels of development can impact effectively in:

- Increase socio-dramatic game,
- Development of verbal skills, and
- Improvement of social behavior.

The changes observed in this study are general about games, places and individuals. Even positive changes in behavior were observed during the observation of each child at home and at school. Investigations showed that autistic children learn to participate in the socio-dramatic play, but the main type of game differs qualitatively from other children with developmental disabilities and depends on the severity of disability.

After training-therapeutic play, verbal skills were improved (Thorp et al., 1995). However, improvement in spontaneous speech was displayed after therapeutic intervention and may not be due to therapeutic intervention.

In conclusion, the results of the study show that socio-dramatic games can be effective as part of whole treatment to improve game, speech development and socialization of children with autism in combination with appropriate developmental prerequisites (Thorp et al., 1995).

Finally, since the early 1920's, perception and the ability to play were connected and many studies concluded that games can become a better benchmark for children with autism than the traditional psychological tests. Traditional tests are based on verbal responses and the willingness of children to work together. As children with autism have severe problems in linguistic, perceptual and social capacity, many researchers suggest use the game as a valuable tool.

4. Approaches to reinforce games

Although game is the main preoccupation of children with autism it is not included in the curriculum and is usually treated as an activity that takes place during breaks. This way of thinking has to change and game needs to be included in the curriculum. Teachers and parents should stop considering game as a "waste of time" and help children with autism to learn to play properly.

5. The characteristics of play in children with autism

Children of normal development, ever since from one year old begin to play on their own initiative and until four years old develop an organized symbolic and socio-dramatic play with children of the same age. Children with autism, however, fail to develop until the age of four years organized symbolic and socio-dramatic play (Table 1).

The sensorimotor game is what dominates and therefore beyond the verbal mental age, during which in non-autistic children declines and is characterized by stereotypes and repetition, e.g. putting objects in their mouth, hitting, throwing toys. The dominance of sensorimotor behaviors prevents the normal appearance of curiosity and leads to the inability to develop the concept of themselves as actors. It therefore prevents the development of the symbolic-imaginary game (Powell & Jordan, 2001).

Their exploratory game is also problematic. They prefer to play with objects they find at home (e.g., caps, ribbons, etc.) and not with specific games. There are curious to explore games.

Symbolic game is usually absent. They prefer to play alone and find it difficult to show that they want to play. Their difficulty in symbolic game is due to difficulties in organizing their thinking and communicating these thoughts to others.

They also cannot participate in imaginary games because of the literal way they view things. Fake game involves children's ability to surpass the literal message of situations. It is necessary not only to attribute imaginary properties to objects, but also to understand that other people can do that as well. This is very difficult for children with autism (Jordan, 1999; Sherratt, 2002).

They do not participate in spontaneous-free game, not because they cannot, but because they find it difficult due to the repeated failures which lead to disappointment and defuse lack of motivation to play (Stahmer, 1999).

Their operating the game is also problematical. They do not participate in complex operating games but only in simple functional games (Williams, 2003). This form of play presupposes that the child can mimic, and this skill is difficult for children with autism.

They also do not develop scenarios in their games and they do not understand the scenarios of other children (dramatic play).

Table 1. Developmental stages of the game in non retarded children and children with autism (Schopler & Mesibov, 1998).

| Age of children | Non retarded children | Children with autism |
|------------------------|---|--|
| 1 st year | Start to play on their own initiative | - |
| 18 months | Development of symbolic acts (pretend to drink, talk on the phone) | Very limited game |
| 24 months | Applying routine games of pretending with dolls (e.g. feeding the doll) | Minimum curiosity to explore the environment, use of toys in an unusual way, e.g. twisting them or aligning them |

6. Types and forms of games

Besides the variety of features, game as mentioned above can have different forms and appears in many ways, (Zigler et al., 2004; Terpstra, 2002; Coplan & Rubin, 1998) as:

- Lonely when the child plays alone;

- Parallel, when children play side by side, occasionally looking at each other;
- Companionship, when the child plays with other children and with the same toys;
- Cooperative, when playing with other children the same game, having a common goal and specific roles;
- Sensor motor play (6 months-2 years), when children explore the physical properties of an object, putting it in their mouth, tapping it, throwing it, etc.;
- Exploratory when children are involved with the accretion of objects, e.g. setting bricks, placing objects one into another, etc.;
- Kinetic or physical activity game such as running, climbing, slide, seesaw and other games of physical activity;
- Operating when children understand the purpose of the game and use them appropriately;
- Constructive – construction when they use materials to build something
- Games with rules, where children play following rules (e.g. a board game or a ball game);
- Symbolic play, pretend play (also referred to as socio-dramatic), where children substitute objects, e.g. the bottle in their arms is a baby, attribute properties to objects, e.g. pretend that the baby crying, etc.; and
- Rough and tumble game, when children participate in fun argues (fake squabble, fake fighting, chase) by pushing other kids, but not in an aggressive mood.

All these kinds of games are necessary for children. Each of these enhances the child's development. For example:

- The game that includes movement and interaction helps the child to develop physical and motor skills;
- The game that includes sounds and words helps develop linguistic skills;
- The game with rules helps children to learn their responsibilities, their duties, as well as the nature of rules; and
- The fake-imaginary or symbolic game is particularly important because it benefits every aspect of development of children and promotes school readiness. Vygotsky (1967) refers to pretend play as a social activity and a form of communication.

7. The use of game in the treatment of children with autism

The use of game in the treatment of children with autism provides significant benefits for these children. Autism is a severe social-communicative disorder. Children with autism are extremely difficult to relate to others, especially to children of the same age in ordinary ways. Game is a wonderful tool that can help children with autism to participate in interactions. When it is used properly game can also allow children to discover their feelings, their environment, and their relationships with parents, siblings and children of the same age.

Play therapy can be taught to parents and parents can be the therapists of their own children, while at the same time creating a stronger and more meaningful relationship with them. Several researchers have emphasized the benefits of play therapy for children with autism.

Thus, Carroll (2002) claimed that through play therapy, children develop the ability to express themselves through play. Hess (2006) suggested that with play therapy children with

autism learn to answer questions correctly, proceed to appropriate and spontaneous social interactions and develop their ability to make-believe. Josefi et al., (2004) argued that the treatment using game helps the development of autonomy and the development of make-believe play, but does not help to reduce formalistic behaviors that children with autism develop.

Lowery (1995) stated that through play therapy the existing capacity of children with autism to build relationships is developed even more. Also, Mero (2002) argued that, through interaction during play therapy, children with autism develop and individualize. Sherratt (2002) argued that teaching game to children with autism increases the flexibility of their thinking.

He said that teaching games helps to reduce repetitive and rigid behaviors and encourages the development of communication in children. But Williams (2001) argued that with proper teaching of games children with autism can learn to participate in imaginary play with other children.

Play therapy has therefore emotional and social benefits for children with autism and mostly non-prescriptive play therapy. In non-prescriptive play therapy the child chooses the pace of the game and thus the autonomy of the child at the game is increased. Furthermore, the orientation of play therapy in emotional reactions of children and adults and the use of empathy by the therapist to penetrate internal solitary words of children, guide the areas of development in which people with autism have serious deficits (Josefi & Ryan, 2004).

In non-prescriptive play therapy children with autism become more competent and willing to do things alone. Thus, their initiative, the beginning of interactions from themselves and the game are increased. Children play continually incorporating new activities. Moreover, they learn to accept rules and restrictions.

In play therapy the autistic child develops an attachment relationship with its therapist and the interactions between them are increased. Also, physical and eye contact are increased and improved by binary game. Non-prescriptive play therapy provides the right environment in children with autism to develop therapeutic relationships. It gives children with autism, like other children with emotional problems, emotional security and relief. It provides a protective environment where the emphasis on the game with the adult and the acceptance by the physicians of the ability of children with autism to promote by themselves the therapeutic change under supportive conditions.

Play therapy leads to the increase and development of games of children with autism. The child is most concentrated in the game. Furthermore, its preferences for game activities change. The child seeks more for activities involving combined attention and direct social interactions with the therapist, e.g. playing with blocks. It also begins to manifest interest in games with symbolic attributes (e.g. Doll's House, phone, etc.).

8. Conclusion

In conclusion, all children and children with disabilities need to play because by playing they learn and develop. Game is an activity for all children and all families. Teachers and preschool and school programs should provide developmentally appropriate opportunities for games that will meet the needs of children with disabilities. But parents and careers of children with disabilities should enjoy interacting with their child at its level, without external criteria of success. Through these game interactions parents are assisted as they feel that in this way they improve the lives of children and their families.

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