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DEVELOPMENT OF THE AUTISTIC CHILD BY PLAY: SPONTANEOUS PLAY AND THERAPEUTIC PLAY

Marian Ciprian OLTEANU[1], Faraj FARAJ[2]

Abstract

Numerous specialists in child development and mental health have recognized that engaging the child in play has innumerable cognitive, socio-emotional and physiological benefits. The play is considered as a key concept in child development. This study investigated the impact of structured therapy through play on the development of the autistic child. The areas investigated refer to socialization, imitation, cognitive and verbal skills, children's mental ages, and last but not least to the play. The children were tested both at the beginning and at the end of the therapeutic intervention through the play, the research design being pre-test-post-test type. Thus, we have selected a group of 40 children (diagnosed with Autistic Spectrum Disorder aged 3 to 7 years, with a IQ of at least 55 - a slight delay in acquisitions) attending an association for children with autism from Timisoara. Over a 6-month period, the children attended play therapy sessions 3 days a week, 30-45 minute per session. These meetings were carried out with the help of specialists from the Casa Faenza Association of Timisoara: 4 social pedagogues for the play therapy part and 2 psychologists for the initial and final assessment parts. It has been found that the structured therapeutic play has positive effects on all areas of development, imitation, cognitive, verbalisation, socialization and play skills.

Keywords: autism, therapeutic play, spontaneous play, socialization

Introduction

The play has an important role in both the human and the animal life and its features are: is it free; its freedom; a leisure of everyday life, but a part of life in general; it is disinterested; it is limited in time and space. Tension takes a particularly important place within the play; it means "unsafe, hazard. A tendency toward détente can be noticed. He/she must "succeed in" something with a certain effort" (Huizinga, 2007: 52). The play of the autistic child also involves "tension", and "effort". It is natural because he/she develops certain skills through the play, it is

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linked to his/her future development. The human culture is also closely linked to the play. Moreover, "culture appears under the form of a play. Culture is played at first" (Huizinga, 2007: 101) because the society interprets both the life and the world through the play, and" the relationship between culture and play should be sought especially in the higher forms of social play, where it exists in the orderly action of a group or a community, or two groups one towards the other". (Huizinga, 2007: 102). It should be noted that before becoming the object of concern of scientific research, the play was widely used as one of the principal means to educate children and the poedagogical systems have always assigned it a certain role, it has been given a certain place, even if its place has changed every time.

A *definition* of the play is that it is a "natural activity that allows the child to learn to communicate and to interact with other children" (Richard, 2005: 33). The study by Candace B. Riguet, Nancy D. Taylor, Sigmund Benaroya, Leslie S. Klein, (1981) measures free play and symbolic play in children with autistic spectrum disorders, those with Down and those with no problems. The conclusions of the study were: children with autism are playing less time than those without developmental problems and have a play of lower quality. Also, children with autistic spectrum disorder are not able to get engaged in a symbolic play. Peabody Vocabulary Test (PPVT) was used as a measuring instrument, and the mental age for all children was chosen at 2 years and 5 months. Other findings argue that autistic children are capable of a limited, stereotyped game, in contrast to children with intellectual disability, which often prove to be able to engage in a symbolic play. The study shows that optimal conditions for starting play in children with autism should include adult intervention, encouragement, and the child must interact with a limited number of toys.

In 1994, Roeyers & Van Berckelaer-Onnes conducted a study whose object was the play for children with autism, analyzing object play and symbolic play in children with autistic spectrum disorder, and presenting possible explanations for the blockage of the play development. Researches show that in children with autism, play is often limited to simple manipulation of objects, the quality of their play being inferior to the quality of the children without autism play who have the same mental age. The symbolic play is often absent.

Ungerer and Sigman (1981) examined the play of children with autism and determined the link between the play and the understanding of language in this group. Free play and structured play have been measured and a test of responsive language has been applied to a group of 16 children with autism with a mental age of 2 years and 8 months. Children with autism demonstrated different play behaviours, but their play was different from that of children without problems with a similar mental age. They have devoted their time to play more immature activities equally to the time for the mature games. And on the other hand, they spent a little time playing dolls. Children with autistic spectrum disorder who have the understanding of language have had a functional and symbolic play and have shown a play with meaningful stages integrated with each other, unlike children with autistic spectrum disorder who do not have this understanding of the language. The results show that a problem that has arisen in the development of a child with autism can be seen in his/her play with functional objects. Difficulties in playing are related to the understanding of language, supporting the problems

children with autism have when it comes to symbolic play.

According to a research conducted by Mizrachi, Balauta and Vlaicu (2018), Shadow theater (a form of interactive, projected shadows) is a more effective teaching method than traditional classroom storytelling for children with autism. Regarding parents that have a child with autism, time dedicated for their own health and wellbeing is also important, as caring for a child can be sometimes be overwhelming. Both care and lack of interest for one's own health is the interaction of psychological, physical, and social factors. (Eglīte, Vintila, Grīnfelde, Kantiķe, 2009). We also mention that the construct of positive body image is also important for teenagers diagnosed with autism as children, and respecting their own body is important for their wellbeing, after being exposed to different standards of beauty. (Swami, Tudorel, Goian, Barron, Vintila, 2017). As professionals, when referring to children with autism, it is necessary to avoid the marginalization status of these children and their families, by using concepts in formal or informal language, written or verbal, when addressing them. Social workers and other specialists may face a multitude of issues and linguistic differences that may affect the working relationship (Goian, Vintila, Bucur, 2012; Goian, 2010; Vlaicu, Fulop, Balauta, 2017).

Methodology

The present work wants to draw attention to the need to integrate the therapeutic play into the empowering activities in the autistic spectrum disorder. Since the play of the autistic child involves rather an "effort", the present work aims to bring in the foreground the need for the use of play therapies, complementing the specific empowerment therapies in autistic pathology. It is natural for the child to acquire certain skills through play, it is linked to his/her future evolution. By definition, play is a natural activity that allows the child to learn and to interact with other children. Also, the game has a great influence on the motivational-dynamic sphere and in the development of mental actions.

Greenspan's model (2006), called Floortime, provides a model play intervention for pre-school children with autistic spectrum disorders. The Floortime model focuses on developing relationships and affectivity. Interventions are designed according to the child's developmental level and his/her individual characteristics. Greenspan explains that although affective engagement, such as the manifestation of pleasure, emotional sharing, and mutual interactions are secondary to the primary symptoms of autism (e.g. cognitive deficits), affections and relationships are more receptive after intervention. Greenspan believes that with affective interaction in the play, children with autism will concurrently experience cognitive and emotional growth.

Objectives of research

Ob.1. Evaluating the level of development through pre and post testing in children with autistic spectrum disorder who participated in play therapy sessions;

Ob.2. Social status assessment through pre and post testing in children with autistic spectrum disorder who participated in play therapy sessions;

Ob.3. Investigating differences in play before and after the intervention.

Ob.4. Identifying some quantitative variables related to the number of siblings, parental education and time spent in the play, along with children.

Hypothesis of the research

Hypothesis 1: There are differences in the level of development of the child with autistic spectrum disorder, pre-test and post-PEP-R test after play therapy sessions.

Hypothesis 2: There are differences with regard to the level of socialization difficulties of the child with autistic spectrum disorder, pre-test and post-test with the ATEC test after the play therapy sessions.

Hypothesis 3: The therapeutic intervention through the play will improve the function of the play in children with Autistic Spectrum Disorder

Sample of research

For this work, a group of 40 children, of both sexes, aged 3-7 years, diagnosed with autistic spectrum disorder with a mild degree of impairment (having an IQ of at least 55) from Timisoara, within the Casa Faenza Association has been selected. Children with moderate and severe retardation, comorbid pathologies (e.g. Fragile X syndrome), visually impaired, hearing impaired and physically impaired children were excluded from the research. In the research group, gender distribution is uniform, 20 girls and 20 boys.

Instruments of the reseach

This research has used three questionnaires / tests: both in pre-testing and in post-testing, as well as a demographic questionnaire for collecting family data.

ATEC (The Autism Treatment Evaluation Checklist, Bernard Rimland si Stephen M. Edelson) - It was created in 1999 to help researchers evaluate the efficacy of different therapies in children with autism and to help parents to see if their child is making progress through therapy. Many parents and teachers use the ATEC to monitor how well the child is doing over time.

PEP-R (Psychoeducational Profile-Revised) - PEP-R is an instrument used to design individualized training plans for children with autism and other related disorders. It was created in 1990 by Schopler et all from an original PEP version, Schopler and Reichler 1979. PEP-R is an instrument for measuring the level of development of children with autism and associated disorders. The test has 2 scales: a developmental scale and a behavioural scale.

TOP Test of Playfulness - designed to evaluate the children's play by occupa-

tional therapists, TOP includes three elements: intrinsic motivation, replacement of reality and internal control. These criteria were developed by Smith and Vollstedt (1985). Bundy spoke about the manifest play and humour in Children's Playfulness Scale (CPS) and from Lieberman's works (1977). Bundy (1997) also included the fourth dimension of the game, frame. From Bateson's theory of play (1955), the frame refers to the child's ability to correctly provide and interpret the social signals related to the play. The test measures 3 degrees of the variables: EXT - which refers to the time spent by the children in the play, variable INT - refers to the intensity with which the child participates in the play, and the variable SKLL - refers to the degree of competence, the child's ability to participate in the play. TOP is suitable for evaluating play in children from 6 months to 18 years in outdoor and indoor play settings.

Selection Guide

For the purpose of collecting demographic information, a questionnaire was developed that was applied to children after their selection. In the selection process, parents were given a parental consent to participate in the research and were guaranteed the confidentiality of the data collected.

Working procedure

The group of children, 40 children, from the Casa Faenza Association in Timisoara. The children were tested before applying the play therapy program with the ATEC, PEP-R, TOP tests. The next step was to implement the play therapy program, run over 6 months for 30-45 minutes per day, 3 days a week. This study was designed after a non-experimental design and it used the Wilcoxon test as a statistical technique. The research was conducted in three stages: initial assessment, play therapy, and final assessment. The questionnaires and tests were applied individually. There was no time limit, a discussion accompanied the completion of the questionnaires. All participants were guaranteed the confidentiality of their responses. Participants were selected according to parents' agreement to take part in this research. In order to process the data obtained, the statistical program IBM SPSS Statistics 16 was used. After the statistical analysis, the data were interpreted in accordance with the results obtained. The research was structured in the form of "pre" and "post" tests, which means that the test battery was applied before and after the intervention.

Results

According to statistical analysis, the results of the Wilcoxon test revealed significant differences between the scores obtained by the children before the intervention and the scores obtained by the children after the play therapy. Thus, a threshold for statistical significance of .000 was obtained, the level of imitation proving to be higher after the intervention (M = 34.02), compared to the pre-test imitation level (M = 28.75). In other words, the ability of children to spontaneously

imitate an adult in a play interaction has improved.

Table 1. Comparison of development areas using the PEP-R test before and after the intervention

PEP-R	After the intervention N=40		After the intervention N=40		Wilcoxon Signed Ranks Test	
	M	S.D.	M	S.D.	Z	Sig.
Imitation	28.75	11.59	34.02	10.35	-5.14**	.000
Cognitive	32.07	10.35	34.97	10.13	-4.21 **	.000
Verbal	24.52	9.63	28.27	8.72	-5.11**	.000
Mental age	31.57	9.84	34.00	8.84	-3.18**	.001

The first research hypothesis claims that there are differences with regard to the level of imitation in pre-testing and post-testing with the PEP-R test after the play therapy sessions has been confirmed.

According to the statistical analysis of the second hypothesis, the Wilcoxon test revealed a coefficient of Z = -4.21, with a threshold for statistical significance Sig. = .000, the pre- and post-intervention averages being M1 = 32.07, M2 = 34.97.

The Wilcoxon test revealed a coefficient of Z = -5.11, with a significance threshold Sig. = .000, the pre- and post-intervention averages being M1 = 24.52, M2 = 28.27. Thus, the third hypothesis, which claims that there are differences in verbal performance at pre-testing and post-testing with the PEP-R test after the play therapy sessions, has been confirmed.

In the case of mental age, before and after the intervention, the statistical analysis reveals a coefficient Z = -3.18 **, with a significance threshold Sig. = .001, p <.05, leading to the main hypothesis, which claims that there are differences, on the level of development (Mental Age) of the child with Autistic Spectrum Disorder, pre-testing and post-testing eith the PEP-R test after the play therapy sessions.

Table 2: Comparative results at the level of ability to play before and after the intervention

Item	Before the intervention (M)	After the intervention (M)	Wilcoxon Signed Rank Test
Is actively involved EXT	.60	1.1	Z = -2.41 Sig.=.016
Is actively involved INT	.62	1.40	Z = -3.48 Sig.=.001
Is actively involved SKLL	1.42	1.97	Z = -3.48 Sig.=.001
Decides what EXT must do	.72	.60	Z= -.651 Sig.=.515
Maintains a level of safety enough to play EXT	.97	2.05	Z=-4.162 Sig.=.000

Shows joy EXT	1.35	.97	Z=-1.69 Sig.=.089
Strives to overcome the difficulties, the barriers or the obstacles to persist in an activity INT	1.22	.87	Z=-1.69 Sig.=.091
Modifies the activity to keep the challenge or to make it funnier. SKLL	.92	1.32	Z=-1.84 Sig.=.065
Engages in playful friskiness or teasing EXT	1.20	1.67	Z=-2.638 Sig.=.008
Engages in playful friskiness or teasing SKLL	1.35	1.82	Z=-2.45 Sig.=.014
Engages in activity for pleasure (process) rather than for results EXT	.60	.62	Z=-.23 Sig.=.815
Plays symbolically EXT	.50	.70	Z=-1.20 Sig.=.227
Plays symbolically SKLL	1.45	1.87	Z=-1.88 Sig.=.059
Includes objects or other people in the play in new, imaginative, unconventional, creative or variable modes EXT	.47	.57	Z= -.44 Sig.=.657
Negotiates with others to meet their needs SKLL	1.52	2.22	Z= -3.15 Sig.=.002
Engages in social play EXT	.62	.85	Z= -1.09 Sig.=.274
Engages in social play SKILL	.77	.90	Z= -.80 Sig.=.419
Supports the play of others SKLL	1.17	1.40	Z= -.931 Sig.=.992
Joins a group already engaged in an activity SKLL	1.20	2.07	Z= -4.45 Sig.=.000
Initiates the play with the others SKLL	.65	2.10	Z= -4.98 Sig.=.000
“Fools around” or jokes with others. EXT	.65	1.47	Z= -3.27 Sig.=.001
Shares (toys, equipment, friends, ideas) EXT	.70	1.5	Z= -3.48 Sig.=.000
Provides clear indications (using the body and the face) that say, “The is the way you have to act towards me” EXT	.97	1.42	Z= -1.72 Sig.=.085
Responds to the clues of others in a way that continues the play EXT	.77	1.25	Z= -2.04 Sig.=.041

Shadow The table gives us an overview of all the variables that refer to children's playing skills, both those that have resulted as significant and those that have not resulted as significant. Qualitative, quantitative and proficiency changes can be noticed in the case of eleven variables, after the therapeutic intervention through the play. Thus, when it come to the time spent in the play (EXT), children become more active, maintain a sufficient level of safety for the play, engage more time in playful or challenging activities, respond more to the instructions of others in ways that continue the play, and share more toys, game equipment or ideas with others.

In the case of the variable (INT), children who benefited from play therapy have shown increased intensity at the level of active involvement. In the case of the third variable (SKLL) - children who have benefited from play therapy have demonstrated changes in play skills, in case of engagement in playful and challenging activities, improvement in negotiation to meet their needs, initiation of the play with others, active involvement, as well as inclusion in a group already engaged in the activity.

Conclusions

The purpose of this work was to make a breakthrough in the world of free play and structured play in the first phase, and in the second phase, to investigate the impact of play therapy on the general development of the child with autistic spectrum disorder. But to be able to play, the child with autistic spectrum disorder must be prone to play, a play that must also produce a joyful state. The play means learning, exercising, stimulating, and when a child with autism is playing, he/she does not have to do it differently from a normal child because he/she also tests, explores the environment and has fun, even if his/her way of acting is different. Regarding the practical part of the work, the results of statistical processing identified variables that showed significant differences between initial and final assessments in children diagnosed with autistic spectrum disorder. Imitation, cognitive performance and verbal performance were positively influenced by therapy. Thus, children have been able to improve their interaction, play, understanding and expressiveness skills.

The main hypothesis which claims that there were differences regarding the level of development (Mental Age) of children with Autistic Spectrum Disorder, at pre-testing and post-testing with PEP-R test after play therapy sessions was confirmed. Imitation, cognitive performance, verbal performance, and total mental age increased as a result of the 6 months of play therapy. The results found in this work are in line with those discovered by Mizrachi, Balauta, Vlaicu (2018), who observed that after watching the shadow theatre, the children played more, the interaction between them increased, as well as the duration of the play with objects and the play with the other. The children have been involved in the game longer after the intervention than before it. The shadow theatre, similar to the play therapy, gave children the opportunity to initiate and maintain individual and social relationships.

In the case of children with Autistic Spectrum Disorder, the studies examined

children's play and determined the connection between play and understanding of language. The difficulties in the play are related to the understanding of language, supporting the problems children with autism have when it comes to symbolic play (Ungerer & Sigman, 1981). With regard to socialization and verbalisation, the difficulties in high scores at the beginning of the research have diminished considerably as a result of the 6 months of play therapy, thus confirming the second research hypothesis, which claimed that there were differences regarding the level of socialization difficulties of the child with autistic spectrum disorder, pre-testing and post-testing with the ATEC test after the play therapy sessions.

The research also reveals qualitative, quantitative and proficiency changes in the case of several play-related variables after the play therapy intervention, at the level of active involvement of children in the play, engaging in play activities, responding to the indications of others, sharing toys with others, bargaining in the play, but also at the level of inclusion in a group already engaged in play activities, significant changes are statistically observed after the 6 months of intervention. A pretty obvious conclusion both in this study and in other research papers is the need to include play therapy in the learning process, because in order to play, the child with autism needs to be prone to play a play that also produces a state of joy.

Limits and future directions of research

The main limit of this study is the small number of subjects and the fact that the population of the sample may not be representative of other areas of the country. Another limit of the study might be that the differences may have occurred without the intervention of the play therapy or other therapeutic interventions. More research is needed to clarify these issues.

Future research is needed to investigate possible links between the ability to play and other developmental issues, such as self-regulating, mind theory, or academic skills.

With regard to the usefulness of this work, the need to create programs in which children use free and / or therapeutic play to diminish issues related to autistic spectrum disorders can be brought up. School counsellors can adapt the play therapy approach as an alternative to classical education in individual or small groups. In addition, these sessions can also provide an opportunity to teach children social skills that will also improve academic performance, and which the children could not address otherwise. It is important to collaborate and to implement a team approach to increase performance and transfer, so that communication skills can develop more naturally and sequentially. It is a good idea to evaluate and to integrate, methodically and in an evolutionary way, the playing skills in the planning and implementing the objectives both in special education, especially in pre-school years, and in recovery centres, such as the Association "Casa Faenza" or other centers providing services for children with autistic spectrum disorders.

Spontaneous play naturally and inevitably contributes to both fine motor skills (grapho-motor, ocular-motor coordination), of the gross motor skills, but also to language, through spellings that prepare the phono-articular apparatus for

speech, interaction. In practice, if teachers approached the *therapeutic play* and the learning as a whole, rather than as two separate entities with separate goals, training could become more effective, particularly by promoting the pleasure of learning.

Although the play has not been recognized for a long time as having a therapeutic value, this research comes as a complement to the need to introduce the play as a form of therapy in children with autism. Given the qualitative nature of the interaction and the difficulty of quantifying the subtle aspects of the child's expressions (both verbal and other), most clinic practitioners of the play therapy have opted for this style as a complement to therapies.

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