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**“El uso del juego en las habilidades de educación y
desarrollo de niños con autismo: opiniones y puntos de vista
de padres y maestros de educación especial”**

**" The use of the game in the education and development
skills of children with autism - positions and views of
parents and teachers of special education educators"**

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*"Everything that a child's soul needs is light the sun,
the toys, the good example and a little love".*

F. Dostoevsky, "Karamazov Brothers"

**To my mother,
that with a lot of patience
and love
she supported me
throughout this course
of elaboration...**

THANKS

Preparing a doctoral dissertation is a difficult and arduous task. A project that on its own a doctoral candidate can not cope with and complete, as it lacks on its part a high degree of self-control and scientific competence. The work of a PhD candidate is the result of collaboration and interaction with the natural and social environment, with people he collaborates with on a daily basis, with people from whom he learns, is taught, guided, but also supported to achieve his goal and complete his doctoral dissertation. of the dissertation.

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A.K.T.

PROLOGUE

The game affects the development of the social skills of children with autism, as they also contribute to the cultivation of linguistic, kinetic, aesthetic functions. The child with autism is exercised to acquire adaptability, self-control, and logical thinking capability. The experiences they gain through structured play encourage creativity, imagination, and the acquisition of basic skills such as fine mobility. At this point, teaching through school curricula and structured education is an important factor. By providing suitable developmental play opportunities, the teacher responds to the needs of these children by helping these children gain better adaptive behavior.

Of particular importance is the question of whether children with autism can learn, enjoy and develop skills necessary for their daily lives through the game, with the contribution and support of adults and their peers using appropriate intervention strategies learn to autistic children how to use the game, how to develop their social skills and interpersonal relationships with others.

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PART I
THEORETICAL
FRAMEWORK

UNIT 1

Abstract

According to the literature review, play, as one of the most important activities of the child, is a primary factor of development and has a decisive influence on the learning process. Good play lays the foundation for the perfect development of the child and covers a wide range of skills, such as aesthetic, motor, mental and social. By offering the child the ideal conditions of entertainment, we invest in his future and contribute in the best way to the formation of his personality.

The aim of this research proposal is the positions and views of parents and teachers of special education and training on the importance of play in the learning process of children with autism. The research was conducted in primary and secondary schools. The research population for the first research question is 80 parents of children with autism and for the second question there are 150 special education teachers in primary and secondary education. Our sample was selected as representative of the population. For this reason, we select selective sampling according to which we select for the sample the school members who are available to participate in the research. The questionnaire was used as a methodological tool, namely 2 questionnaires, one for teachers and one for parents. The type of questions is closed-ended and the Likert scale is graded from negative to positive and the research subject will be asked to choose one of the five points. This scale represents 5 points between which the distances are equal and we have used numbers to find the gradations of the variables.

The methodology of this research is the quantitative and descriptive analysis of the data (averages and frequencies) to identify the main trends in the responses of parents and teachers. For data analysis, we will use SPSS (Social Science Statistical Package). With the help of SPSS it is possible to perform different analyzes, measure functions

and present statistical results. For the analysis of the information we used the descriptive statistics, describing the various statistical data after collection and classification of the statistical data which are then presented in the form of analysis in tables, charts with characteristic values, or properties. The results of the research showed that play is one of the main occupations of the child, as well as a key element in all educational programs. The necessity of play in the educational process of children with Special Educational Needs (SEN), especially children with autism, is a key factor in the development of skills, decisively influencing the learning process. The game contributes to the development of many skills, such as social, motor, language, aesthetic, and lays the foundation for a proper development and shaping of the personality of children with autism, making the learning process enjoyable and creative.

KEY - WORDS: Autism, Game, Skill Development, Parents, Teachers.

Introduction

The game is a core activity of all children and children with autism. Through the play the child shapes and forms a healthy personality. It acquires knowledge, motivations, skills and values that are important in understanding the social environment in which it operates and evolves (Augitidou, 2001). With the play, the child develops linguistic, social, spiritual and emotional functions that will help him gain self-control and social adaptation and integration into the social world (Bradshaw et al., 2015; Schertz et al., 2012). The game is a process of integration and creativity with the child's peers, as they learn to interact and manage different roles in the game (Augitidou, 2001). For this reason the role of parents and teachers is important. In particular, game interactions between parents and children with autism can provide these children with opportunities to practice and learn new skills (Dawson et al., 2010). Despite the great benefits offered by the game in these children, there is little research that analyzes the role of the game in autistic people. Therefore, it is relevant in this aspect. To this end, the present study emerges, with which teachers through school programs can provide developmental play capabilities in accordance with each child's potential (Schertz et al., 2018). This effort also includes the present research that seeks to explore the views of parents and special education educators on the importance of play in the educational practice of children with autism.

Educational research of recent decades has highlighted the need for play in the educational process of children with autism, concluding that these children learn, grow and rejoice in the game (Schertz et al., 2018). It is not an important element the success in the game as much as the interaction and the joy that these children will feel in their lives. This gives them the opportunity to explore their environment and they begin to

know the various things and materials around them through the senses (Schertz et al., 2018). They begin to smell, see, hear sounds of their environment to experience the world that surrounds them. According to Piaget, children act on things and acquire knowledge (Lightwood, 2015). It is necessary for parents to be trained in how to structure and give momentum to game interactions, in order to create a framework that will enhance the social and other interactions of the child (Dawson et al., 2010). Equally important is the cooperation of parents with teachers, who should be consulted about playing children with autism. For this reason, teachers have to organize structured school curricula, but also through experiential teaching practices to provide learning opportunities within and outside the school environment (Estes et al., 2015).

The game is a means of learning, interacting, developing skills, communicating and building the child's identity. They acquire a social role and learn social rules within the context of communication and interaction with their peers. Research results show that play in children with autism teaches them to communicate, solve their own situations, express feelings and desires (Schertz et. al, 2012). We also find that through the game teachers can better understand and interpret the needs of the child by effectively identifying teaching objectives and educational planning (Augitidou, 2001).

This study will explore the role of play in developing the skills of children with autism. In particular, this will study the importance parents give to using the game of play in developing skills such as social, linguistic, motor, cognitive and aesthetic. A second element that will be studied is the views of teachers on the importance of play in the education of children with autism. In particular, we will emphasize the importance of the appropriate gambling opportunities provided by parents and teachers to these children through school curricula.

The purpose of the research is to explore the views of parents on the role of play in developing the skills of children with autism and the views of special education educators about the importance of play in the educational process with pupils with autism.

The research questions of this research are:

- A) What are the parents' views on the role of play in developing the skills of autistic children?
- B) What are the views of special education educators and educators on the importance of play in the education of children with autism?

UNIT 2
THEORETICAL FOUNDATION
AUTISM

2.1 Definition and Historical Background

«A specific definition of autism is difficult to give, because it also varies from the multitude of sources that comes from the various professionals – specialists involved and from the parents of children with autism. For the definition of autism and its affinity with various disability situations of childhood there were many disagreements and questions» (Wing, 2000, pp. 5).

The term "Autism" comes from the Greek word "he" or "self". The Word Autism According to Synodynou (1999) means "I myself". The Swiss psychiatrist Bleuler (1978) first introduced the word "autism" to signify the loss of contact and communication of the mentally ill with reality (Balamotopoulou et al., 2010). According to Note (2006) Leo Kanner in 1943, when he took over the John Hopkins clinic in Baltimore, described himself for the first time autism using the term "early childhood autism" to describe a childhood psychosis. He considered that people with autism have normal intelligence, but in the process it was proved that a significant proportion of children have "mental retardation" and serious learning difficulties. Asperger also describes, in 1944, a category of children which he called "Autistic psychopathy" and which he believed was congenital, causing these characteristic problems (Zaky, 2017). This particular syndrome is classified at the highest point of the autistic spectrum with symptoms of mild form (Kakouros et al., 2013).

However, autism is considered to be a congenital developmental disorder of the brain, which remains in the person throughout its lifetime. A disorder that prevents individuals from understanding what they see, hear and feel by addressing serious problems in communication, social relationships and behaviour (Wing, 2000, Fernell et al., 2013). Autism is a Pervasive Developmental Disorder (PDD). The terms PDD and "Autism Spectrum Disorders (ASD)" are used as synonymous terms in the literature to describe a wide range of neurodevelopmental disorders that affect three areas of development (Baron-Cohen, 2017). In Particular, they affect social interaction, verbal and non-communication and repetitive behavioral patterns/stereotypes, which form the trinity of disorders, the core of the clinical characteristics of autism (Fernell et al., 2013).

Nowadays the diagnostic criteria and classifications when mentioned in this syndrome describe individuals who are in the spectrum of autism and have high functionality. They present some difficulties and limitations, but the difficulties and limitations of those with autism, which vary in severity from person to person, are characteristic that affect overall its function. Have fewer problems with verbal communication and usually have average or superior intelligence (Woods et al., 2013; Allman, 2010). These people do not usually suffer from learning difficulties, but may experience specific learning problems such as dyslexia, dyspraxia or other situations such as Attention deficit hyperactivity disorder (ADHD). With proper support, people with Asperger's are perfectly capable of living a complete and independent life (Mattila et al., 2010).

According to the DSM-5 taxonomic systems of the American Psychiatric Association (2013) and ICD-10 of the World Health Organization (1992), the PDD includes a series of disorders found along with others, such as autism Disorder,

Disorder Rett, Child Disruptive Disorder, Asperger Syndrome, Pervasive Developmental Disorder not determined (Informal Autism). The Disorder of autism is the basic disorder, while the other disorders begin to be removed from the original form with several variations both in the presence of symptoms and in the way it manifests in each area of development. That Is, individuals may not experience the trinity of symptoms associated with autism disorder (Hutchison et al., 2016).

2.1.1 Symptomatology

The Symptoms of autism can vary from person to person both in intensity and in the way it manifests in the behavior of the person with autism. Also, many autistic characteristics are distinguished from little to quite a lot in the behavior of the person with autism (Wing, 2000, Fernell et al., 2013).

According to Schaefer (2016) Autism is a case in which the etiology has many dimensions. This means that both environmental and genetic and medical factors are in the whole issue of autism. This is why we usually refer to the "autism spectrum" which includes many cases. These symptoms are mainly influenced by their form, intensity and frequency from the linguistic and cognitive level. With the passage of time these symptoms evolve, they change, they do not remain the same and constant. This is due both to the development of the individual and to the effects that the person will receive from the environment, the educational intervention and the social interaction that will develop in its course (Kim et al., 2011; Milton, 2016).

The Investigations of Wing (1985) which introduced the concept of trinity of the characteristic deficits of autism, helped in the formulation of diagnostic criteria and determined autism as "widespread disruption of development", which occurs before

From the third year of age of the child. These diagnostic criteria were named "Trinity of Social Interaction Disorders" (The triad of impairments of social interaction) and concern (Happe, 2003):

- The disruption of social relationships/interactions
- Social communication disorder
- The Disorder of social understanding and Imagination

Of all these deficits related to autism, the most fundamental element is considered to be in the field of social relations and interactions. People with autism find it difficult to understand the world around them and especially other people (Lyons et al., 2011; Kim et al., 2011). The lack of social interest they present for other people, do not seek, but also avoid their contact (physical and mental) with other adults and their peers. These people find it difficult to take any initiative for interaction, but also to respond to any social stimulus from their peers with a view to social intercourse (Guldberg, 2016). They Behave as if there are no other people, even if they want something they use or their bodies as a means to serve their own needs, such as if they want something they can't reach, they catch the adult's hand without looking at him in the eyes and Show him to catch an object or close the door or place something at some point (Magnisali et al., 2014). They make social approaches to other people, and especially to adults, in a strange and one-sided way, to require or act for their own needs. People with autism prefer an environment with calm, no noises and stable faces, so that they feel safe. Generally, they panic and indifferent from the presence of other children, show no interest and empathy for each other, they appear isolated, in a world of their own, absorbed into their own activities. Compared with other symptoms of autism the difficulty of social interaction with peers remains, even when they begin to have some improvement in their communication with adults, they find it difficult to acquire the

basic social Skills (Woolfenden et al., 2012). However, children with autism can show interest in others when they mean something different and special to them. This is because these children are attached to someone, whether they are the parent or another person, so they react differently to different people and different conditions (Magnisali et al., 2014). Children with autism can recognize themselves in a mirror, which shows us that their difficulty in the social sphere has nothing to do with the difficulty of recognizing themselves from the Other (Guldborg, 2016).

As far as the emotional sector is concerned, people with autism exhibit strange, unusual and inappropriate emotional responses. Emotional behavior is linked to the social evolution of the individual and influences communication and knowledge of oneself and others (Guldborg, 2016). They do Not manifest interest in the feelings of others, as they also find it difficult to understand the emotional state and facial expressions of others, in order to understand how others feel and what kind of emotion they express (Guldborg, 2016). Even children with autism have difficulty expressing feelings or sharing feelings or expressing their love to someone else, feeling empathy in the pain or in relieving each other. They can manifest either indifference or difficulty in parting their mother. There are cases where they may show apathy towards stimuli that cause fear or manifest this feeling very strongly (Manifava et al., 2015).

In the disorder of verbal or non communication these children display qualitative and quantitative deficits in the way they use communication. In Non-verbal communication we encounter a monotonous, mechanical or inappropriate personality. In Particular, the variety of facial expressions and the recognition to others is quite limited. Often These expressions are not directed towards each other (McCall, 2015). The volume of the voice may be strong or very weak. Over time it can develop some

gestures, such as a shake of the head to signify a positive or negative desire. Understanding and using complex gestures appears fairly limited. The Characteristic of these children is that they are not able to respond even to the sound of their name at an old age (Bottema-Beutel, 2016).

In Verbal Communication We observe that the development of speech presents some delay on the basis of typical development. The main thing is that these children will not make any attempt to compensate for this deficit with any gesture or mimic communication to give messages (Wang et al., 2016). It Presents direct and regressive Tusolalia, has difficulty in articulation, repeats words expressed by others or heard in the past. When asked a question, will it repeat, like "Do you want to drink water?", to ask to drink. Uses inappropriate words and phrases. His speech sounds like a wooden sound, meticulous and has some rhythm. He Has difficulty in starting and maintaining a conversation if his interlocutor does not try to help him with questions in order to be able to develop a communication. His speech is idiosyncratic, contains neologisms and repetitions, displays errors in personal pronouns, while he faces difficulty in telling stories (Gomes & Pedroso, 2007). During the communication he will try to talk only about his interests, often changing the subject abruptly or saying unrelated topics (Moseley et al., 2016). In General, he cannot understand the reason and respond when a subject is addressed to him. It Can understand names of known objects and follow simple instructions when it is in a specific context. Children with autism Are best helped when some instructions are given with images, with visual elements (Wang et al., 2016). Often their understanding of a subject is simply literal, without understanding the deep meaning of a sentence (whether it is a metaphor, irony, humour, sarcasm, metaphor...), for example in the sentence "Can you close the door?" Will reply "Yes!" without making any attempt to shut it down (Wang et al., 2016).

The existence of stereotypical, repetitive and ritualistic reactions, including stereotyped occupations, are the main features of these children and constitute an alternative to the person with autism, as long as they do not Can engage in activities that contain flexible and creative thinking. Children with autism have developed intensely the sensory sector and express particular interest in stimuli arising from the senses. Many of the recurrent stereotypical reactions are observed in the senses, such as smell, taste, vision, touch, speech (Geni, 2002). Their interest in some objects is not related to functionality, but to the sensory interest that arises from their preoccupation with them (Tsatsanis, 2005). They Present unusual and limited interests. Indeed, there are times when they may manifest a strong reaction to changes, which are unpredictable for them (Green et al., 2007).

The inclusion of the game has the meaning that the development of this is a key element in the development of communication. Children with autism do not develop symbolic play and activities using imagination, creativity and thought, such as other children. They Do not wish to play in binary or team play with their peers (Wolfberg et al., 2012). They Use games in a repetitive stereotypical way to satisfy their own senses. They can resume an activity over and over again with a game with excessive attachment to it (Wang et al., 2016).

The development of social skills, play, listening and new knowledge plays an important role. Children learn through mimetic procedures. In contrast children with autism have difficulty in imitate various words through oral speech, facial expressions, body movements (Rogers et al., 2005). This imitation is problematic and leads to difficulties of interaction and negotiation with the surrounding world.

According to Fombonne (2003) Children with autism are lagging behind in many areas of cognitive development, due to the fact that they present a large percentage,

70% to 75%, mental retardation. According to Frith Surveys (1999) It is estimated that 1/3 of cases present a serious form of mental lag, another 1/3 is considered to be an average condition, and the other 1/3 appears to be moving in IQ rates over the 70. In Many cases, autism co-exists with other medical conditions, i.e. synosiality (Stasinios, 2013).

Research in recent years (Tsimaras, 2012), concludes that autism is accompanied by various bodily deformities. They Exhibit some physical defects such as ear asymmetry, ear adhesions, fins, deformed ears, prognagia, high palate, grooved tongue. The presence of these bodily deformities may be due to some complications during the period of intrauterine life of the fetus, resulting in the existence of autistic elements.

Another hallmark of the child with autism is the difficulty of concentrating attention. His attention Is focused on specific characteristics of a stimulus, in what is mainly of interest, and deals selectively in the treatment of this stimulus. This option leads to the inability to concentrate the child, and to enable the child to examine and process important elements in order to gain knowledge of the surrounding world. They Have few strategies to coordinate their attention with others, resulting in a significant impact on teaching and learning (Kasari et al., 2006).

In the matter of the behavior of the child with autism we see a number of problems, such as aggression, which can lead to self-injury, intense outbursts of anger, even to behaviors of disobedience and stubbornness. According to Wing (2000) These kinds of behaviors are not traits of autism, but result from reactions due to confusion, fear, anxiety and insecurity towards the unknown, to the inability of these children to manage Situations, to gain self-control and to understand the social rules.

Entering the child with autism in school is clearly a challenge in his school course. In Particular, the social obligations required by the school environment make it difficult to adapt the child with autism, affects his participation in teamwork, in his relationships with his peers, but also the opportunity to gain benefits in the cognitive sector (Kotsopoulos et al., 2014). This kind of difficulty affects the child's social and emotional world, as well as his school performance, creating frustration, restlessness and insecurity within the school context (Gillespie-Lynch et al., 2012).

It is a fact that these children cannot follow the pace of school requirements, they cannot complete a task or a test in the classroom at a specific time, resulting in difficulties in adapting and low School performance. The emergence of difficulties in school skills differs in grade and genre (Estes et al., 2011). The school curriculum requires increased verbal skills, social adjustment to the challenges of the classroom, and self-management skills which the child with autism cannot exploit, resulting in low School Performance (Estes et al., 2011).

Autism Spectrum Disorder is divided into three levels according to the severity of the symptoms:

- Level 3: "Need for particularly enhanced support" (serious socialization difficulties)
- Level 2: "Need for enhanced support" (significant difficulties)
- Level 1: "Need for support" (difficulties) (Πλιάσα, 2020, p. 13).

Table 1: Levels of severity of ASD symptoms

Severity level	Social interaction	Limited interests and attitudes
Level 3 "Very strong support required"	Serious deficits in verbal and non-verbal social communication, which cause serious dysfunctions, very limited onset of social interactions and minimal response to communicative stimuli.	Repetitive behaviors at the level of rituals, which significantly affect all of their behaviors. Great stress / difficulty if they need to be stopped.
Level 2 "Requires significant support"	Significant deficits in verbal and non-verbal communication skills, obvious deficits even when there is support. Limited initiatives to initiate interactions and reduced or unusual response to communication stimuli.	Limited and monotonous interests and stereotypical movements are often and obvious to the ordinary observer, and affect functionality in various areas. Manifest anxiety arises from when they stop.
Level 1 "Requires support"	Without support, communication deficits cause significant difficulties. Difficulty in initiating social interaction and presence of atypical or failed responses to communication stimuli. Frequent presence of no interest in social interaction.	Ritual and repetitive movements cause difficulties in functionality in one or more contexts. Resistance to attempts by third parties to interrupt or redirect their recurring events.

(Pliasa, 2020, pp. 13-14)

The key issue in autism, however, is the early diagnosis of symptoms and the immediate onset of tackling the problem which will bring better results. There is a great need for treatment and special education of children with autism which has a very high cost for families and lasts for years (Boat et al., 2015). The different symptomatology in some cases also prevents adult people from realizing that they are in the spectrum of autism. Adults who are autistic and do not know autism has not been treated at least until now. An autistic child is not cured by autism or as an adult (Bahrami, 2012). Many times, in fact, these people have a normal life, they work, they

have a family and they are considered simply eccentric. The important thing for the advancement of a child with autism is to have reason/speech and good cognitive ability. The more functional an autistic child is, the more easily it can respond to special education and have remarkable results. However, with the systematic training that is carried out through the specialized programs of "early intervention" can present significant improvement and depending on the case there is possibility of some of the children of the spectrum of autism (syndrome Asperger's, high functionality etc.) To join regular schools and have a normal life (Abubakar et al., 2016; Foster et al., 2012).

2.1.2 Underlying Deficits

Autism is not a mental disorder but is due to the organic causes of the central brain system, which are responsible for the cognitive deficits and especially at the level of behavior (Barendse, 2013). The main cognitive deficits that characterize autism focus on the theory of Mind, on central cohesion, on executive functions, on this particular thought and on the difficulty of generalization (Baddeley, 2012).

Central deficit in autism is considered the Theory of Mind (Theory of Mind), which relates to the ability of the individual to perceive mental processes such as thoughts, feelings of desires, ideas, knowledge and perceptions, both for themselves and For others (Zeritis, 2015). They do Not have the intuitive ability to perceive what feelings and desires they experience, but neither what others feel or that the feelings and thoughts of others differ from theirs or may coincide (Gena et al., 2016).

The deficits presented by children with autism, as well as the reduced cognitive abilities they have, explain the lack of the Theory of the Mind. This is because these individuals find it difficult to "enter into the place of another", to understand their own

thoughts and feelings of others, taking into account mental processes/images, social interactions, emotional and psychological State and intentions of others (Gena et al., 2016; Tzuriel et al., 2017). This is Why there is no need for communication and interaction.

The Central Coherence is another important cognitive deficit. According to Frith (1999) The processing of information requires both regional and central mental processes. Autism, unlike the mental retardation that affects both central and regional processes, affects only the central. People with autism cannot process the central system information (Zeritis, 2015). Individuals with autism exhibit a particular way of processing information, which acts as a fragmented treatment instead of holistic/total. They Seem to process the information in detail, for this reason some individuals of autism exhibit skills in specific activities and interests, such as a puzzle, game with Balls (Bahrami et al., 2012). The weak central cohesion allows us to explain the reason for lack of social skills that require information processing and inclusion of this information in some context.

People with autism have a particular thought, they face great difficulty in perceiving symbolic or abstract ideas rather than specific events. They Cannot combine and synthesize different ideas while making them easier to understand individual events or situations (Bogindroukas, 2016).

The difficulty of generalization is harmful to the adaptation of these children, but also to their learning. The skills or behaviours they adopt concern a particular environment and in the event of change they face immense difficulty in generalising them in other contexts.

Perception and understanding of the world is a difficult task for a person with autism. However, this difficulty is trying to manage it by keeping things around them with

firmness and similarity. The slightest change can cause tension and panic among people with autism. This preservation of similarity acts as a defensive mechanism to cope with any change that is made and can not grasp it (Faja et al., 2016).

The problems in executive functions Are important in shaping the clinical picture. Repeated acts and thoughts complex and not, are presented to all children with autism (Faja et al., 2016; Tzuriel et al., 2017). Development areas, such as symbolic play, social interaction and behaviour, attention, as well as imitation/mime skills, language skills, emotional processes, are linked to executive functions to These types of deficiencies are presented (Ozonoff et al., 2015).

However, the causes of the ASD are not necessarily due to the aforementioned cognitive deficits. Other alternative psychological theories have been formulated, which contribute to the interpretation of the symptoms of autism, such as the theory of "Enactive Mind" (Klin et al., 2005) and The Theory of "Empathizing-Systemizing" (Baron-Cohen et al., 2005).

2.1.3 Early detection

The Diagnosis of autism can be done at the age of 2^{1/2} years (Στασινός, 2013). However, recent research, has shown that the child from infancy presents some clues that may reflect and motivate the parent (Zwaigenbaum et al., 2015). The sooner doctors and parents realize that the child is showing signs of autism, the more timely and meaningful the intervention (Delion, 2014). Fernández-Alcántara et al. (2016) highlight that parents in the first months observe that their children are growing normally and that starting at 18-24 months they begin to observe disturbing attitudes. The clinical picture presented by a child with autism is not always homogeneous, but

ranges from mild to severe forms of behavior. This is why the evaluation of the child is necessary. The evaluation of the child at a clinical and psychological level aiming at the complete picture of the child in terms of his abilities and deficiencies begins with the receipt of a history from the parents in order to be collected information concerning the course of the child in its developmental stages (Woolfenden et al., 2012).

In the first phase the diagnosis consists of a screening. Parents' observations on the child's development and reactions are essential and concern parents to mobilize and seek an early diagnosis for their child (Zwaigenbaum et al., 2015). Today, we can detect some early signs of autism from infancy related to development stages and we can draw information on the social and communicative primarily development of the child in a medical context.

The "Autism Diagnostic Observation Schedule" (ADOS) is a weighted observation measure used to investigate social and communicative forms of behaviour in children who are lagging behind or in the absence of these Behaviors (Lord et al., 2012; Barnard-Brak et al., 2016; Brukner-Wertman et al., 2016). ADOS is a tool that is not intended to diagnose autism but to detect and gather information. It Evaluates the social skills and attitudes to the social interaction, play and symbolic ability of the child in the game.

"Psychoeducational Profile – Revised" (PEP-R) is an evaluation of the diagnostic and developmental part for children with autism (Coonrod et al., 2005). There are currently various psychometric tools of type diagnostic scales or interviews or observation. One of the most well-known diagnostic scales is the "Childhood Autism Rating Scale" (CARS) (Schopler et al., 1988), scale, which appreciates the child's reactions to adaptation, to some stimuli, to verbal communication and to relationships

with others. Other scales are "Gilliam Autism Rating Scale" (GARS) (Posada et al., 2007), "Autism Behavior Checklist" (ABC) (Krug et al., 1980), and scales of type semi-structured interviews mainly by the child's parents are the "Diagnostic Interview for Social and Communication Disorder" (DISCO) (Posada et al., 2007) and the "Autism Diagnostic Intervention – Revised "(ADI-R) (National Autism Association, 2006).

The above tools are preventive controls and are an indicator to reflect on the parents that the child may have autism and focus more on their attention. However these tools can not accurately diagnose the existence of autism (Βαργιάμη κ.α., 2013; Μαγνήσαλη κ.α., 2017). The Diagnostic Criteria examine a wide range of language and mental skills of the child at various developmental stages and can evaluate changes occurring in the individual (Dunphy-Lelii, 2012). The evaluation should be repeated at regular intervals to check the effectiveness of the intervention and to adjusted to the changing needs of the child.

2.1.4 Diagnostic criteria and Epidemiology

Based on recent scientific studies the basic diagnostic systems for the diagnosis of autism are the DSM-5 (Diagnostic and Statistics Manual, 5th edition, 2013) of the American Psychiatric Society and the ISD-10 (International Classification of Diseases, 10th edition, 1992) of the World Health Organization (WHO) (Gotsamanis, 2015; Kondaxakis et al., 2015). The first is mainly used in the USA, while the latter is most prevalent in Europe. In 2013, in May, the 5th edition of DSM included significant changes in the diagnostic criteria of autism in relation to the previous

version (DSM-IV). However both tools, the DSM-5 and the ISD-10, have, in principle, a similar overall diagnostic approach (Posada et al., 2007).

The criteria of ISD-10 for Autism focus on the disruption of communication, the development of social skills and stereotyped behaviors and resistance to change. The most common are Childhood Autism and Asperger's Syndrome (Manchikanti et al., 2011; Sioula et al., 2015):

- Autism of Childhood (F 84.0)
- Informal Autism (F 84.1)
- Ret's Syndrome (F 84.2)
- Child Degenerative Disorder (F 84.3)
- Hyperkinetic Disorder accompanied by mental retardation and stereotypes (F 84.4)
- Asperger's Syndrome (F 84.5)
- Other Pervasive Developmental Disorder (F 84.6)
- Diffuse Developmental Disorder-not otherwise identified (F 84.7)

The DSM-5 basically includes the latest trends concerning the diagnosis of autism (Hyman, 2013). In Particular, the term Diffuse Developmental Disorders (DDD) has been replaced by the term Autistic Spectrum Disorder (ASD). The Conditions of autism, Asperger Syndrome, and other DDD – not identified, have been deleted. Autistic Spectrum Disorder (ASD) is considered a diagnostic category that has a group of symptoms. This Group of symptoms is divided into sub-groups or levels, which are determined by some markers (Gotsamanis, 2015; Kondaxakis et al., 2015).

As regards the trinity of the symptoms of autism, social interaction, communication and stereotypes, these became two, that is, social interaction and communication have been unified into one group and called Problems in the social Communication: a)

Social Communication and b) Stereotypical, repetitive behaviors, activities and interests (Kim et al., 2014). Also, hypersensitivity and undersensitivity to sensory stimuli have become part of repeated – stereotyped behaviors (Hyman, 2013). Symptoms should be evident during early childhood, up to the age of 3, but some disturbances may occur later. Unlike the DSM-IV (which did not refer to the gravity of the ASD), DSM-5 determines gravity according to the individual's need for support separately in the field of social contact and in the field of stereotyped behaviors (Hyman, 2013). Each diagnosis will be accompanied by other individual markers (such as if the person with autism has mental retardation or epilepsy or some other medical case) so that there is a complete picture (Fransis, 2012; Gotsamanis, 2015; Kondaxakis et al., 2015).

The diagnostic criteria of DSM-5 were published in May 2013, replacing the earlier version of the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (Diagnostic and Statistical Manual of Mental Disorders IV, DSM-IV) (APA, 1994) , which have been in force for almost 20 years. Indeed, DSM-IV was re-issued in 2000 as DSM-IVTR (Text Revision), but without any changes to the criteria of the ASD (APA, 2000) (Lohr et al., 2013). The publication of the DSM-5 brought significant changes, not only in the diagnosis, but also in the perception of the concept of autism, which disorder treats it as a single spectrum with quantitative characteristics (Grzadzinski et al., 2013).

**Table 2: Diagnostic criteria of the ASD, according to DSM-5 (APA, 2013)
(all 5 criteria A, B, C, D, E are required)**

TABLE 2. Diagnostic criteria of the ASD, according to DSM-5 (APA, 2013) (all 5 criteria A, B, C, D, E are required)
A. Persistent disturbances of social contact and interaction, as manifested by ALL of the following:
1. Disturbances in social-emotional reaction, as lack of spontaneous pursuit to share interests or feelings with others, difficulty To start or maintain a discussion etc.

2. Disturbances in non-verbal communication behaviors that serve 16 in social interaction, as reduced eye contact, decreased use or understanding of gestures and postures or even complete absence of verbal/exverbal Communication etc.

3. Disturbances in the development, preservation and understanding of relationships, e.g. difficulty in adapting behaviour in the social context, reduced participation in fantasy games, lack of interest in peers, difficulty in participation in social Activities similar to age etc.

B. Limited, repetitive patterns of behavior, interests or activities, as manifested by a ASD by the following:

1. Routine or repetitive movements, use of objects or logos, e.g. simple kinetic mannerisms, placement of toys In series, rotating objects, soundalia, use of idiosyncratic expressions etc.

2. Excessive adhesion to routines or ceremonial patterns of verbal/exverbal behavior or excessive resistance to change, as significant discomfort in small changes, use of rituals greeting, need for use of the same route Daily etc.

3. Very Limited, stereotypical interests with pathological intensity or focus, as intense adhesion or dealing with unusual objects etc.

4. Hyper- or undersensitivity to sensory stimuli or unusual interest for sensory elements of the environment, as apparent indifference to pain/temperature, unexpected reaction to specific sounds or textures, excessive smell or touch of objects, visual attachment to lights or motion.

C. Symptoms have been present since the early developmental period, but may not be fully evident until societal demands surpass reduced abilities. In Addition, the symptoms may be covered by learned strategies in later life.

D. The symptoms cause a clinically significant reduction in the social, professional or other basic scope of functionality.

E. Disorders Are not more adequately explained as mental retardation (cognitive developmental disorder) or as a generalized developmental disorder. Mental retardation and ASD often coexist. In order to diagnose co-morbidity, social communication should be lower than expected for the general developmental level of the individual.

(Grzadzinski et al., 2013)

The first epidemiological studies of Lotter (1966) in the UK and Brask (1970) in Denmark speak of a prevalence of DFF in 4 to 5/10000. From 1980 onwards many researchers talk about "autism epidemic" in America. In 2010, a percentage of 147/10000 was recorded in the United States for all ASD in children aged 8 years (Developmental Disabilities Monitoring Network Surveillance Year 2010 Principal Investigators and Centers for Disease Control and Prevention, 2014). Canadian psychiatrist and epidemiologist Eric Fombonne, in a study of the 2005 reported a

prevalence of all ASD at 60/10000, and 13/10000 for autism and 3/10000 for Asperger. The Study of Elsabbagh and its collaborators held in 2000 in Europe, in America, in Asia, in Australia and in Africa showed 2.8 to 94/10000 for autism and 1 to 189/10000 for the ASD (Elsabbagh et al., 2012).

It Should be noted that in recent years the data concerning the epidemiological elements of autism have changed considerably. According to the latest epidemiological research, autism occurs most often in boys, in a ratio of 3 – 4 boys to 1 girl (Yeargin-Allsopp & Rice, 2003; Lai et al., 2014). The supremacy of boys with autism in the girls was observed by Kanner and Aspenger and is now established in the scientific community (Baxter, 2015). It is certain that autism affects children irrespective of social order, economic – educational – cultural or ethnic origin (Elsabbagh et al., 2012; Baxter, 2015).

In The higher social strata the reports of high prevalence are minimal, which may be due to the vigilance of parents, teachers and physicians, as well as to better access to health services (Thomas et al., 2012). Of the 4 to 5 in 10,000 children according to earlier studies are on the autism spectrum, while the latest surveys indicate that rates have risen and are estimated in 16,8/10,000 children, while the percentage of other diffuse developmental disorders is estimated to be in 45,8/ 10,000 (Stasinos, 2013).

It Is a fact that this frequency shows that the phenomenon of autism is not a rare condition. In America, the prevalence of people with ASD is increasing, reaching 1/59 in proportion. In Greece, epidemiological investigations have not been carried out, but we will be relying on research assessments made in other countries (Stasinos, 2013). Based on this data in Greece it is estimated that children and adult individuals with autism range from 150,000, while children with autistic spectrum developmental disorders range around 30,000 to 60,000. This number is interpreted proportionally to

1 to 166 people. Specifically, we can see that 1/42 concerns boys and 1/189 concerns girls, who are born with characteristics in the autism spectrum. This increase is due to many in environmental factors. However, there is a view that it cannot be compared for understandable reasons past the present, because the cases of autism that existed in the past are impossible to ascertain, because many people who suffered from autism were characterized by them then Doctors as mentally retarded or never examined (Kaliva, 2005).

The upward trend of these proportions can be seen in the table below, as it also shows that this increase in people with ASD makes it necessary to find methods and technical applications to support and include in the social development of people with ASD.

Table 3: CDC data on the prevalence of ASD

Surveillance Year	Birth Year	Number of ADDM Sites Reporting	Combined Prevalence per 1,000 Children (Range Across ADDM Sites)	This is about 1 in x Children
2000	1992	6	6.7 (4.5-9.9)	1 in 150
2002	1994	14	6.6 (3.3-10.6)	1 in 150
2004	1996	8	8.0 (4.6-9.8)	1 in 125
2006	1998	11	9.0 (4.2-12.1)	1 in 110
2008	2000	14	11.3 (4.8-21.2)	1 in 88
2010	2002	11	14.7 (5.7-21.9)	1 in 68
2012	2004	11	14.5 (8.2-24.6)	1 in 69
2014	2006	11	16.8 (13.1-29.3)	1 in 59

(Pliasa, 2020, p. 8)

Interpretations of the prevalence of ASD vary. In Addition to the diagnostic criteria or environmental considerations of the ASD prevalence, it is of particular importance to inform and raise awareness of all relevant actors, parents, teachers and medical staff on the subject of and support for people with ASD.

2.1.5 Reason

According to the bibliographic review, our knowledge of autism cannot help us to refer to a pathological mechanism with specific causes that contribute to the onset of autism (Stasinou, 2013). Although Several views have been expressed about the issue of reasoning, most of them are documented at a research level.

The Symptoms of autism in many cases are associated with diseases or complications that occur during the prenatal, perinatal and postnatal period of the child's life, which then lead to disturbances of the functions of Brain (Gordon, 2013). Some studies have shown that certain complications during the prenatal period (such as diseases, administration of medicines to the mother due to frequent bleeding in the uterus, placenta or other conditions) or the moment of childbirth (such as brain injuries, suffocation...) are considered as the root cause of autism (Froehlich-Santino et al., 2014; Bohm et al., 2013).

"Although Most of the causes – risk factors occur during the prenatal period, none of what has been identified to date can be considered with certainty to be a danger and necessarily harm the child's nervous system. Furthermore, although some surveys show that autism syndrome is not associated with premature childbirth, other surveys show a percentage of 27.2% of autistic children having premature birth and weight

below 2500 grams. However, for the presence of autistic syndrome, there is a serious risk of premature birth or suffocation "(Kipriotakis, 2003, pp. 27).

According to Kipriotakis (2003), the results of some surveys lead to the conclusion that there is a close link between infections in the mother's womb and diseases during pregnancy and autism. Infections and diseases include chickenpox, rubella, toxoplasmosis and generally diseases from which the mother may be sick and affect the newborn. In Table 4 We can observe the factors that affect the ASD during pregnancy, but also during childbirth.

Table 4: Perinatal and neonatal factors related to the occurrence of ASD

TABLE 4: Perinatal and neonatal factors related to the occurrence of ASD	
Factor	Odds Ratio
Sciatic projection	1.81
Complications related to umbilical cord (e.g. prolapse/circumnavigation of the cord etc.)	1.50
Fetal Distress	1.52
Trauma during childbirth	4.90
Multidynon Pregnancy	1.77
Maternal hemorrhage (perigenital)	2.39
A Kite in the summer months	1.14
Very Low birth weight (<1500 γρ)	3.00
Low Birth Weight (<2500 γρ)	1.63
Small for the duration of a gestational newborn	1.35
Congenital abnormalities	1.8
Low Apgar Score (< 6) (5th minute)	1.67
Aspiration of the Milonium	7.34
Feeding Disorders	3.35
Neonatal anemia	7.87
ABO or Rh Incompatibility	3.7
Hyperbilirubinemia	1.87

(Gardener et al., 2011)

According to Kipriotakis (2003), there are contradictory data in the relationship between the age of the mother and the presence of autism. For such a claim, this author is based on two investigations. For example, the Links ' Investigations (1980) led to the conclusion that there was a positive link between the age of the mother and the presence of autism, while the investigations of Quinn and Rapoport (1977) showed that the age parameter of the mother is not related to the Presence of autism. However, research by Gardener and its associates (2009) showed that the old age of the mother or father (>40 years old), maternal bleeding during pregnancy, gestational diabetes, the use of medication (mainly psychopharmaceuticals) by the pregnant have been important factors in the emergence of the ASD (Bohm et al., 2013; Guldberg, 2016).

Recent research shows the existence of a genetic predisposition. According to Gardener et al. (2011) the role of heredity in the emergence of the ASD is a key role. In Particular, in survey conducted in Britain as to the intercorpus of twins 36% and 0% for Monozygic and dizyotic twins, while in studies that followed the percentages ranging 36% to 96% for Monozydiotes and 05 to 24% For dizyotic Twins (Folstein & Rutter, 1977). This significant variation is due to methodological differences between studies, mainly in terms of diagnostic criteria, which varied from strictly to highly enlarged (Ronald & Hoekstra, 2011; Willfors et al, 2017). According to two studies in the last five years, they reported even higher percentages, in total for the ASD, ranging in 88-95% for Monozykotes and 31% for dizyotic twins (Taniai et al., 2008; Rosenberg et al., 2009; Sucksmith, 2013). According to a study conducted in the USA, it has shown that there is no possibility of an identical twin-celled twins in the effect of common causes in the pre and perinatal period (Froehlich-Santino et al., 2014). In Antithesix with the Dizyotic twins there is a possibility of common intrauterine factors affecting the degree of synobiosikness (Bohm et al., 2013). In their research the

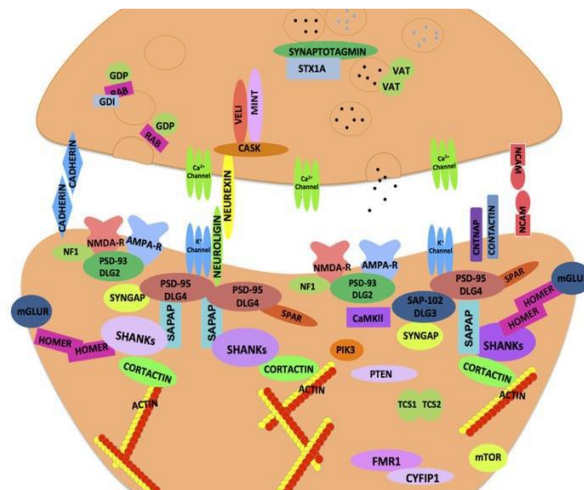
Sanders et al. (2015) have identified 6 areas in DNA and 65 genes which have undergone some mutation and are related to autism. Researches in dizygotic twins with autism showed that there is a link between a mutation in the gene HTK7. This gene encodes the 5-HT7 serotonin receptor that is involved in brain development and the contagion of these synapses. Observations that have been made stressed the important role of serotonin receptors in autism. In children with autism serotonin levels are low compared to normal children. This shows that there is a relationship between the genetic anomaly in the HTK7 gene and a neurodevelopmental disorder (Helsmoortel et al., 2016).

As far as non-twin siblings are concerned, the degree of co-similarity for the ASD is calculated in the U.S. 18.7% survey, with a large percentage in the case of boys (Ozonoff et al., 2011). An investigation in Denmark showed that there is a 6.9% occurrence of the ASD for the next siblings, while for the maternal half-siblings of children with ASD incidence rate of 2.4% and 1.5% for the paternal half-siblings of children with ASD (Gronborg et al., 2013).

According to Sucksmith and his associates (2013). There is heredity of autistic traits, such as social interaction, theory of mind, speech disorders, emotional rigidity. These autistic characteristics are presented at a rate of 20% in children without ASD, but there is a sibling or sister with a ASD in the family (Gerogiades et al., 2013). Also, there is a large increase in the number of characteristics to parents of children with ASD (Bernier et al., 2012).

From A genetic point of view we can see that there are some gene mutations associated with the ASD (De Rubeis et al., 2016). Such mutations (synaptic proteins) affect the growth, structure and function of the brain (Banerjee et al., 2014).

Figure 1: Synaptic proteins affecting the ASD



(Banerjee et al., 2014).

In The postnatal period some brain damage can lead to the presence of autism (Bλάχος, 2015). Studies show that early changes in the brain occur during the period in which autistic behaviors occur for the first time (Hazlett et al., 2017). In research by Hazlett et al. (2017) in infants aged 6 to 24 months, with the MRI method to investigate some characteristics of the brain, showed that there is a hypergrowth of the brain and hyperstimulation of the surface of the cortex Before the age of 24 months. These early changes in the brain are related to the emergence of the characteristics of autism, which leads to the emerging deficits of autism. Some different pathogenic causes may affect the central nervous system and be considered causes of autism (Won et al., 2013; Gordon, 2013).

In terms of chromosomal abnormalities conducted in autistic children did not have a relationship between autism and chromosomes, as is the case in other syndromes, Down syndrome. In gene research in people with DF, genetic markers were detected in chromosomes, 2, 3, 4, 6, 7, 10, 15, 17, X and Y at increased frequency (Jiao et al., 2012; Ronemus et al., 2014). People with "fragile X syndrome", which is presented more to the boys and the percentage of these autistic individuals is estimated to be

10% – 20%, exhibiting various physical deformities, mental retardation, difficulty in speech and Communication, sound, avoidance of contact, lack of social relations and interactions.

According to Happe (1998) and to Won (2013) we should see autism as an image of the "Common neural pathway" in the sense that autism may be due to a lesion of a particular region or a single brain system but may have been caused by Environmental factors.

2.1.6 Therapeutic treatment of autism

2.1.6.1 Early intervention

The treatment of autism and related pervasive developmental disorders has been a challenge and the subject of significant scientific interest for many years. While the biological basis and the role of genetic factors have been acknowledged in the etiology, there is still no specific, effective treatment aimed at the complete rehabilitation (Polichronopoulou, 2012). Efforts to deal with the disorders have led to different approaches, some of which promise "treatment ", sometime with negative effects on the individual and the family. The recognition of autism and its increase in the lives of families has led to the development of early intervention methods. Early intervention covers the pre-natal diagnosis up to the compulsory education that the child reaches. It Concerns the child, the parents, the educational community and thus the broader society (Stasinou, 2013). In Greece, early intervention is not achieved by a systematic and organised system, which is due to the lack of coordination in special staff, the negative perception of society, inadequate education and the lack of units (school and Health) and specialists

(Marcovits et al., 2011). However, there are bodies that apply early intervention, such as nursery schools, some parts of paediatric hospitals and Differential Diagnosis and Support Centers (DDSC), and today the name has changed and are called Centers Advisory Support (CAS) (Law 4547/18).

Valid psychological therapies and educational approaches in the field of autism are based on theories of developmental psychopathology. The importance and value of early intervention, specialized education and support of parents has been proven, while pharmacotherapy is useful in the control of symptoms in many cases (Lewis, 2013). Today, there is no specific treatment for all individuals or for the person itself, throughout life. The individualized application of a combination of psychoeducational and biological therapies at different phases of life, within the framework of a network of health services and education, ensures support, stability and continuity in the promotion of independence of the individual (Lewis, 2013).

For The best result, interdisciplinary cooperation is necessary, i.e. the collaboration of many specialties, such as a specialist educator, psychologist, social worker, pediatrician, child psychiatrist, speech therapist, occupational therapist etc. This Multidisciplinary team will be able to identify the issue of autism and offer appropriate interventions through appropriate programs. For example, a pedagogue will focus on social interaction skills with others and adaptation skills (Polichronopoulou, 2012). A social worker will receive the social background, which will give valuable information about the child. An occupational therapist will deal with the recording of potential sensory dysfunctions, difficulties in the subtle and coarse mobility and daily living skills presented by the child, aiming at the design of a sensory Integration. In Accordance with the above, we can conclude that the purpose of early intervention is to improve communication, social interaction,

the reinforcement of the game and the development of flexible forms of behaviour (Toth et al., 2007). In Particular, the effectiveness of the intervention is judged by (Zoniou – Sideri, 2012):

- The Timely implementation
- The personalization of programs in children and parents
- Systematic and planned teaching
- The involvement and contribution of the family
- The cooperation of the Special Scientific Staff

Finally, it is very important to differentiate autism from others, with similar characteristics and manifestations, heavy and widespread developmental disorders. The autism disorder should be differentiated in relation to other severe widespread developmental disorders, such as schizophrenia, selective voity, disruption of linguistic expression, mental retardation (Hughes et al., 2016). A differentiated diagnosis requires a set of examinations from different scientists who will work in the individual and give responsible observations excluding other disorders or illnesses (Hughes et al., 2016).

2.1.6.2 A Variety of therapeutic and pedagogical methods

The recommended approaches are structured educational programs, which have shown positive results in improving the functionality of children with autism (Lofthouse et al., 2012). These programs apply a variety of teaching methods that enhance positive behaviors and modify some problematic behaviors. According to experts, behavior management is achieved through structured teaching of skills (linguistic, communicative, social, etc.) and includes (Wall, 2010):

- Improvement of problematic behaviors.
- Development of social – communicative attitudes and school skills.
- Integrate these children into normal environments and in school classes with formal peer-to-peer development.
- Educating all people working with the child (family...)

Regarding the intervention framework, note that the specific characteristics as well as the simultaneous deficits that are in several areas of the development of children with autism form each time and the approach and intervention that they should accept, so that they can develop some Skills (Siriopoulou – Delli, 2016).

In The first phase is defined the context in which the child with autism receives the intervention. Thus, the frames that the child receives the training are (Siriopoulou – Delli, 2016):

- ✓ The House
- ✓ Specialised Intervention centres
- ✓ School
- ✓ Other environments (House of friendly persons, playground, Restaurant...)

The Home-based training, the "home-base" is defined in these programs, which the largest and most important part of the training is completed in the House by a group of special therapists under the supervision of parents (Harris et al., 2005). After proper counselling, parents can also take on the role of therapist. Home schooling has several advantages because it allows the child to acquire significant teaching time as long as it does not change another educational framework in order to have more time, has the potential to generalize and reinforce the already existing Skills, and finally the parents themselves benefit from the skills they acquire from the intervention programme (Kotsopoulos et al., 2014). Of Course, there are also

some difficulties in these kinds of programmes related to the way in which each programme, the limited effectiveness, the high cost, the time available to devote the Parents to respond to the therapeutic powers and organise and coordinate these programmes, unlike a group of therapists in specialised centres where the intensification and organisation of the programmes is achieved, the accuracy and The consistency of the programs, the strict control of specialized professionals (Grindle et al., 2009).

A second framework for intervention is the special day centres. The daily intervention programmes in the special centres are the most common framework which facilitates and prefers parents to educate children with autism (McCloskey, 2016). The Aim of these programs is to develop these children's skills to integrate into school classes with their typical development peers (Harris et al., 2005). The staff is specialized in the education of autism, the whole team participates and the scientists are in close collaboration from all disciplines, such as psychologists, occupational therapists, language pathologists, special educators etc. The training is done globally and with absolute precision, the space is appropriately configured to serve the needs of the program. The families participate in the intervention and they also receive a kind of training to continue the intervention at home with the aim of developing self-service skills and generalising and preserving skills with the guidance of the specialists Scientists (Harris et al., 2005). This reduces the stress and pressure of parents, parents themselves feel safer and confident about the course of their children.

The School area is another kind of intervention framework in which the child with autism is invited to participate and enjoy the benefits of the classroom. Children with autism can study at the general school in the integration departments or in the

classroom with full membership attending the school program normally. The role of parents in this case is the continuation of the intervention and at home (Kotsopoulos et al., 2014). Of Course, the difficulties of this framework are the absence in many cases of skilled staff offering support and an advisory role to children and parents. In the event that the child with autism does not attend the school program of the Normal School, he attends school Special education Units (special schools, Special Professional Laboratories of Education and Training) (Kotsopoulos et al., 2014).

Of Course, the intervention framework is not confined to home or school or to a centre, but continues to other places, such as a playground or a restaurant or a Supermarket, where the child acquires communication and social skills Interactions. However, as the specific importance of the intervention area is not only the involvement of the child, the quality and importance of the intervention programme. (Xanthi, 2015).

Regarding the methods that improve educational interventions, try to help children not only learn subjects and acquire readiness skills, but also improve their functional communication, immediacy and social skills such as: from Common attention, the acquisition of skills such as symbolic play, the reduction of negative attitudes and the generalisation of skills learned by applying them to new situations (Beukelman, 2013).

A popular intervention programme is the programme **TEACCH**:

TEACCH is a comprehensive program created by Eric Schopler and has been used and spread in many countries around the world (Neely et al., 2016). It deals with diagnosis, treatment, vocational training and the living of people with autism. The foundation stone of TEACCH is structured teaching that is used systematically to make the environment predictable, helping the child to understand it and thus to

function more safely, utilizing and practicing skills. TEACCH has incorporated certain behavioral principles of treating children with autism, but differs from applied behavioral analysis on some fundamental issues. The most important differentiation is that it focuses on maximizing the abilities of children with autism using their abilities. The program is designed to provide structured frameworks where children with autism will be able to develop their skills (Boyd, 2014).

Children with autism are facilitated in learning when structured training is practiced by the TEACCH programme (Treatment & Education of Autistic and related Communication Children handicapped) (Neely et al., 2016). The preference of this training initially helps children to understand the world around them and to be able to function more safely (Dempsey & Foreman, 2001). Organization and structure helps the child to occupy the world. Another element of this training is tranquility, stress reduction, which help children relax, improve their behaviour and facilitate learning (Häussler, 2012). Because children with autism are distracted, they cannot focus on what is necessary, so they find it difficult to learn. Structured education tries to understand the most important element in an activity, to help children to become independent, to rely on their abilities and visual abilities, which are very satisfying. They are able to remember what they see. Based on the above, we can see the improvement of the behavior of the person with autism. In a well-structured environment we can observe the reduction of undesirable behaviors, while the opposite causes confusion (Häussler, 2012; Siriopoulou et al., 2010).

The TEACCH Programme includes the organisation of the natural Environment (Orellana et al., 2014). In other Words, a classroom should be organized in such a way that it is understood – understandable which activity will be done and which will be done (the point of space). The Physical organization of the classroom helps

them to stay in place for a while. In this important role are the furniture, the materials, the space that will work with the teacher and learn something new.

Another element of the program is the individual daily program (Orellana et al., 2014), with which children know the activities they will do, which have written form for children who know reading or photographs, sketches, shapes, objects for children who can not read. The next step is the personal work system, which is based on the way an activity will be organized. So, What am I going to do, how much work I'm going to do, how I know I'm done? The individual work is applied in the area of individual work in which the student works independently and does what he knows with the help of the teacher (Orellana et al., 2014). Exercised in fine mobility, sorting, matching, categorisation, left-to-right movement using various materials e.g. cubes, numbers, letters, ropes, beads....

Another area quite difficult but necessary for children with autism is communication training according to the TEACCH programme (McCall, 2015). People with autism are unaware of the existence of communication, nor what it is, nor its meaning. For this reason we strive to "provoke" the communication of the child in various ways (McCall, 2015).

Another well-known program is the Applied Behavior Analysis Program (ABA), which was developed by Ivar Lovaas in 1970 (Olley, 2005). According to some authors (Lambright, 2011) is a behavioral approach that is applied quite successfully. When we realize that a child manifests a behavioral problem, because of the difficulty in communicating, we need to search and teach in it alternative ways in which to communicate. A program known as behavioral theory is an important amplifier of the communication and linguistic development of children with autism, is the Applied Behavioral Analysis Program – ABA.

In The 1970 years, Ivar Lovaas and his colleagues were among the first to argue that children with autism are unteachable. He develops a systematic therapeutic program based on the principles of Behavioral Analysis, which showed significant positive results in the development of positive reactions and skills of children with autism (Olley, 2005).

Applied Behavioral Analysis (Applied Behaviour Analysis – ABA) is a behavioral approach, which is applied fairly successfully and is based on the principles of instrumental learning (the relationship between stimulus and reaction), the Use of rewards or aid to encourage desirable behaviours and reduce undesirable behaviours in the context of an individualized intervention plan (Lambright, 2011). The Applied Behavioral analysis focuses on the systematic teaching of small and measurable units of behavior, based on the reliable measurement and the objective evaluation of the behaviour we observe and which we want to Modify, describing the guidance, context, duration and people involved in this process (Lovaas, 2003). This is done with careful observation to identify the references of problem behavior (Lambright, 2011). The knowledge they have acquired is repeated until they are fully conquered. The Main goal is to teach children how to learn. This teaching is highly personal and is provided by a group of teachers who are supervised by specialists (Gena, 2002). Behavioural interventions reinforce the conquest of speech, social skills, improve behavior and reduce the stress of parents (Engberg-Pedersen et al., 2016).

Behavior modification is based on the belief that reward increases the likelihood of a positive behavior, while deterrence reduces the onset of negative behavior. The model of Lovaas emphasizes the processes of positive reinforcement of behavior. Of Course, in the case of children with autism should be checked the reward so that the intervention is effective. Despite the effectiveness of behavioural intervention

techniques, however, few researches have dealt with behavioural techniques aimed at the effectiveness of intervention in children with autism (Engberg-Pedersen et al., 2016). The Survey by Lovaas (1987) presented the most important results, which concerned children aged 34 months on average. The programme had a duration of 40 hours per week for 2 – 3 years, with an increase in IQ averaging 20 units. A percentage of 47% showed intelligence ("85") at normal levels and succeeded in joining General school classes. Although Recent research has failed to make such spectacular percentages, they argue that behavioral programs are effective in educating children with autism, such as development in subtle and coarse mobility, social Skills, the emotional sector, the development of speech (Reichow & Wolery, 2009).

Another intervention programme, which surrounds the framework within which the way to learn and understand children with autism is achieved (Siriopoulou-Delli, 2011), is the **pecs programme-communication system via image exchange**. The Picture Exchange Communication System (PECS) is translated as "Image Exchange Communication System". The PECS is the communication system for exchanging symbols, according to which children are taught to exchange images or symbols and in this way can express their desires (Engberg-Pedersen et al., 2016). The PECS was developed in 1985 as a unique package of intervention/alternative communication for people with a disorder of the spectrum of autism or related developmental difficulties. The PECS was originally used in the Delaware Autism Program and gained worldwide recognition because It emphasized the initiation of communication among its other components. PECS does not require complex or expensive materials. It was Designed with families, trainers and staff of protected homes in mind, so it is easy to use in a variety of environments. It Is an

internationally recognized communication system based on the exchange of information through images (Bondy et al., 2015; Raja et al., 2017). It is Used to amplify speech or to enhance communication when speech is not developed or lost. The PECS has been developed in America in 1994 by Bondy and Frost. The child can choose from a series of cards from a portable book, the one he needs and put them in a row as a simple suggestion. The Main advantage is that it teaches the child the communicative process (Bondy et al., 2015).

The PECS consists of some stages (Bondy et al., 2015):

Stage 1: How We communicate:

Pupils learn to exchange an image about an object or activity they desire.

Stage 2: Distance and persistence:

Pupils can use images, learn to generalise this new skill, in different contexts and with different people.

Stage 3: Picture Distinction:

Pupils learn to choose between two or more images to ask for something. The images are placed in a communication book so that communication can be easily made.

Stage 4: Proposal Structure:

Students place on a detachable base images to form a sentence and identify what they want. Slowly They learn to broaden the sentence using adjectives, verbs, intentions.

Step 5: Answer Questions:

Learn to use images to form questions.

Stage 6: Commentary:

At This stage the student can describe and comment on some things (like, "I see..." or "It's... etc. ...).

The PECS method is very successful if combined with appropriate elements of behavioral analysis, proper evaluation of amplifiers, teaching techniques (Bondy et al., 2015). This method has been particularly successful in adults and adolescents with extensive communication, cognitive and motor skills (Bondy et al., 2015).

Another well-known program is the **MAKATON PROGRAMMA**. The MAKATON language programme is a means of communication that encourages the development of language skills in children and adults with communication disorders. It is also used to introduce the learning process of writing and reading, as well as a way of alternative communication where necessary (Bartza et al., 2016).

Makaton'S Vocabulary was developed in 1972 by British Logopediko Margaret Walker. It was the practical part of an investigation and was intended to provide some means of communicating adult inmates of an institution, who were deaf and had serious learning difficulties (mental deprivation) (Vogindroukas & Sherratt, 2005). Makaton is a language program that combines speech, meanings and symbols (images). It Is used as a multi-sensory method for developing communication, speech, writing and reading skills. According to Bartza et al., (2016) this program effective for children with difficulties in speech development, to children with specific language disorders, to children with severe, moderate or light learning disabilities, to children who exhibit autism spectrum disorders Children with sensory impairments. The Aim is to develop speech, basic communication, to assist in understanding, to facilitate social interaction and to develop relationships and to teach pre-reading and writing skills with the aim to read and write (Bartza et al., 2016).

An Important element is the creation of working groups to provide training for people who interact with pupils. In Other words, it tries to cover the needs of students who exhibit communication deficiencies. The creation of a supportive environment in the management of alternative forms of communication is of great importance. For this reason, language learning should be combined with daily and consecutive events, as well as the use of a stable vocabulary compatible in all situations. According to the above considerations, the design of the Makaton vocabulary, which incorporates four functional principles, has emerged (Vogindroukas et al., 2005):

Table 5: Operational principles of the MAKATON programme

Operational principles of the MAKATON programme
1. Focus on teaching a small, basic vocabulary from very functional words.
2. Organization of vocabulary in succession of communication priorities in stages.
3. Personalize your vocabulary to suit your individual needs
4. The combined use of all kinds of speech, meanings with hands and graphic symbols.

(Vogindroukas et al., 2005)

This language program consists of a vocabulary of 350 word-meanings, which is called the vocabulary "nucleus" and is organized in a series of 8 stages. These stages are complemented by an additional open stage. The teaching begins with the introduction of basic ideas in the early stages and gradually passes in the next stages with the introduction of more complex Concepts (Kotsalidou et al., 2018). The Aim of Makaton's teaching in stages is to ensure the acquisition of at least limited but useful communication in cases of individuals whose limited opportunities for learning and maintaining their knowledge prevent Progress from the initials to the later stages.

The objectives of the programme's teaching are as follows (Kotsalidou et al., 2018):

- The correlation of a meaning/symbol with a picture or object
- The use of meaning instead of the name of the object
- The functional use of the meanings in a variety of situation

Makaton is open and flexible in design, and can be enlarged according to the student's abilities, rhythms and personal needs. However, his teaching method is based on the multi-sensory approach, since it combines the use of meanings, graphic symbols and oral speech. An effort is being made for a global approach to communication in order to achieve communication needs.

Another program is treatment with aesthetic integration (SI), which is designed to detect disturbances in the way that the person's brain processes movement, touch, smell, vision and sound, and helps him to process these Senses in the productive way (Tindal et al., 2013). Many scientists argue that children with autism are hypersensitive or under sensitive to sensory stimuli, thus experiencing excessive or inadequate sensory stimulation compared to most people (Vlachou et al., 2017). It is therefore possible that they have difficulty in realizing the environmental stimuli and reacting to them in an appropriate way. For this reason, sensuomotor therapeutic approaches can be used to help calm the child, constitute an amplifier of desirable behaviors, as well as to function as a transition to other activities (Tindal et al., 2013). Sensual-kinetic therapies are based on the theory that the person with autism does not react naturally to external stimuli because it has difficulties in the processing and analysis of the information received. Based on this theory, the function of stereotyped movements is interpreted as this – a factor in balancing the reactions of the person with autism to the various external stimuli and distraction factor (Vlachou et al., 2017).

One of the most important sensuomotor therapeutic approaches is music therapy, which was applied for the first time in the decade 1950 – 1960 in Britain (Kargiou, 2012). It is a holistic approach that aims to promote the balance between the emotional, physical, mental and social development of the child in order for these children to reduce their sensitivity to sound and to learn to communicate and are expressed (Kargiou, 2012).

Music therapy uses a musical instrument, which acts as a "mediator" for the creation of a relationship between the child and the therapist. There Are various music therapy approaches, with the most widespread musical improvisation. Children work on an individual basis. The Therapist uses percussion and stringed instruments or his voice encouraging the child to construct his own musical language (Geretsegger et al., 2016). The frequencies of sounds that may disturb the child's behavior are removed from the relevant music track or repertoire. The positive effect of music therapy Is found in the following forms of behavior (Kargiou, 2012):

- Improvement of rough and fine motor skills.
- Improved Eye and hand coordination.
- Improving the capacity for acoustic discrimination.
- Increase the duration of attention.
- Improving Communication Skills

The method of sensory integration, which is based on the assumption that sensory integration is a neurobiological process, which was developed by Jean Ayres 30 years ago. Many scientists (Katsiana, 2015; Siriopoulou, 2016) argue that children with autism are either hypersensitive or under-sensitive to sensory stimuli resulting in excessive or inadequate sensory stimulation compared to most people, and They find it difficult to perceive environmental stimuli and react to them in an appropriate

way. This treatment aims at the synthesis of the incoming stimuli with the help of sensual kinetic exercises. Most surveys converge on the conclusion that sensory integration therapies are as effective as other treatment methods and can be used in tandem with an educational intervention (Tindal et al., 2013).

There are other treatments that have been applied to children with autism, such as Facilitated treatment, which was initiated by Australia by Rosemary Crossley and relies on the fact that people with autism often enjoy the use of The Pc (Tseng et al., 2011). Treatment Aims at learning the choices, while other issues such as hand-eye coordination, high and low muscle tone, the use of both hands, the isolation of the index, the impulsiveness (Vlachou et al., 2017) are also addressed. The treatment of daily life, which focuses on the development of social skills, skills in everyday things, empowerment exercises, academic activities, art therapy (Volioti et al., 2016). The game is a multidimensional and complex behavior that is considered vital for the normal development of children. As highlighted Schertz et al., (2018) different investigations that the game helps children learn and interpret themselves, to conquer basic concepts and skills (physical, social, mental...), to shape cultural concepts and ideas, to develop superior Psychological functions. Also, the game is of great importance in adaptability, learning, perception, the development of the socialization of the Child (Dawson et al., 2010).

The Co-education program is also a key factor in enhancing the abilities of children with autism. The International Research of recent years argues that the inclusion of these children in the General Education school improves the social behavior of these children (Stasinos, 2013). However, research results showed that very few children with autism can successfully join the Co-education program (Stasinos, 2013). According to Agalioti (2002), the reservations expressed for co-education focus on

the inadequacy of teaching time, the inappropriateness of traditional teaching programmers, inadequate education and knowledge of The potential burden on other pupils, stress, mood disorders, hyperactivity, attention deficit, aggression, self-inflicted injuries.

In recent years, robotic science has made great strides and has offered many technological marvels. Robotic systems are constantly evolving and are already part of our lives in many areas. The term “Social Assistance Robotics” refers to a new subcategory of robotic technology designed to assist in rehabilitation and treatment through an environment of social interaction (Fahantidis et al., 2017).

The use of robotic technology aims to overcome the barriers that exist in human interaction during the teaching process one by one, as robots offer a more simplified and predictable form of communication for children with autism (Fachantidis et al., 2018). This makes the children feel safer and involved in the activities designed by the trainer. For this reason, a key element that a robot used to enhance social skills should have the characteristics of a human face (mouth, eyes, nose, etc.). The presence of human characteristics contributes to the development of eye contact between the child and the robot (Fachantidis et al., 2018). The human face looks more threatening than that of a robot, whose expressions and reactions are more predictable and controllable. Also, another element that a robot should have is movement or at least the ability to verbally interact with humans. It is very important for a Social Welfare Robot to be built with the ability to interact and achieve the researcher's goal of developing social skills (Bharatharaj et al., 2017).

Social robots include robots that "engage" in the social interaction of humans through speech, gestures and other media. Auxiliary-support robots, or assistants, are mainly engaged in helping people with special needs and disabilities. From the

combination of these two branches of robotics, the SAR (Social Assistive Robots) emerge, which are robots that help both socially and physically (Shcheidet et al., 2017).

SAR is a new (about a decade) industry that is evolving rapidly and faces different challenges from the two industries from which it emerged. For example, assistive robots focus on reliability, accuracy, and repeatability; SARs focus on emotion expression, appearance, user approach, and robustness during interaction (Cho et al., 2016). The social characteristics of SARs are particularly important compared to those of social robots, because SAR must help the user, teach him and "inspire" him to change behaviorally (Murias et al., 2018). So due to the large field they have to cover, SARs draw on data from robotics, psychology, physiology, sociology, etc.

Another point is that SAR, in their quest to develop effective, adaptable, and easy-to-use robots to help autism, look at the conditions under which humans receive an auxiliary robot, how they can build it. such a robot, as well as how they can match the robot's behavior depending on the user's personality (Murias et al., 2018). So the challenge for SARs is to balance a focused treatment with an engaging and non-threatening interaction (Murias et al., 2018). Added to this challenge is the fact that people with autism may experience behavioral differences overnight (Carillo et al., 2017). Therapists have the experience to deal with this, but robots must have some kind of adaptability to be able to deal with it.

Table 6: Features of SAR and DAF

Characteristics of children with ASD	Characteristics of social assistance robots - SAR
They respond impulsively to sensory stimuli, interact with objects in strange ways and cling to them (Feinstein, 2010).	They are predictable and simple in their interactions (Francois et al., 2009)

They show high sensitivity of a sound (Bogdashina, 2016)	They can produce music or sounds but not sharp ones (Robins et al., 2006)
They often show sensitivity to very bright colors, lights (Bogdashina, 2016)	They can have different colors, shapes and lighting to arouse children's interest, without them being too bright and bright (Cabibihan et al., 2013)
They have difficulty decoding and responding to non-verbal communication and gestures (Lee et al., 2012).	They can make one move to greet and have a face to make expressions (Pennisi et., 2012)
Difficulties in understanding instructions and new social interactions (Baron et al., 2006).	They are programmed to adapt one's behavior, so that on the one hand they are close to the interests of each child and at the same time can avoid stimuli that trigger behavioral reactions and outbursts (Huijnen et al., 2016).
They penetrate uninvited into the space of others (Lawton et al., 2007).	They must be stable and made of soft materials to prevent possible injury (Cabibihan et al., 2013)
Difficulties in making eye contact (Ingersoll et al., 2006)	It should be about the size of a child so that it can promote enjoyable interaction, easier eye contact and not be intimidating (Huijnen et al., 2016).

(Pliasa, 2020, pp. 48-49)

According to the characteristics and deficits that characterize children on the autism spectrum, as well as the characteristics that a social assistance robot has to be able to meet the needs of the child with ASD, all of these have been grouped in Table 7 and 8 below. characteristics of robots.

Table 7: SAR response to demands of children with ASD

Robot	A variety of designs	A variety of colors	Not too bright colors and lights	At most up to the size of the child	No very anthropomorphic	Look like a cartoon or an animal	To he's got a degree of autonomy of one	To Do not completely Autonomous	Robust
NAO			*	*			*	*	
Robota	*			*				*	
Probo			*	*	*	*	*	*	*
Keepon			*	*	*	*	*	*	
Pleo	*		*	*	*	*	*		
Necoro			*	*	*	*	*		*
L Sobot			*	*			*	*	*
Tito				*	*	*	*	*	*
lfbot		*		*	*		*		*
Kaspar			*	*			*	*	
Labo 1				*	*		*	*	*

Table 8: SAR response to demands of children with ASD

Robot	No from Hard material	Soft	No Sharp tips	No very engineer in	Adjust to Environment	To Allowed say choices	Without Complex Expressions	With And without eyes	Attractive Interactions And
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				appearance			Facial		toys
NAO				*	*	*	*		*
Robota	*	*		*		*	*		*
Probo	*	*	*	*		*	*		*
Keepo n	*	*	*	*		*	*		*
Pleo		*	*	*		*			*
Necoro	*	*	*	*					*
L Sobot						*	*		*
Tito	*	*	*	*		*	*		*
lfbot			*	*	*	*			*
Kaspar	*	*	*	*		*			*
Labo 1						*	*		*

(Pliasa, 2020, pp. 57-58)

Looking at the table above we can see that of all the robots the safest and the one that causes the most interest is the Probo. This robot is made of soft material, making it more attractive and less dangerous to cause injuries in times of tension and intense behaviors of children, as it has a soft texture. It can respond effectively to the different characteristics of people with ASD, having 15 of the 19 characteristics (Pliasa, 2020).

The proposal of today's curricula in the context of the inclusive approach emphasizes the provision of a high level of education for all students and especially for students with ASD. In the context of the integration policy, special emphasis is placed on the use of new technologies in the process of planning and implementing

the educational process. In this sense, a basic category belonging to new technologies is augmented reality (AR). The use and benefits of augmented reality in the education of children with ASD are important and decisive for their daily living and social integration. In particular, the applications of augmented reality have been included in therapeutic programs, taking advantage of children's imagination, the possibility of social interaction, the increase of concentration of attention, the linguistic, social, sensory, physical development of children with ASD.

In figure 2 we see the application of the Mobile Social Compass, from the research of Tentori and Hayes (2010), which examines the social interaction of children with ASD.

Figure 2: The Mobile Social Compass app - Social interaction (Left) and danger warning (Right).



(Tentori et al. 2010).

In figure 3 we observe the application MOSOCO, (Mobile Social Compass) which was used by Escobedo and her colleagues (2012) with the aim of investigating the social skills of children with autism.

Figure 3: The AR application, MOSOCO, (Mobile Social Compass)

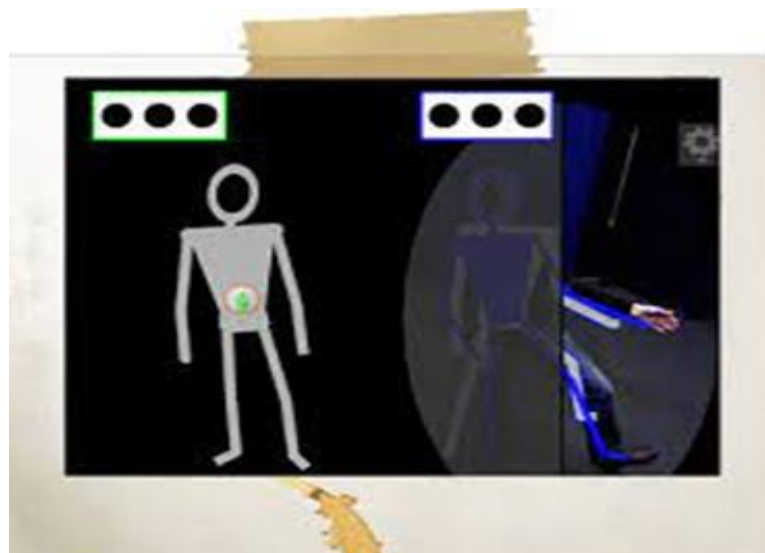


Figure 2. The MOSOCO system

available assistive technologies. One of the main challenges is... Figure 3: Students using MOSOCO during recess (left) two students making eye contact (right) Learning and (Escobedo, et al. 2012)

Figure 4 shows the research by Casas et al. (2012), who applied the "Pictogram room" system, which worked like a mirror and with the aim of detecting the movements of children with autism during play, through imitative movements and touching objects they could observe themselves in the mirror.

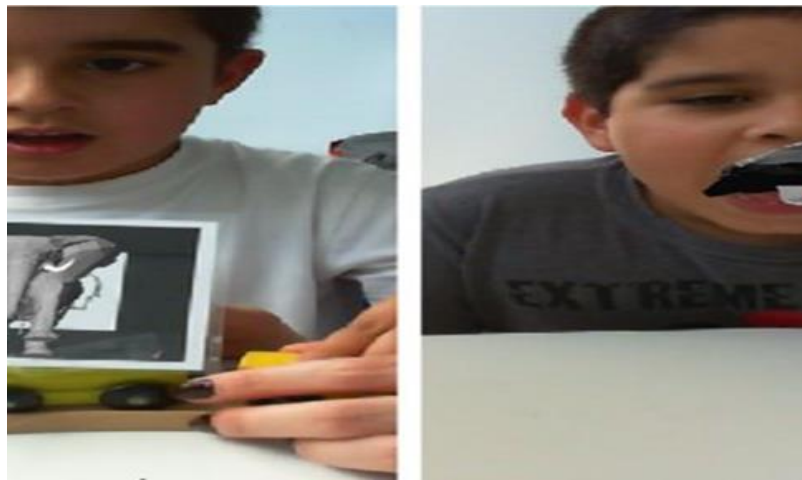
Figure 4: The application "Pictogram room"



(Casas, et al. 2012).

In figure 5 we notice that in her research da Silva et al. (2015) studied the improvement of communication skills of children with ASD by applying S.T.A.R. (Speech Therapy with Augmented Reality). 3D images and animations are presented on cards using the computer.

Figure 5: S.T.A.R. (Speech Therapy with Augmented Reality)



(Da Silva, et al. 2015)

In table 9 we observe the amount of research that has been done on the use augmented reality in children with ASD.

Table 9: Summary table of AR research in children with ASD

ARTICLE REFERENCE	OBJECT RESEARCH	SAMPLE	RESULT RESEARCH
Casas, Herrera, Coma & Fernández, (2012). A Kinect-based augmented reality system for individuals with autism spectrum	Developmental skills	22 typical children development age 3-4 and 5 children with Autism	Positive

disorders. Sciterpress Science and Technology Publications,440- 446.			
Bai, Blackwell & Coulouris, (2013). Through the Looking Glass: Pretend Play for Children with Autism. International Symposium on Mixed and Augmented Reality 2013, 49- 58.	Spontaneous play	10 boys and 2 girls aged 4-7 years	Positive
Bhatt, De Leon & AlJumaily (2014). Augmented Reality game therapy for children with Autism spectrum disorder. International journal on smart sensing and intelligent systems, 7, 519- 536.	Social interaction, hand coordination, encouragement, concentration, imagination	4 typical children growth age 10- 15	Positive
Escobedo, Tentori, Quintana, Favela & Garcia- Rosas, (2014). Using Augmented Reality to Help Children with Autism Stay Focused. IEEE Pervasive Computing, 13(1), 38-46.	focus of attention, selective and lasting caution	12 children of low age functionality 3-8, 7 teachers	Positive
Qin, Nagai, Kumagaya,			

<p>Ayaya & Asada, (2014). Autism Simulator Employing Augmented Reality: A Prototype. 4th International Conference on Development and Learning and on Epigenetic Robotics, 123-124</p>	<p>Experiential system</p>	<p>-</p>	<p>-</p>
<p>Almeida da Silva, Fernandes & Grohmann, (2015). STAR: Speech Therapy with Augmented Reality for Children with Autism Spectrum Disorders. a, Universidade Presbiteriana Mackenzie.</p>	<p>social sector, speech, language, Contact</p>	<p>3 children</p>	<p>Positive</p>
<p>Cihak, Moore, Wright, McMahon, Gibbons & Smith, (2016). Evaluating Augmented Reality to Complete a Chain Task for Elementary Students With Autism. Journal of Special Education Technology, 1-10.</p>	<p>Hygiene rules</p>	<p>3 average boys age functionality 6 and 7 years old</p>	<p>Positive</p>
<p>Chen, Lee & Lin, (2016). Augmented reality-based</p>	<p>Social skills, non</p>		

<p>video-modeling storybook of nonverbal facial cues for children with autism spectrum disorder to improve their perceptions and judgments of facial expressions and emotions. Elsevier, 55, 477-485.</p>	<p>verbal behaviors, Contact, interaction, maintaining attention</p>	<p>-</p>	<p>Positive</p>
<p>Liu, Salisbury, Vahabzadeh & Sahin, (2017). Feasibility of an Autism-Focused Augmented Reality Smartglasses System for Social Communication and Behavioral Coaching. Frontiers in Pediatrics.</p>	<p>social communication, stereotypes, peculiar behaviors</p>	<p>2 boys with clinics diagnosed with ASD, aged 8 and 9 years</p>	<p>Positive</p>
<p>Sahin, Keshav, Salisbury, & Vahabzadeh (2018). Safety and Lack of Negative Effects of Wearable Augmented-Reality Social Communication Aid for Children and Adults with Autism. Journal of Clinical Medicine, 7, 188-205.</p>	<p>Social communication</p>	<p>18 children and adults, aged 4.4 to 21.5 years with clinics diagnosed with ASD of varying severity</p>	<p>Neutral</p>
<p>Syahputra, Arisandi,</p>	<p>social history,</p>		<p>Positive</p>

Lumbanbatu, Kemit, Nababan & Sheta, (2018). Augmented reality social story for autism spectrum disorder. Journal of Physics, 978, 1-6.	motivation, emotional change, empathy, social interaction	3 Children with autism	
Nazaruddin & Efendi, (2018). The Book of Pop Up Augmented Reality to Increase Focus and Object Recognition Capabilities for Children with Autism. Journal of ICSAR, 2(1), 9-14.	ability to focus, object recognition	Students of SDLB Laboratory of Autism UM	Positive
Dragomir, Manches, FletcherWatson & Pain, (2018). Facilitating Pretend Play in Autistic Children: Results from an Augmented Reality App Evaluation. Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility, 407-409.	Play, interaction	7 children aged 8-14 years	Positive
Kolomoiets, & Kassim, (2018). Using the Augmented Reality to Teach of Global Reading of	Reading, editing information, assimilation	Preschool children age duration 2 years	Positive

Preschoolers with Autism Spectrum Disorders. National Metallurgical Academy of Ukraine.			
Rega, Mennitto, Vita, & Iovino, (2018). New technologies and autism: can augmented reality (AR) increase the motivation in children with autism. Proceedings of INTED2018, 4904-4910.	Social and cognitive skills, language, relationship development, interaction with environment	-	Positive
Lorenzo, Gómez-Puerta, Arráez-Vera, & Lorenzo-Llendo, (2019). Preliminary study of augmented reality as an instrument for improvement of social skills in children with autism spectrum disorder. Springer Link, 24, 181-204	Social and communication skills	11 Children	Positive
El Seoud, Halabi, & Geroimenko, (2019). Assisting Individuals with Autism and Cognitive Disorders: An Augmented Reality based Framework. International	Cognitive skills	-	-

Journal of Online and Biomedical Engineering, 15(4), 28-39.			
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(Spiliopoulou, 2020)

In the end, children with autism should follow medication. Children with autism are at increased risk of psychiatric symptoms and behavioral disorders related to autism. Such disorders are for this reason, medical pharmaceutical treatment is necessary, aiming at the treatment of the symptoms of autism, in order to help the child's education (Stasinou, 2013).

2.1.7 Support and counselling for families of children with ASD

The traumatic situation for the parents of autism is a source of strong emotions resulting in the creation of a multitude of emotions that may sometimes be contradictory (Hayes, 2013; Negri et al., 2014).

In The first phase the parents feel a shock and a sadness. While waiting for a beautiful, healthy and cheerful child for whom they have made many plans for his future. Suddenly at the hearing of a diagnosis that the child has autism, it is a very painful blow, causing shock and sadness (Keenan et al., 2010; Heather et al., 2010). The deep desire of parents to believe that their child is well, puts them in a process of questioning the diagnosis and belief that a mistake has been made. The question marks continue but they also express anger about what is happening to them. Anger is accompanied by shame and panic, whose manifestation is felt by behaviors of rage and tension (AutismSpeaks, 2014). Ingersoll and Hambrick (2011) found that parents with characteristics such as rigidity, reticence, sensitivity to criticism,

interpersonal difficulties and cognitive deficits were likely to use bad coping strategies and were also receiving reduced support.

They must then accept this fact. And Here's the big difficulty. No Parent can accept that this is the case. Many parents try to convince themselves that nothing happens and that their child is a normal child like all others (Stasinios, 2013).

In Order to get rid of the guilt, they blame each other. With the correct information the feelings of guilt begin to diminish and with time cease to exist. After the diagnosis (Molteni et al., 2015), has been finalized, the parents begin to manifest concern both for the severity of the disorder and for the future and the perspective of the child, to find the appropriate treatment, skilled professionals, appropriate Educational framework, adequate advisory support and education (Eikeseth et al, 2015). There are cases of parents who feel ashamed of what's happening to them. They do Not want to become aware of their problem, do not seek help and support, thereby losing valuable time. Also, several cases of parents are led to social exclusion due to the presence of the child with autism (Watson, et al., 2011). The feelings of shame and guilt that they feel for the child who is not like the other children, but has something special, they push them away from their social environment. It is certain that such a treatment is a defense mechanism in order to find a solution to their problem. However, such a tactic poses risks and adversely affects the relationships of family members, resulting in more problems (alteration of spouses ' relationships, disorder of children with autism with their siblings, Social relations of the family with other social groups) (Hartley et al., 2010).

In view of the above, the support and cooperation of parents and siblings is crucial and must reflect positive attitudes, values, aspirations and goals of the family. The parents ' questions can be answered by experts, special centers for evaluation,

diagnosis and counselling (Karst et al., 2012). Experts should establish with parents a relationship of trust and mutual respect, respecting the rules of ethics and ethics can provide adequate support and counseling guidance to all family members and Strengthen the field of social interaction.

The participation of the family in the healing process does not only benefit the child, but also the family itself. The involvement of the family is an important and decisive factor, as Masha in the family context are shaped ways of behavior and emotional, social and psychological manifestations of the child with autism (Hall et al., 2011). The mediation of the parent is a form of early intervention for these children with autism, therefore it is necessary not only the education but also the counselling support of parents to cope with problems that come from (Gau et al., 2012): a) the child itself With the particularities and difficulties it faces, b) parents with marital relations and relations with other members of the family, c) The difficulty of finding a suitable educational and therapeutic framework, D) the financial situation of The possibility of covering all the basic needs of the child, (e) The social situation, the cultural perceptions of the social environment of the family and the confrontation of exclusion and rejection of social structures (Gau et al., 2012).

Such a proper and adequate approach to therapeutic treatment results in significant benefits for both the family and the child. In Particular, the family is strengthened to offer support and assistance to their child through family education, increasing the ability of the parent to continue their work at home, an improved compliance with the therapeutic Process and decreases significantly the stress and other negative emotional charges (Weiss et al., 2012; Harper et al., 2013).

According to the above, we can support the importance and necessity of the fruitful cooperation of parents with specialists in order to gain skills to cope with composure, perseverance and patience the existing situation (Harper et al., 2013). The Course of autism is a chronic condition, for this reason requires experienced specialists for a long time always according to the needs of the child. Let's not forget that every child is a unique and special case, having his own peculiarities and difficulties. It is advisable that parents receive support, help, understand the subject and develop their potential and skills to address the problems.

2.1.7.1 The relationship of siblings of children with autism

Among all human relationships, the relationship between siblings is the one that lasts longer (Orsmond et al., 2007; Angell et al., 2012). Experiences with siblings promote the development of emotional understanding and self-control, while at the same time they are partners in the game and supporters in their daily contact (Hesse et al., 2013). According to the literature, the relationships between siblings are particularly close to childhood and adolescence, and in particular the girls seem to have more affection in their relationships compared to the boys (Dworzynsky et al., 2012).

Based on these, we can perceive that the presence of a child with autism within the family can affect the relationship between siblings. From the bibliography we can see very few researches that have studied the relationship between siblings when there is a child with autism. There are some recent surveys that have focused their interest in infancy, which although they focus on early signs of autism, however they give information about the social and family situation (Weiss et al., 2012).

According to the research of Yirmiya et al., (2006) in infants aged 4 months, it was observed that siblings of children with autism do not differ from the typical development children in terms of social interaction. Interactions with his mother were less synchronized when he started interacting, while showing a neutral reaction and crying less when his mother stopped interacting. At the age of 14 months the investigation showed that siblings of children with autism and siblings of children of typical development had no differences in both perceptual and kinetic development (Yirmiya et al., 2006). According to the Orsmond et al., (2007) presented the same findings in language and early social interaction. At the age of 14 – 19 months the infants of siblings with autism showed low social interaction with the infants of the typical development brothers. In another research (Zwaigenbaum et al., 2005) conducted in children of one year observed abnormal language skills, imitation and responsiveness to social stimuli, which were later associated with the emergence of autism.

There are other surveys which claim the opposite of the above (Mitchell et al., 2010) when they showed for children of one year, siblings of children with autism presented the same development in language and communication skills in relation to siblings of children of normal development.

In conclusion we can observe that the research carried out on infant children presents some difficulties for siblings of children with autism, even if they are not diagnosed later. According to the scholars (Yirmiya et al., 2006; Mitchell et al., 2010) of the above surveys it seems that these developmental differences may be due to hereditary causes, to environmental factors. The social relations of the family and the interaction between the mother and the child may also be influenced by the presence of the child with autism.

The results of the research in terms of self-confidence, social adjustment and depression symptoms of siblings of children with autism in childhood and adolescence are contradictory (Petalas et al., 2012). Bauminger et al. (2001) report conflicting research findings examining the self-confidence, depression and social adaptation of siblings of children with autism. Some surveys suggest that there can be a positive effect and a close relationship between the two siblings (Masha et al., 2007). In terms of self-perception and esteem of brothers researches have shown positive results (Orsmond et al., 2007). However, some other surveys have shown high rates of social and emotional problems (Petalas et al., 2012). In General we can observe that there is interest from the brothers to help. Usually, excessive responsibility is tiring, causing anxiety and indignation, and unpleasant behaviors occur. Siblings who take early care of their siblings with autism, experience intense stress because they are called to assume responsibilities that require maturity (Petalas et al., 2012). Many times the choice of studies or the professional status of siblings are associated with professions related to the difficulty experienced by siblings with autism (such as psychologists, special educators...) (Notas, 2005).

In childhood siblings of children with autism spend a lot of time with their siblings. Although A survey of Knott (1995) shows that these children at the age of 2-12 years pass by way of a term of 40 minutes with their siblings in various activities, this time is less than that passed by siblings of children with Down's syndrome. Another survey of Rivers and Stoneman (2003) who used personal interviews of siblings, shows, that siblings of children with autism, at the age of 7-12, expressed mainly positive feelings about their relationship with their siblings. These surveys agree that siblings of children with autism describe positively the relationship with their siblings, although they do have some negative aspects, such

as the shame created by the behaviour of their siblings (Petalas et al., 2012). In the investigation of Angell et al. (2012) Siblings of children with ASD describing the fraternal relationship and fraternal interactions, it follows that: a) the existence of a sense of shame, b) the fraternal relationship is associated with feelings of love and pride for the child with ASD and feelings of responsibility for the safety of the child with ASD and his acceptance and C) the adaptability of the brothers is carried out by applying coping strategies such as widening personal boundaries, isolation, seeking support from friends and Implementation of technical coolness and social skills.

Rivers and Stoneman (2003) in their research found no differences between siblings aged 8-14, children with autism and children with developmental disabilities. In A survey of Kaminsky and Dewey (2001) it showed that siblings of children with autism and other developmental disorders aged 8-18, express greater admiration and less competition and controversy than siblings of typical development children. Studies by Moyson et al (2011) mention that development with a brother with a ASD could have positive effects, stressing that siblings exhibit higher levels of empathy, tolerance and patience.

However, on the basis of their petitions, we find that their relations are not as close as those of the brothers with developmental disabilities. In a qualitative survey, conducted by Mascha and Boucher (2006), in terms of activities that siblings do together, almost half of siblings aged 7-20, reported the good character of their brother or sister with autism and that they were playing and Entertained together. According to this survey, siblings also expressed feelings of shame and concern for the future of their siblings with autism (Moyson et al., 2011; Tanaka et al., 2011).

Some of the most frequent activities they did together are watching TV, going around and playing.

In Some other surveys of Roeyers and Mycke (1995) Siblings of children with autism appear to have a greater sense of shame than siblings of children with developmental disabilities. According to Ross and Cuskelly (2006), 84% of siblings aged 8-15 said they were being attacked by their siblings with autism, which caused them anger. Bagenholm and Gillberg (1991) report that siblings of children with autism aged 5-10 years of age were playing and interacting less with their siblings than siblings of children with developmental disabilities. In Addition, the first saw more negatively the role of their brothers in the family. More than half of the children could not explain the shortcomings of their siblings and only one-third said that he would talk about the problem of his brother or sister to a person outside the family.

In regards to the behavior of siblings of children with autism A survey of Constantino (2006) refers to problems in the social behavior of boys aged 4-18. In the research of Bagenholm and Gillberg (1991) A percentage of 35% of siblings with a sibling or sister with autism aged 5 – 20 years state that they feel alone and without friends. In The Gold Research (1993) It was found that siblings of children with autism had high scores in a diagnostic test for depression. The same high scores were presented by siblings of children with autism and in the research of Bagenholm and Gillberg (1991). In This investigation the Rutter scale was used and it appeared that in the ages of 5-20, the siblings of children with autism had high scores in the lack of attention and hyperactivity, in relation to the children of brothers typical development and same score as that of Children's siblings with developmental disorders. However, all researchers point out that siblings of children with autism may score high on these tests, however they are within normal contexts.

Another factor affecting the fraternal relationship is the age and gender difference, which are considered to be elements of fraternal competition. Same-sex siblings who are close to the same age tend to show greater competition due to parental expectations (McPartland et al., 2016). On the other hand, the biggest age difference among siblings showed a lesser sibling rivalry and greater support for the elder brother (Solmeyer et al., 2014).

Based on the above, it follows that siblings of children with autism during childhood and adolescence describe positively their relationship with their siblings, referring them as companions in various activities, expressing admiration and less Competition and controversy. However, they seem not to have as close a relationship as the siblings of children with developmental difficulties. They also, Corsano and its associates (2016) emphasize that concern themselves with the shame they feel, the social isolation and the future of their brothers. During the aging siblings of children with autism seem to experience emotional and social problems. In particular, they conducted a series of interviews with teenage siblings of children with IFF. Where they were negative, they were related to the aggressive or uncontrolled behavior of the autistic child and the feeling of embarrassment caused by such behavior or from other negative behaviors related to autism (Corsano et al., 2016). More generally, the risk of psychological and psychiatric problems increases at the end of adolescence and during aging.

Unfortunately, the bibliography does not give clear evidence of the effect that autism has on siblings of children with autism. There is some evidence that siblings of children with autism face the risk of having problems adapting during childhood, in relation to typical development children, with the risk of growing during puberty. The diversity of the results is due to the small sample, to the different ages of the

children involved in the surveys, and to the different tools used. Almost ALL surveys point out that self-esteem and self-confidence remain unaffected while some surveys point to some degree of depression and anxiety (Petalas et al., 2012).

As far as adulthood is concerned, there is not much research to describe the relationship between brothers and sisters. However, the existing surveys indicate that the siblings' relations are not so close, especially in relation to the brothers of people with developmental difficulties (Petalas et al., 2012). Since the rates of diagnosis of autism are increasing, it is necessary to have more research in order to understand to what extent the siblings of children with autism are involved in their lives when their parents age and can no longer help (Buist et al., 2013).

In addition to methodological issues that may contribute to the conflicting outcomes, Bauminger and Yirmiya (2001) stress that the effect of a child with autism on the brother or sister of typical development depends on:

1. From the overall cognitive functionality of the child with autism,
2. The sex of both children and
3. The size of the family.

Unfortunately, very few researches have examined the effects of these variables on the social and emotional function of the brothers of the people with autism (Corsano et al., 2016). In addition, parents themselves, have a mistaken appreciation for their children's perception of typical development for their siblings with autism (Watson et al., 2011). On the contrary, if the children of formal development are informed and given the opportunity to express and modify their feelings and thoughts, there is the possibility of improving their reaction to their siblings (Moyson et al., 2011). So, the interventions that include information about the disorder, their participation in camps for interaction with other siblings of children with autism and

exchange of views, are the most effective. The alarming behaviors of siblings for which the family must seek help are (Karst et al., 2012; Petalas et al., 2012):

- Reduced concentration and attention
- Reduced self-esteem
- Feelings of guilt and worthfulness
- Bleak outlook for the future
- Ideas or acts of suicide
- Disturbed sleep
- Reduced mood that varies much or little from day to day
- Loss of interest or pleasure for enjoyable activities
- Frequent bursts of anger, panic or fear

Playing together children with autism and their siblings typical development seems incredible, however some approaches can help. If playing skills with non-autistic children are practiced, the likelihood of improvement in their social abilities increases. In addition, playing together the siblings gain closer ties. The positive elements that get children formal development from their siblings with autism, are the patience, the sympathy and the fact that they have the opportunity to learn to handle difficult situations (Watson et al., 2011).

UNIT 2.2

GAME

2.2.1 Theoretical approaches to play

The particular features of the game, as well as the various attempts at definition, have engaged many theorists. In the context of the game, there are several theories (for example: the theory of surplus energy formulated, the theory of relaxation, the theory of recapitulation or ancestral heritage, the theory of training preparation, the theory of psychoanalysis or purification...) that explain the importance of the game in the development of the child, which are highlighted below. Basically, what you are trying through these theories is to explain the need for a game and how it affects the child's development.

According to Vygotsky (1978) between the game and the development there is a relationship (Diamadopoulos, 2009). In particular, it claims that the child in the game acquires the skills, motives, attitudes and values necessary for social adaptation. During the game, the child portrays himself, his future roles and values, as he perceives them through his activities and relationships with adults. In pre-school age, the game is the highest level of development as the child evolves through it. The play in this sense can be seen as "the work of the child", since it is the dominant activity that determines the child's development. The importance of social play is a mechanism of organizing common concepts and knowledge. Finally, Vygotsky (1978) considers the lonely play as a social activity, if the child plays roles during the play (with whom he can join the team, interact with his peers and communicate), subjects and texts that represent the child's perception and relationship with the socio-educational structure of society (Diamadopoulos, 2009).

The fundamental role of the game was also reported by Piaget (1962), according to whom all children should play. This author faces the game through his theory of intelligence. For him, the game evolves in stages by serial number, in order of priority (some stages are fulfilled first and then follow the next), and contributes to the person's mental development (Lin et al., 2010). Piaget proposes three forms of play that contribute to the child's development: rules, symbolic games and exercise games (Lin et al., 2010).

Piaget (1962) in the context of the child's mental development also refers to four stages: the first is the understanding of the rules (for children under four years of age), in which the child tries to understand the way in which its environment works through the game. The second stage (for children of four to seven years of age) is the stage of self-centeredness, in which the child does not very much obey the rules of the game and create rules that serve their egocentric interests. In the third stage (about seven to ten years old), it is the stage of initial collaboration, the child begins to socialize through the game and better understand the concepts of cooperation and collectivity. According Diamadopoulou (2009) in the fourth and final stage (children aged eleven), children's cooperation begins during the game, as well as the imposition of older children on the lessons about learning the rules of the game.

Another game theory is the theory of surplus energy by the 19th century philosopher and psychologist Herbert Spencer, according to which the child's exaltation in the game is due to the energy that has accumulated and has to be externalized. In the context of this theory, the need for energy is externalized based on physiology, as it is impossible to explain the children's obsession with the game when they are exhausted (Diamadopoulou, 2009).

In addition, another theory is the of relaxation, which was supported by Lazarus and Patrick (1883), it is clearly in conflict with the theory of surplus energy since it is essentially about the child's need to recharge the energy he has wasted on other activities (Diamadopoulos, 2009).

Then, the theory of recapitulation or ancestral heritage is supported by Stanley Hall (1904) psychologist, and based on this, man is constantly reviving the memories of the past, adapted to the contemporary life. So, the toy is a reflection of the evolution of man. According to the founder of the theory, the behavior of the child in the evolution of the game varies according to his age (Lin et al., 2010).

Also, the theory of training preparation, which comes from Groos (1898) who started his studies of animal play and then ended up in man. His theory has been accepted by the western European community for several years. What he noticed was that through the game, instincts of the early days emerge and the child is preparing for his development. This theory can explain the pedagogical and developmental goal of the game, however, it can not be applied to any form of play and seems to considerably limit the engagement of the players with the game (Feldman, 2009).

Of those indicated so far, it is worth highlighting the theory of psychoanalysis or purification, is that proposed by Freud, in which he suggests that based on this, the child resorts to the game in order to cope with some subconscious needs (eg a traumatic situation that has marked it in his life ...). The child is originally described as "lured" by a difficult experience, as a passive being, and later battling and ready to reverse the whole situation through the game. For this reason, play is very important in a child's life and helps to overcome some situations that may cause fear or anxiety while highlighting various pedagogical elements (Diamadopoulos, 2009).

On the other hand, the theory of the Mind refers to the ability of the individual to mentally convey to himself and other people mental states in order to interpret behaviors. This ability helps the individual in social interaction and in smooth integration into society. Of course, these mental situations may not go hand in hand with reality and be differentiated from the experiences (Diamadopoulos, 2009).

In addition, another author who emphasizes the relevance of the game in children is Montessori, which says that the toy is the perfect means for learning the child, and therefore special emphasis should be placed on designing appropriate toys for this purpose (Diamadopoulos, 2009).

Finally, Froebel's theory, which is in line with Montessori's theory, is a very good way for the child to know the self, its limits and needs, and to lay the foundations for its development (Feldman, 2009).

According to John Dewey, a philosopher and psychologist, the child's own experience stems from every discovery and learning, while he encouraged the game as a way of acquiring knowledge, exploring, searching, solving problems and creativity (Diamadopoulos, 2009). He emphasized social learning, considering that the game prepares children to become citizens of a democratic society.

Yet there is another theory, the representative of which is Erik Erikson, emphasizes that the game is a function of the «I», which shows the child's psychosocial development. Children during the game create situations that later help to manage the demands of reality (Diamadopoulos, 2009). In short, there are several theories that have emphasized the importance of play in the child, stressing the importance of the child's overall development (social, linguistic, emotional, cognitive, physical development).

2.2.2 Features of the game

The game describes the elements that one deals with their environment and controls it exclusively by internal means, regardless of external difficulties. The game is an activity that is left to the children's free will, aims at being entertained, takes shape through their participation and makes a special sense because of their attitude (Else, 2014). Recently Else (2014) created a decalogue of features for the game. In particular, it refers to procedural, that is, a process that has no specific action. Also, the second characteristic concerns to Self-selecting, that is, chosen by the child, willing to participate. Another characteristic is the Asset, requires the active involvement of the child. In addition, the Safe, that is, it is sufficiently safe for the child physically and psychologically. Then, the Experience, physical and spiritual, that is, the child can develop physical abilities and develop his / her body through play, as well as broaden his or her spiritual horizons - to understand various concepts important to his life. The sixth characteristic refers to No time horizon, that is, the sense of time is lost, the child does not understand the time when playing. The Exploratory is the weekly feature, which there's the element of curiosity and exploration during the game.

Pleasant, offers pleasure and joy to the child. In addition, the Different, each child has their own way to play and treat the game differently. Finally, there is to please the child, the game offers satisfaction as an end in itself, the goal is for the child to feel satisfied and full of joy. It is of particular interest to understand the way a child plays in various areas of his development and behavior, as well as how the game varies according to the age and needs of each child, that is how the game ends more and more social (Feldman, 2009).

The game is understood as an activity that is enjoyable, endogenously motivated, flexible, voluntary, with active engagement of the child. The game is an activity through which children meet all their developmental needs (Brock et al., 2016). The concept of play is functional pleasure, joy, creativity, development of perception, intellect, the muscular system in which children are enthusiastically and carelessly involved. It includes a variety of behaviors that are not the same (Brock et al., 2016). It is manifested in many ways. Thus, the game can be physical, organized, spontaneous, lonely, social. So the definition of the game depends on whoever observes it. The game is an end in itself pleasure. It is also an unconscious means by which the child learns to stand out from others, to self-affirm and to know the world at the same time (Else, 2014).

Through play, children enhance social interaction, expression and communication, thus building an image of themselves, others, and the world (Else, 2014). Its role is essential in the intellectual development and in learning of children because it provides stimuli for observation, experimentation, inquiry, anticipation, planning, interpretation, hypothesis formulation, question generation, comprehension, goal fulfillment and problem solving (Augitidou, 2016). In addition, by playing, they perceive their body, their limits and abilities, develop their body's orientation and adaptation skills to the needs of movement but also to the objects and persons around it. All of these effects of the game act as a holistic learning and development mechanism since it is an activity (Augitidou, 2016):

- integrates cognitive, emotional and social stimuli.
- provides meaning for new connections and relationships between ideas, experiences, competences and knowledge.
- facilitates learning by exposing children to new experiences, activities and ideas.

➤ allows children to construct meanings from their experiences.

The game is an endless source of joy and education. It is a search for and testing of the forces and potentials that are hidden within man and that nature and the social environment offer. Play is an excellent means of education for giving the child a smooth, future integration into society (Augitidou, 2016).

2.2.3 The game and its importance

It is possible to change the game's definition depending on the orientation, the theoretical background of the researcher referring to the game (Brock et al., 2016). It is something like beauty, whose definition depends on everyone's point of view.

The play while it concerns all, young and old, is etymologically more closely related to children than ancient Greek etymology: *Παις* (child) - *παίζω* (play) - *παιχνίδι* (game) (Babiniotis, 2004). The two words, child and toy, come from the same etymological root and are related. The word game has its roots in ancient Greek and comes from the words child, play, education, stressing the relationship that this word has with the child, entertainment, spiritual culture, and the education of the child. By the word children, they pronounced not only the children's games, but also every kind of game (Babiniotis, 2004).

The game is the dominant and essential activity of all children. It is not a child without a toy. The significance and value of the game according to various theories, which stem from either psychoanalysis, or cognitive and evolutionary psychology, pedagogy and sociology, has been associated with the child's all-round development (Kotsalidou, 2011). The game is the most important tool for the child's physical, cognitive, social, emotional, mental and intellectual development (Kotsalidou,

2011). For example, group games requiring movement and alertness contribute to physical development, strengthening the nervous - muscular system, facilitating the function of breathing, intensifying the blood circulation and causing relaxation and balance (Thiesen et al., 2014). Also, children are able to gain more flexibility, endurance and dexterity.

Children learn through the game. Typically, children use the game to create physical and social skills, test different personalities and characters and create friendships (Ozaydina, 2015).

Spiritual development is achieved through the game, as the spirit is disciplined, the child becomes concentrating and attention to what he does, developing critical thinking, memory and imagination (Kotsalidou, 2011). The game causes pleasant emotional states contributing to emotional development and spiritual euphoria. Through the game, the child's mental world is refined (Morfidi et al., 2015). It is a means of expressing emotional life and of relieving the anxiety and tension that each child has. Through the game, the child can make different stories, develop ideas and thoughts, thereby contributing to linguistic development (Wilkinson et al., 2016). The game and its individual form are accompanied by dialogues and discussions that create children playing, enriching their knowledge of the rules of linguistic communication. Doll games and dialogues developed by children playing are of great linguistic significance, and for this reason many educators use this material as a means of linguistic amplification (Wilkinson et al., 2016).

The feelings of fear, hatred, anger and generally violent emotions find a way through the game and contribute to an emotional balance (Thorsted et al., 2015). The development of social sentiment is a prerequisite for the harmonious cohabitation and social inclusion of the child in society, taking into account the communication

deficits, the difficulty of understanding the emotions of others (Morfidi et al., 2015). The creation of moral personality is achieved by cultivating the virtues of bravery, sincerity, mutual respect, cooperation, altruism and justice. Thus, egoistic behaviors are suppressed while exercising self-esteem, perseverance and patience (Hughes, 2010). Based on the above, the game becomes a means of expressing the personality of the child.

In summary, it is perceived that play is an essential activity in every child's life, because it contributes substantially to the formation of his subjectivity and personality. It contributes to its liberation, emancipation from the environment, abstract thinking, self-control, and linguistic and conceptual autonomy (Hughes, 2010). It also contributes to the acquisition of knowledge, motivations, skills and attitudes necessary for understanding the historical and social context in which it lives, as well as for its social adaptation and participation (Trawick-Smith et al., 2015).

2.2.4 The importance of play in Training

The game, with its proven cognitive and social benefits, must be an interpersonal and cooperative structured activity in the kindergarten classes, primarily, but also in elementary schools. It should not be considered by kindergarten teachers as a product of individual action or individual participation (Aughtidou et al., 2016).

In Greece, in the nursery program the game has occupied a privileged position. However, the formal program of elementary school, in addition to the ability to develop toys and groups during the break and perhaps in the time of gymnastics and artistic courses, does not have a place for the game itself (Ramstetter et al. 2010;

Thiesen, 2014). Learning should not be limited to teaching situations, but should be perceived as a continuous socio-cultural process in which both students and teachers have an important role as socialization bodies.

Also, the role of teachers is important in the development of children's play. The teacher should take into account the child's interests in the game and evaluate them by constantly observing children as they play. It is important to look at why the child prefers a particular type of game, what motivates her, pushes her to play with this game. So, the teacher can find other types of play that satisfy the same need or even the same puzzling for the children. The role of teachers in enhancing the game can be summarized in the following (Aughtidou et al., 2016): The observation of children playing. Children's play is very revealing. From the way they play, the materials and the themes they choose, the way they belong to the group or an activity. Also, it may have indications of the child's maturity, flexibility, difficulties. It can also recognize and respect inter-individual differences and differentiate them from the indications of problematic situations. Finally, Strengthening the game. The teacher should give children a lot of opportunities for the game if the goal of education is to develop as a whole, to reinforce the imagination as well as the creativity and initiative of the children rather than the sterile knowledge. Besides, school learning can be more effective when given in a playful form and is not considered incompatible with the game. Finally, the teacher himself should be flexible and can not only tolerate but also encourage children to find alternative ways of pleasure in the context of creative activities, providing the appropriate equipment and the appropriate configuration of the classroom (Oikonomidis et al., 2012).

In addition, the game environment may be associated with some particular child's preference. Thus the teacher has to determine the characteristics of the environment

(human and natural) that predispose the child to play with the game (Botsoglou, 2010; Sakellariou et al., 2015). The teacher must also take into account the child's needs and abilities and, on the basis of these, try to broaden the child's repertoire of play behavior. It also has the readiness to respond to the cues given by the child during the game (Varea, 2016).

The teacher has a key role in the development of children's play. It is he who can motivate, encourage or cause children to play in more sophisticated, modern and mature ways, using, for example, technology-enhanced learning using digital games (Chaidi et al., 2011). In fact, the teacher should not be considered as a product of individual action or participation (Augitidou et al., 2016). The adult or educator launches the role play in small groups of children and helps them to maintain and develop it for a period of time using modeling, verbal guidance, exercise in dramatizing a script, and practicing in fantastic play, regardless of the economic and social environment (Milteer et al., 2012). Such forms of encouragement and education by adults increase the complexity of fantasy and social-dramatic play in children and especially in those who do not have much inclination in these types of play.

The importance of adult role in play and child development has been emphasized by Vygotsky (1978), with his theory of the upcoming development belt and Bruner (1966) with the «scaffolding» method, according to which the support provided by the teacher will it must be adapted to the child's current development level and can be reduced or even reduced when the child acquires competence in the task (Coppie et al., 2011).

2.2.5 The Game in Special Education

2.2.5.1 The Importance of the game in Special Education

The importance and contribution of the game in the educational process is important. Through the game a child can be led to acquire knowledge regardless of his or her age (Sarris, 2010). In both infants and older children the ability to join the game becomes more active (Aggelidou, 2011). In particular, for specialists in the field of special education, the game is an important task for children as they are able to understand certain details about how to develop the child and acquire the basic skills and knowledge (Veiga et al., 2016).

The game for children with disabilities should be adapted and the environment must be appropriate to achieve the objective. In order to exploit the benefits of the game to children with special needs, parents should offer the conditions for play with the help of special scientists. Because of the limited capabilities that these children have, compared to typical development children, they tend to be marginalized and not participate in the various activities that offer entertainment (Lynch, 2015). Taking into account that there is a broad category of children with the concept of "special needs" (such as autism, dyslexia, Down syndrome, etc.), this makes it even more difficult to study on the one hand the characteristics of each case of a child, and adapting the game to each case to develop specific skills.

This process is important and the appropriateness in terms of knowledge and behavior of teachers who support the program should be judged. The general direction in the development of these programs is based on the existence of a variety of games, choices that meet both their personal interests and their participation in

them. The role of the teacher is important in guiding and facilitating the student to participate and help in externalizing his needs and desires (Pui-Wah, 2010).

Participation in the game opens many doors to these children and provides many opportunities at home, at school, in recreational settings and in early intervention programs (Pui-Wah, 2010). Their adequate participation in the game allows their parents to increase their expectations for their children's abilities. Also, when a child participates in games it is easier to overcome his deficits, weaknesses and strength, to strengthen his abilities (Lynch, 2015). Children are the best teachers of the game and can share their gaming experiences with others, especially their siblings and their parents. Children with disabilities do not differ. In fact, it's exciting for these kids to show off their playing skills and feel that they are in control of the game (Augitidou et al., 2016). The game is thus a wonderful means of family interaction.

In conclusion, all children and children with disabilities need to play because they learn and grow with it. The game is an activity for all children and for all families. Teachers and pre-school and school curricula must provide developmentally suitable gambling opportunities that meet the needs of children with difficulties (Augitidou et al., 2016). Parents and caregivers of children with special needs should also be happy to interact with their child at his / her level without external criteria of success. Through these gambling interactions, parents are helped because they feel they are enriching the lives of their children and their families.

2.2.5.2 Types and forms of play of children with autism

The use of the toy in the treatment of children with autism has significant benefits for these children. Autism is a serious social-communication disorder. Children with

autism are extremely difficult to relate to others, especially their peers, in normal ways. Play is a great tool that can help children with autism engage in interactions (Bradshaw et al., 2015). When used properly it can also allow young children to discover their feelings, their environment, their relationships with parents, siblings and peers. Play therapy can be taught to parents and parents can become their child's healers while at the same time building a stronger and more meaningful relationship (Dawson et al., 2010).

During the pre-conceptual period of mental development, during which the child acquires the ability to encode his or her experiences into symbols, images and events can thus to be recalled from memory. Symbolic play expands freely and symbolically on the manipulation of objects, emotions and experiences (Feldman, 2009). The child alters the reality, modifies the data she has, adjusts situations and interprets the experience in a free and imaginative way.

The imaginary, the play, the child performs complex actions in order to represent a situation. That is, the child can use the objects independently of their specific use, properties, and actual functions and combine them in a new way (Veiga et al., 2016), such as for example call a "plane" car.

Erikson (1975) says about the symbolic toy that it is the best and most natural self-healing tool in the child's development, whatever role the child acquires in the game and elsewhere (Diamadopoulos, 2009).

Symbolic ability is a deliberate disregard of reality, in which the child perceives the real situation and at the same time creates an image of it as if it were something else (Diamantopoulos, 2009).

A form of play, relevant to the symbolic, is also the mimetic game. This manifests itself at the same age as the symbol with which it has common features. Nevertheless,

the memetic game corresponds to a more sophisticated stage. Imitation presupposes the existence of an external model: it is the mother, the doctor, the teacher. It is the expression of the child's desire to be "big" (Sheridan, 2014).

The child with the mimetic game repeats and re-creates incidents of everyday life in order to understand mentally and to deal emotionally with the problems posed by social reality whose rules are set by the great and natural world which he cannot yet to understand (Chaidi et al., 2010). Individual mimic toys gradually evolve into groups. In these are played scenes of houses, which children have previously lived, playing roles not only of persons but also of animals and things (Sheridan, 2014).

The importance of a child's mimetic response capacity is high, recognizing that it is essential and critical in school-age to develop play, communication, social interaction and building relationships with peers (Hobson, 2006) as it forges its early relationships with the people around it (Sheridan, 2014). In particular, imitation of the mother's face has been observed to occur in newborns and is a skill that develops during the first two years of childhood (Maratou, 2006; Vartzopoulos et al., 2019). In the first year of life, the child draws information about the world around him and his actions through imitation, which refers to the person's tendency to communicate with the social environment (Sheridan, 2014; Argiropoulou et al., 2012).

Concerning the development of imitation in children with autism, there is no consensus among scientists, and Hobson (2006) speaks of the existence of "something mysterious". Starting with the study of Kanner (1943) and references to Rutter (1986), the reduced ability of children with autism to imitate can be seen. Most modern scientists (Gena, 2007) refer to bad imitation, reluctance of children with autism to imitate, and reduced ability to imitate. Various interpretations have been attributed to autistic children's difficulty in imitation, which may be related to

possible motor problems (Rogers et al., 2008) or short-term memory difficulties (Rogers et al., 2008). Also, Hobson (2006) states that there is no emotional involvement of the child with autism and a person who is called upon to identify and then imitate, so there is no imitation game with him. Further evidence for the association of imitation with the social and emotional development of children with autism comes from research findings showing improved children's eye contact and increased social interaction when the mimic is the individual with autism (Stephens, 2008; Chaidi et al., 2010).

In particular, in the last decade there has been a growing interest among scientists in studies of the ability to imitate children with autism, many of which do not detect differences with typical developmental groups (Rogers et al., 2008; Tavoulari et al., 2010). This finding is probably due to the fact that often the functional understanding of mimetic behavior is higher than it actually is, since children may not give importance to the meaning of the energy they perform (Ingersoll et al., 2010).

Regarding the models to be imitated, it is noted the tendency of scientists in recent years to use in their research activities grouped into three categories: 1) Object-based activities, is the use of one or more objects (e.g. hitting a bottle with a spoon), 2) those involving the involvement of the person's body (eg scratching the head with the hand pointer) and 3) imitation activities based on oral speech, in the sense that a person's speech is expected to be repeated a form of imitation by a child with autism (Rogers et al., 2008). The use of objects in imitation activities is particularly helpful for the child with autism, as it further delineates the movements to which he or she is required to respond without resorting to 'meaningless' and sterile reproduction of movements and speech (Ingersoll et al., 2010). The use of the body and especially

gestures (eg clapping) can help to increase the social interaction of the child with autism (Ingersoll et al., 2010). While imitating a person's speech or actions can help develop their linguistic and communicative abilities (Rogers et al, 2008).

Relevant to the mimetic game is also the dramatic play, a role play, derived from life, such as representations of fairy tales, songs, etc. This game is mainly lonely. Even if there are many kids in the same room, their play is usually secluded. To perform the dramatic play, some clothes or other accessories are also usually needed to assist disguise (Michalopoulou, 2010). The game of accusation is more social and more complex for preschool children than for infants. Instead of lonely suspicion, children begin to engage in a social-dramatic play: suspicious games where two or more children perform different social roles (Papadopoulos, 2010). With the dramatic play, the child is expressed in various ways and mainly improvises. He improvises in various areas, psychomotor, linguistic, musical, rhythmic, artistic. This gives an opportunity for children to communicate (Veiga et al., 2016).

The fantastic play allows the child with autism to express vital emotions in a controlled general context and to repeat experiences in a variety of symbolic ways through conflict and painful emotions (Veiga et al., 2016). As a result, the sense of excellence is acquired by repetition. Infant play is usually more advanced when playing with older siblings than when playing with their mother because the siblings are more capable of getting into the logic of fantastic play than adults (Sakellariou et al., 2012).

The fantastic game requires the person to temporarily eliminate the reality and its consequences. This ability plays an important role in child development and can contribute to creativity (Veiga et al., 2016). Imagination can be used throughout the treatment to stimulate the child or encourage him to actively use creative thinking.

Some games can be used during the session as it encourages the creative thinking process by putting the child to create a story alone by encouraging the active participation of the child (Sheridan, 2014). In order to develop the ability of the child of pre-school age to play creatively with roles, it is necessary to cultivate self-activity because the creative role-playing shows first of all its own independent activity (Smith et al., 2013).

Another type of game is the team play in school age, which has an invaluable value. First, conscious inclusion in the group covers the need for companionship, the need for the child to be found with other children. At the same time, the child understands that it belongs to the children's group apart from the family. And since this group is out of the family, its tendency for independence is satisfied (Feldam, 2009). Although the child is a little bit out of family warmth, the feeling of certainty is diminishing rather than strengthened, because the team is also a safety net and a symbol of collective power.

With group play, children cultivate as much of their spirit as any other medium and in the most effortless way. They gather their attention to the demands of the game with intensity and persistence, commitment, appreciation of distance, speed and time, capturing relationships and anticipating, ready to act lightning and efficiency. They in turn employ all their strengths and keep their ego vigilant, electrified by collective emulation (Thiesen, 2014). Ingenuity is engineered ways to help win the team.

With team play he gets the best social education. The character is forged there and the whole personality is built. There he learns to help the children in his group and to receive their own help accordingly (Thiesen, 2014). He learns to work together, to abide by the rules of the game, and to play fair. To move to the other's place and

not want to do to the other that he would not want others to do to him. To start and go, to become a worthy leader and a good follower (Feldam, 2009). With multiple interpersonal interactions, as a natural consequence of team play, the child accumulates an immense variety of wealth, experience and knowledge of life and society, which is the most reliable material for personality structure (Feldam, 2009). Among the variety of children's toys stands out a category that has many things in common with adult racing games, for example, the children's effort to jump the ball higher, to jump farther, to run faster.

Within these efforts, these games, in addition to the satisfaction they offer, also give the child with autism the opportunity to compare the results of his or her efforts with other children or with his or her own (Polimenopoulou et al., 2012). This is confirmed and encouraged. Racing games, of course, obey certain rules that a child with autism is not yet capable of adhering to (Venetsanou et al., 2016). However, the school encourages these children's efforts, which are an initiation for the rules of games that will follow later (Thiesen, 2014). After all, remember that school is a systematic beginning for whatever efforts will be made later in the child's life.

2.2.5.3 Role of the game in the therapy of autistic children

Play therapy was developed at the turn of the 20th century. The game has been a part of treatment since the 1930s when Melanie Klein and Anna Freud began using play techniques in child psychotherapy. Since 1992 the toy has been used in childhood therapy by the majority of clinics (Diamadopoulos, 2009).

Game therapy was originally designed as a tool for providing psychotherapy to young people with traumas, anxiety and various mental illnesses. In this context,

play is a way for children to express feelings and find mechanisms to deal with various difficulties (Rye, 2010). Children with autism can play in different ways. They are more likely to play on their own, and their play is often repetitive, with no particular purpose. Letting themselves be children, they remain steadfast in an activity, unable to explore their own abilities and interests (Ozaydina, 2015).

The treatment technique through play about autism is a children's guided approach involving parents, teachers and therapists who play with a child according to their own interests. The first element that Rye (2010) highlights refers to the knowledge of the world and himself. The child's engagement with the environment, as well as his ability to understand his environment, is hampered by aesthetic processing issues. In the treatment the child must be involved with the environment and work through various behavioral and sensory issues to interact. The game also favors the building of relationships. The game helps the child to recognize faces, sounds, speech, and become familiar with them. As it develops in the field of recognition, it develops various cognitive and kinetic skills that will help it improve communication and building relationships. Also, acquires bidirectional communication. That is, gambling activities can help the child to interact and communicate in a two-way way, better recognizing patterns of cause and effect, solving problems, contributing to the areas of cognitive and social development. In addition, the game affects complex and non-verbal communication, such as facial expressions, body language, gestures, perceptions of non-verbal communication. The game can interpret emotional ideas that are part of abstract thinking and the game can help the child with autism participate in the fantastic game. Finally, it is very important the expression of emotional thinking. Through the play a child can better understand his / her own

feelings and others, as well as develop mechanisms for dealing with stressful situations.

The game can help the child to broaden communication circles and improve the social and symbolic skills of children with autism spectrum disorders. The aim is to help the child make use of his / her strengths to contribute to emotional and spiritual development (Neely et al., 2016). The play in order to be beneficial to the child requires to participate in processes that are well organized and studied, tailored to the environment, needs and peculiarities (Rye, 2010). It is also a prerequisite for the materials to be used in each treatment, depending on the needs and the specificity of the conditions (Woolf, 2014).

In all these, besides the child and educators or therapists, the necessary link is also the parents (Sakellariou, 2012). They are the ones who will provide information about the child's history, guide the child to the smooth running of the process, and continue home therapy so that experts can draw proper conclusions about the child's condition.

In particular, the child with ASD, through the cooperation between parents and specialists, enjoys freedom of choice and is encouraged to work spontaneously, while at the same time having the opportunity to build a trusting relationship with the therapist that will help her interact positively with those around him (Woolf, 2014). It also enhances its ability to respond to stimuli, as well as enhances its linguistic and social skills. Another element that is equally important is that it acquires standard communication behaviors through role plays with the therapist and improves his ability to perceive himself as a different personality from others and at the same time to recognize others as different entities in their own experiences. , thoughts, reactions, etc. (Rye, 2010). In addition, it is promoted smoothly to the

next stage of development, moving from functional to symbolic, while expressing its emotions in a projective way and helping to identify and manage them. Finally, the child with ASD is able to realize the value of himself or herself and to enhance his / her self-confidence (Neely et al., 2016).

2.2.5.4 The game as a means of evaluation

Because of the importance of the game for child development, it is also important to evaluate a child through the game. A valid and credible assessment through the game requires a clear understanding of what is measured and evaluated as a game. The difficulty of defining the game prevents the development of a game rating. Kalverboer (1977) claimed that the game's evaluation was neglected due to the complexity of the game and its difficulty in defining it, making the game's behavior difficult to weigh and measure (Michalopoulou et al., 2014). Thus, usually experts, therapists do not use game ratings as a priority (Michalopoulou et al., 2014). Instead, the game plays a secondary role in child assessment and is commonly used by experts as a way, as a means of observing and enhancing other skills, such as the attention of motor skills, etc. (Vale et al., 2010).

Evaluation, however, in the context of the game can lead to specific interventions and a mechanism for controlling student progress. It helps to set appropriate intervention goals and to control effectiveness. The use of free play in a natural environment is an appropriate way of assessing cognitive functionality. Early childhood assessments should lead directly to interventions and take place in natural environments such as the game (Botsoglou, 2010). In addition, game ratings help to examine the children's developmental level through the game. For example, if a child

has game skills below their chronological age, a cognitive disorder is likely (Michalopoulou et al., 2014). The game is the place where a set of skills is developed that either acquires or exercises the child while playing. Observing the child during the game we can see the expression of a large number of cognitive, emotional and interpersonal processes (Augitidou et al., 2016). Thus the game can be reduced to an evaluation tool in cases where there is a risk that these skills will not be developed.

The evaluation of the game was proposed in 1970, but its use was spread in the 1990s (Linder, 1993; Michalopoulou et al., 2014). It is an ecologically valid method that activates the child and attracts interest, as opposed to traditional weighted measurements / ratings using weighted processes, unknown to children, and unfamiliar environments. Also in the weighted assessment procedures is an unknown and incompetent examiner. Weighted tests require specific responses from children that do not meet children's abilities. Finally, weighted procedures do not identify the needs of the intervention and are not used to control the progress of children (Michalopoulou et al., 2014).

Using the game as an evaluation method has many advantages over other traditional methods (Bundy, 2010):

- ✓ Flexibility in choosing toys allows the researcher to take into account the child's difficulties and to choose games that fit the child's abilities.
- ✓ Flexibility also allows the selection of toys appropriate to the age of the child.
- ✓ The observations focus on what the child can do with the toy while there is no proper and wrong use and the child is not evaluated based on whether he followed exact instructions or not.

- ✓ Using the game as an assessment tool, important information on child preferences and discoveries is gathered and children's skills for play are assessed.

Some of the game ratings used are (Whiteley, 2017; Supawadee et al., 2010; Bundy, 2010; Linder, 1993; Boucher et al., 1997; Molina et al., 2018; Ray-Kaeser et al., 2018):

- Play Observation Scale. This scale is useful for identifying differences in children's play depending on the age and gender of the child, but also for determining the individual differences in the game (aggressive children).
- Preschool Play Scale (PPS). This scale was revised by Knox (1997, Preschool Play Scale). Evaluates the play of pre-school children (0-6 years old) through direct observations of the game in the child's familiar environment. This scale gathers information on the child's language skills, hefty mobility, the child's ability to mimic and the development of imagination and exploration skills.
- Test Of Playfulness (T.O.P.). This test evaluates the child's mood for play. It refers to children aged 3 months to 15 years old. It consists of 24 parts rated with a four-tiered scale. It assesses the child's inner lust for play and the ability to maintain a play scenario.
- Trandisciplinary - Play Based Assessment (T.P.B.A.). It assesses children 's skills and abilities in many developmental areas, such as cognitive skills, cohesive mobility, communication, social skills. It was designed to evaluate children aged 0-6 years and includes parents in the assessment of their children. It is also used to assess children with special needs.

- Test of pretend play. This test evaluates the child's ability to develop the pretense-fantastic game. It is designed to assess and observe children in their familiar environment, but has been used primarily in clinical settings.
- Play Evaluation Scale (PAS): It is an experimental game development observation method consisting of 45 points in a developmental series based on the typical development of children aged 2 -36 months. It includes eight sets of toys that are rotated during the assessment so that the child has many opportunities to demonstrate a wide range of play abilities. It is also used to evaluate children with multiple disabilities.

UNIT 2.3

AUTISM AND GAME

2.3.1 Game and skill development

The nature of the game is related to the transaction, communication and co-conversion. Through the play, children learn behavioral patterns, organize their knowledge and skills in the context of social encounters, with the ultimate goal of solving various problems they experience in everyday life (Veiga et al., 2016). Through playful activities the child has the opportunity to express positive feelings, such as affection, to his peers and to create friendly relationships.

In their activities, they learn various strategies of social coexistence, learn to negotiate, but also to reconcile, so that they can resolve their differences (Lynch, 2015). They perceive the challenges during the game, acquire social roles in the group, become independent with strong self-esteem and the development of ethical behavior (Brown et al., 2009). The child begins to understand social rules and conventions through the roles and themes that arise. Since the social game is a miniature of society about people's attitudes and aspirations, they develop the ability to perceive the roles and relationships of adults by cultivating and empathy, which is important for social interaction and function of social thinking (Brown et al., 2009; Ozaydina, 2015). In this way they become more mature and get ready for various social behaviors.

Also, another key point is the relationship between play and linguistic development is recognized in the scientific community. Peer play is an important framework for children, as they can learn new vocabulary, a more complex language

structure, and the rules of discussion among group members (Tsapakidou, 2014; Mathur et al., 2015).

The child learns phonological, syntactic / semantic and grammatical rules to enrich newly acquired language skills and acquire metlanguage perception (Benitez et al., 2016). This leads to the child's ability to represent objects, actions and feelings during the game using language (Nordgren, 2016). Thus, the child begins to give the language game another dimension, which is connected with the creation of narrative stories, the creation of literary fantasy, the ability to read and comprehend stories, the creation of scenarios by children during symbolic play and the development of linguistic symbols are used in the various circumstances of life (Benitez-Burraco et al., 2016). Finally, we can observe that children choosing lonely play have limited language skills, as opposed to the social or dramatic play in which children have more developed language skills (writing and reading) (Wilkinson et al., 2016).

Another contribution of the game is that it can help increase physical endurance as well as develop motor skills related to coordination and balance (Zaragas, 2010; Robinson, 2011). The kinetic toy helps strengthen the bones, skeleton, muscles and proper development of the cardiovascular system. Clearly, its results are long-term in terms of the cerebellum, which is the part of the brain and is responsible for motor coordination. Finally, through the game, they evolve the senses, give way to their mobility and realize their physical strength (Zaragas, 2011).

Studies on children with ASD show higher rates of obesity and reduced physical activity than healthy children (Egan et al., 2013; Phillips et al., 2014; Rimmer et al., 2010; Todd et al., 2010). The abstinence of children with ADHD from physical activity is due to the difficulty of socialization, emotional disorders as well as

reduced motor skills (eg, movement coordination) (Pan, 2014; Srinivasan et al., 2014). Many studies have reported the benefits of including physical activity in interventions designed to address social behavior problems and improve academic skills in children with ASD (Lee & Vargo, 2017). Participating in physical activity directly is often a challenge for children with autism due to poor motor function and the insignificant motivation these children have to engage in physical activity (Lee & Vargo, 2017). In addition, team sports and group physical activities are of no interest to children with autism, and in some cases, they may exhibit intense aggressive behavior, especially if they are unwilling to engage in team sports (Quirnbach et al., 2009). Physical activities that do not require group participation or do not require high levels of social and motor skills may be more attractive to children with autism (Lee & Vargo, 2017). As can be seen from the above, physical activity and group play can make a significant contribution to the social development of people with ASD.

Another skill that is worked through the game are emotions. The play has a very beneficial effect on children's emotional development. It is the natural way to cope with anxiety and tension, allowing the processing and management of various traumatic experiences as well as relief from negative emotions (Veiga et al., 2016). During the game, the child can play several roles, "leave" for a while, and from a nasty experience of transferring these negative emotions to a substitute object (Thiesen, 2014). Finally, dramatizing various stressful situations helps the child acquire self-knowledge and better control of the external situations of life.

For Piaget (1962), the game is a delightful activity, releasing the child from friction, leading it to cognitive gains and social interactions, allowing for the development of imagination for future processes (Diamadopoulos, 2009). For

Vygotsky (1972) the game is a kind of activity (Diamadopoulos, 2009). He also thinks that many desires, tendencies and needs of the child emerge through the game, which children can play through the game, since it emphasizes that the child in the game always behaves a step beyond his / her age and everyday life of. Bruner (1983) argues that children can combine thinking, language and imagination during the game, while adult support contributes to the development of children's personal powers (Milteer et al., 2012). The game is an activity in which children communicate, learn, think and represent the world, shaping their own framework to negotiate and control their relationships.

Finally, we can observe that early childhood is characterized by creativity, resourcefulness and imagination both in children's play and in their artistic expression. The presence of symbolism in the game in a complex way, parallels the process of symbolism in artistic expression (McCabe, 2016). We can see the relationship between play and oral language, writing, painting or dramatization, including imagination, creativity, and social interaction through various activities (Moller, 2015). Painting, like play, is a way of expressing, approaching and exploring the child's environment. Many times the paintings are an attractive way to play, as well as the basis for the dramatic play (Michalopoulou, 2010). As the child expresses through the drawing, the line and the shape, we can distinguish feelings, experiences, thoughts and stories that children have made by rendering the surrounding world through the game (McCabe, 2016).

2.3.1.1 Symbolic game and autism

Symbolic play occurs at the age of 18 months and is becoming more elaborate

during pre-school age. Piaget suggested that symbolic play gives the child the opportunity to practice and understand the events that happen around him. The inability of children with autism to use an object in symbolic play is typical. In addition, the absence of symbolic play at the age of 18 months may indicate that the child belongs to the high risk group for the autism manifestation (Feldman, 2009).

The definition of the symbolic toy is the use of objects by the child in order to recreate his / her daily performances, such as a little girl can represent the teacher in her dolls or feed her doll with her mom. In the symbolic game Leslie (1987) distinguished the following features (Loukrezi et al.,2010): specifically refers to replacement, which concerns an object can be used as if it were another, like a balloon can become a plane, or be given a property it does not have, such as a teddy bear coming to life, talking, crying, eating ... A second characteristic is Pretend, that is, at this point one can refer to persons, objects or situations that do not exist in the immediate environment at that particular time, such as there is a fantastic person in the house... Finally, the Dramatization, according to the child or a doll plays some role in reality or in a fantasy space, for example the child may make a doctor or place a doll in an armchair that drinks her tea.

These children from the early stages of play show the difficulty of using an object in symbolic play. In order for a child to develop social or functional play, he must go through some early stages in a normal way (Mathur et al., 2015). Children with autism face problems because of the lack of curiosity and the need for exploration. According to perceptual theory, the inability of children with autism to develop symbolic game is related to the weakness of their representational thinking, their ability to form and handle the symbols. In this sense the absence of symbolic play in children with autism is something similar to blindness blindness. Children with

ASD have deeper skills in symbolic play, but they are hampered by restrictions on performance. Their inability to generalize ideas or ignore incoming messages may be responsible for their weakness in symbolic play (Diamadopoulos, 2009).

Piaget (1967) notes that children's play has been described as the gradual internalisation of the actions previously presented in the kinesiological aesthetic plan and is also considered a method of learning for the outside world through the process of assimilation. According to Piaget, the play of pre-school children is mainly symbolic (Diamadopoulos, 2009). This is at the basis of the child's attempt to get to know and share the reality in which he has just begun to make the first steps. Different situations are not dealt with by the symbolic game as they are in reality. The child sees reality as he wishes. How many times have we not seen children on a pole reeling as if they were on the strongest and fastest horse. Once again, how many times an old spectacle skeleton does not transform a child into a doctor, a teacher, according to the needs of the moment (Feldman, 2009).

The symbolic play of children with autistic disorders differs from that of typical children, either because children with autism do not have cognitive representations and language skills (Wittke et al., 2017) required or because they do not have the ability to spontaneously generalize new shapes. In the symbolic game of children with autism there is a general symbolic weakness that affects language, gestures and symbolic play. Research has so far been concerned with the stability of diagnosis, the severity of symptoms or the prediction without having ever investigated the exact appearance of symbolic game abilities.

Children with autism as already mentioned have significant deficiencies in symbolic and role playing. People with autism as they grow older can be trained to develop certain aspects of the symbolic game (Wittke et al., 2017). This cannot be

done without guidance. They need to teach the child how to play symbolically, to teach him / her to recognize that he / she can play this way and that this will help his / her classmates (Mathur et al., 2015). What happens to a child without autism in their second year of age without the need for special education, a child with autism will need systematic and structured education to be able to partially conquer at some point.

Some educators are wondering if it is worth giving up on such a skill training, as it is not a survival skill such as self-service, since there are so many that we need to educate a child with autism (Wittke et al., 2017). The answer is that the development of this skill will help it to catch the attention of other children, promote its social interaction and enable it (especially with role playing) to be able to comprehend others and take on later its role within the social community that has been called upon to live (Mathur et al., 2015).

2.3.1.2 Social game and autism

Since the triad of impairments of social interaction includes the disruption of social relations, the disruption of social communication, and the disruption of social understanding and imagination, the importance of the development of the social play for children with autism grows (Morfidi et al., 2015). Difficulties in social interaction even for less severe forms of autism remain the main problem. Difficulties in the areas of communication and language in autistic children are one of the main features of autism (Morfidi et al., 2015). It is estimated that about half of children diagnosed as having autism never develop functional speech. Compared to the other half, where their speech is mostly referred to as sound or better

stereotyped. In other words, most of the speech produced seems to consist of immediate or delayed literal repetition of the speech of others, often without appreciating the importance of what is said (Tsapakidou, 2014). The lack of diversification of communication functions occurs with a similarly limited repertoire of media. Not only is reason not used as a means of communication, but also non-verbal media, commonly used to increase communication, is inadequate (Morfidi et al., 2015).

Children with autism show differences in the appearance of social play in relation to typical development children. These differences are due either to their inability to spontaneously generalize mental patterns, or to lack the linguistic abilities and cognitive representations required for social pretense (Morfidi et al., 2015). According to the Veiga et al. (2016) there is a link between the social and linguistic development of children with the game. Their weakness in social interaction, combined with their inability to perceive emotions, prevents them from recognizing others as individuals with feelings and thoughts that may have different orientations for the same situations (Veiga et al., 2016).

In any case, the difficulties faced by children with social play also affect their adaptation to the kindergarten and then to school. Children who did not develop social games in preschool age, find social anxiety problems, rejection by their peers, depression and low self-esteem until adolescence and academic failure (Tugrul et al., 2014). Therefore, engaging a child with autism with their peers can bring enormous benefits and contribute to a smooth social integration. Early intervention and implementation of appropriate play programs at an early age improves social skills (Morfidi et al., 2015).

2.3.2 Game and children with DSA: the difficulties they encounter

The importance of playing for each child is indisputable, although it is difficult to overcome the problems that arise during the game. Especially for children with autism who, due to their special characteristics, differ in their way of playing with typical children, because they have difficulty in drawing the positive data for their development (Veiga et al., 2016). The play of children with autism, even if improved after intervention, remains qualitatively different from that of typical children. This qualitative difference in play is a key feature of autism, as well as being particularly resistant to all interventions of the theoretical approaches (Augitidou et al., 2016).

Children with autism lack the predisposition to engage in the game and show an apathy towards it. While many children with autism are able to engage in their activities with sensory, organizational and functional play, but also with a guiding and supportive role, some children can get involved in symbolic play, very rarely this child can give the impression that he is playing (Morfidi et al., 2015). However, children with autism have striking similarities to the overall picture of their play. In particular, the spontaneous, flexible, inventive and social game is absent. When children with autism have the opportunity to play freely, they will deal with repetitive and stereotypical activities. They are able to reproduce the same game activity for hours and even react with particular stubbornness when interrupting the play routine (Miltter et al., 2012). A game of rules that escapes from the usual creates discomfort.

Another element to note is that children with autism dominate the simple game, while complex activities are scarce and short. Their play is poorly functional (Smith

et al., 2013). They have a peculiar use of games, can play with them for a long time in an unnecessary, repetitive and poor way, without imagination, creativity and spontaneity (for example, a doll or a puppy can use it as a car instead of taking it in his arms or how to assemble a puzzles that adore it is quite different from the way a typical development child will follow, ie a child with autism will use the shape of the sides of the t u puzzle, ignoring the overall picture of the puzzle). They abstain from symbolic or team-binary peer play, excessive adherence to specific games of particular interest to them, absence of spontaneous and creative play, role-playing and fantasy games (Smith et al., 2013).

The three main elements that interact with each other in game activities are social interaction, communication and imagination. These elements are essential to the game, but they are also the basic deficits of children with autism. For this reason children with autism are involved in the game in a way unusual in relation to typical developmental children but is also at a very low developmental stage and with a qualitative differentiation (Morfidi et al., 2015).

The game of children with ASD, if any, has been described as simple, repetitive and stereotyped. The most observed game includes the parallel-functional game and the lone functional game. Children with autism behave as if they have lost the curiosity of typical development children. They show the absence of spontaneous play, this is not the result of complete inability to play but is due to the fact that they consider the game a difficult process (Miltter et al., 2012). This in turn can lead to frustration and lack of incentives to play. Children with autism do not have game skills, nor do they understand the symbolic meaning of "playing with the car". Whenever an ordinary game is given to them they do not know what to do, so they smell or try their taste. So, their game is repetitive (Morfidi et al., 2015).

Another area of difficulty is language. The social use of the language, which defines the organization of form and content by identifying communication in this way, is absent from children with autism (Zachakou, 2016). The language difficulties of children with autism show a variability, as they range from non-development of language to late development. In general, and in cases where there is reason, it is presented with varying complexity and factual use in the autistic population (Wittke et al., 2017). Language deficits are evident in all their developmental stages. In a study by Benitez-Burraco et al., (2016) conducted in children aged 12 to 24 months, there was linguistic regression or never acquired functional reason, while phonological, semantic and morphosyntactical problems were presented. According to Fernald et al. (2014), understanding disorders and vocabulary are evident from the age of 18 months. What should be highlighted is the difficulty resulting from the language deficits of children with autism and make the communication element more difficult.

For children with autism, what is difficult during the game is the externalization of emotions and the reaction to environmental stimuli (Sheridan, 2014). Thus, a child with autism stays stagnant with regard to the development of the game, is not actively involved, has difficulty imitating and expressing spontaneous behavior. Also, due to their basic deficits in communication and socialization, they are not socialized and do not care about social play but prefer lonely activities (Mathur et al., 2015). This kind of behavior is interpreted as an expression of negative emotions and a failure to synchronize with other children. Another feature is the fact that these children do not attach a meaning or purpose to their game, simply move objects from one point to another without purpose or can perform repetitive moves with a toy, such as moving the wheel to a car, are generally apathetic to the game (Moller,

2015). There is no apparent predisposition for engaging in a game. They can include sensory, functional and organizational play in their activities, and with support they can play in symbolic game (Mathur et al., 2015).

To achieve these beneficial effects of the game on children with special needs, various educational programs tailored to the needs of these children have been created (Pui-Wah, 2010). The difficulties we encounter relate to cases where children may not cooperate, show no interest in the game, the environment in which the intervention is not appropriate or even the means / materials that may be used do not meet the needs (Veiga et al., 2016).

2.3.2.1 Intervention strategies in the game of children with autism

It is a fact that children with autism have difficulties in developing social relationships and in starting and maintaining communication with others. The following approaches emphasize the understanding of social rules, behavior management and social relationships (Feldman, 2009). Based on what has been said above, one would reasonably conclude that autistic children are not capable of playing or understanding the meaning of the game and especially the symbolic one. However, research has shown that these children have the ability to engage in toys even in their own unique way (Mathur et al., 2015). So, is understood the way children with autism perceive the game, then an educational program can be designed with activities that respond to these children. Although in most cases the process of play or the possible uses of an object should be indicated, it has been shown that after intervention children with autism are able to perform symbolic actions within the game (Wittke et al., 2017).

Although play does not suppose an important role in an educational or therapeutic program, the ability of children with autism to play and the multiple benefits presented to these children is evident (Mathur et al., 2015). Also, autistic children, even the most dysfunctional, they can show greater abilities in symbolic and social play. Moreover, it is observed that through play, children with autism improve their social interaction, (quantitative and qualitative) play abilities and produce complex forms of play (functional, social, symbolic) with the support of an adult (Feldman, 2009). However, a correlation of improving symbolic skills with verbal abilities has been observed. That is, children with autism who have developed verbal abilities show greater improvement than children with autism who have not developed oral speech (Wittke et al., 2017).

Based on the positive results of playing with children with autism, several therapeutic interventions using the game have been organized. Most of them are aimed at young children, while few interventions are aimed at school children. Some general strategies for intervention and improvement of children's play with autism are (Rodger S. et al., 2014; Anagnostou, et al., 2014; Ashburner, et al., 2014; Bagatell, et al., 2015; Welch , et al., 2016; Brock et al., 2016; Augitidou et al. 2016):

- ✓ Children with autism perform better at the level of free play if they are offered a reward or if the adult organizes the play, that is, if the play is mobilized externally.
- ✓ Children with autism can benefit from play activities if an environment is tailored to their needs. Adult thinking is needed in order to create situations that children will find fun and, thus, encouraged to interact. Often, they have to prepare and control their environment to make sure they are attractive to them.

Mobilizing children with autism often depends on our ability to select exciting play material and present it in a way that makes sense to the child.

- ✓ It is particularly important for the mobilization of children, the themes and content of the toys chosen to be appropriate for their age. Particularly emphasized by Brown and Murray (2001) is the need to select activities that approximate as much as possible the chronological age of people with autism, irrespective of their mental age (Feldman, 2009). For example, the use of infant toys by school-age children should be avoided, as the child is more stigmatized in their social environment. There is also a higher social interaction between peers, when the toys chosen correspond to the level of child development.
- ✓ It has been found that toys chosen by the child themselves with autism are the best means of supportive intervention. This activity offers opportunities to participate in the game and interact with the teammate through the game. In the common game (eg child with therapist, parent or other child), however simple and monotonous the actions may be, the teammate offers opportunities to introduce small changes gradually in the game, with the aim of modifying the child's behavior with autism. This is always a prerequisite for maintaining and enhancing playground joy. Also, motor activities (swing, running, etc.) are enjoyable and are of particular importance for children with autism because their sensory-motor mechanisms are activated.
- ✓ Often children become more excited and motivated when an adult "exaggerates" during play and makes quick movements and playful play. The positive and enthusiastic disposition of the therapist is especially important. Toys that can draw the child's attention and create emotional charge should also be selected, as well as toys that are fun and exciting and enjoyable. This clearly

shows that the behavior of the child - and especially of the child with autism - is dependent on that of the adult. The playthings must be large and distinct at the beginning, in order to achieve this exaggeration during the game.

- ✓ Most gambling activities require social and practical skills. When there are complex social requirements for children, the content of play activities should be kept simple and, conversely, when the practical part is more complex, social requirements should be lower.

Therapists' play strategies following have in common and are all aimed at the following (Beyer et al., 2000):

- ✓ in imitation and "mirroring" (mirroring).
- ✓ to focus on attention and in expectation.
- ✓ in parallel play and dialogue, during play.
- ✓ in game scripts and social stories.
- ✓ in learning to turn around during the game (turn taking).
- ✓ in learning the rules of the game.

Therefore, play is important for a child's developing ability to understand and bond with their social environment and to participate in the culture of their peers. Play can be a source of personal development for children with autism when children learn from their parents and teachers the rules of the game, as well as communication strategies - how to talk to other children during the game.

One of the intervention strategies used the game of children with autism with adults may be a simple pretending game, not necessarily spontaneous, as long as there is an adult who encourages and coordinates the game, there is a complete and organized gambling program and the absence of peers (Morfidi et al. 2015; Reichow et al., 2010). Children with autism can increase their social interaction with others,

show increased ability to play on a qualitative and quantitative level, are able to understand more complex forms of play, such as functional, symbolic and social game with support and incitement of the adult (Feldman, 2009).

In an attempt to create a program children's play with autism with their other peers, Pamela Wolfberg (2009), the integrated model of gaming groups, was set to play by bringing closer children with different skills (Integrated Play Groups Model), different cultural and social backgrounds. Pamela Wolfberg influenced by Russian psychologist Lev Vygotsky, who considered the game to be a key element in developing children's competences for social understanding and symbolic representation (Bjorklund, 2012; Wong et al., 2015). This model is based on Vygotsky's theory based on "guided participation" in the game, which is a process through which children are developed, actively involved in cultural activities under the guidance of, supported and involved by their teammates, who come from various social contexts and vary in skills (Bjorklund, 2012). The ability to provide opportunities for social interaction, new experiences and interaction with peers has very positive results in the lives of children with autism (Lee & Vargo, 2017).

Children with autism through guided participation in the game are involved in creative symbolic game activities with teammates who have developed social skills and act as supporters of autistic children (Eskicioglu et al., 2016). Through this model, children with Dafa present an improvement in social interaction and social learning skills, such as the Walden School, when there are standard-grade children working as templates or trainers who are previously trained to work on the program, how they will invite their teammates to play, how they will contribute to the development of social skills and interaction between them (Lee & Vargo, 2017). Children are the most important model that can affect and influence their social

behavior, since the younger the child is, the easier it can learn by observing the other children. Intervention based on natural environments, peer-to-peer partnerships creates greater generalization and greater social interaction (Carter, 2010). Of course, during the game there may be problems and difficulties that can be overcome with proper management by standard development children.

Of course, in this model children with autism and children of standard development are not left alone without help, but there is always an adult who helps and acts as a promoter and leader of the game team, and with his help over time decreases (Wong et al., 2015). However, for the smooth development of the game the communication techniques are developed as well as the learning of the skills necessary for the autistic children to enter the peer group, so that the children with autism limit the solitary and stereotypical play, acquiring social play skills and when the program is completed (Lee & Vargo, 2017).

Particular attention is paid to the design of the environment in which the game program will be implemented, the choice of the physical space, the school courtyard, the playground, some other indoor space, the logistic infrastructure, the materials to be used for the best conduct, of the game, who will be the teammates (Zogopoulos, 2013). It is important to have stability and organization that are key elements in educating children with autism, and to create a safe environment to inspire certainty and prediction for something unpredictable (Rudy, 2017).

Also, the patterns of imitation or learning through observation is a learning technique. The term is introduced by Bandura (1977) and forms part of his social theory, stressing that observing the behavior of others is an important factor in learning new behaviors as the imitation process can be done with or without reinforcement and manifested in different contexts (Diamadopoulos, 2009). Of

course, the manifestation of behavior according to Bandura social theory is based on attention and motivation. For this reason, attempting therapeutic intervention with this method in children with autism can contribute to the development of mimetic capacity and limitation of attention disruption due to stereotypical motions (Palechka et al., 2010).

The provision of imitation pattern may be videotaped, that is a person can observe a pattern (which may be peers, brothers, adults ...) which demonstrates a desirable behavior or teaching skills development (Palechka et al., 2010). This technique can be tested and repeated for the needs of the program, as well as generalized in different environments and adapted to different conditions (Boudreau & D'Entremont, 2010). It also contributes to teaching game skills and improving independent and symbolic play.

Particularly effective, according to Bandura's theory, is the ability to provide a peer-to-peer model, since children find it easier to observe and imitate a pattern that resembles and has the same characteristics as these (Buggey et al., 2010). This method is important for children with autism, who have difficulties in mimicking skills, while being helped to join the school classroom. On the other hand, formal developmental children are able to benefit from improvements in school performance, verbal and expressive skills and self-esteem (Palechka et al., 2010).

Another method of intervention is the interactive games, the teammate mimics the child's behavior and his initiatives, thereby increasing the prudent and social attention. As we have mentioned, the mimetic abilities of autistic children are limited and lagging largely with those of typical children (Sheridan, 2014). However, by cultivating these mimic abilities children with autism acquire greater skill in symbolic play, improve their social behavior, acquire better visual

communication and the game acquires a qualitative character with more potential (Gena et al., 2007).

In interaction games, the teammate follows the child's playful guidance. The adult imitates the child's initiatives so children with autism increase their social attention (visual attention) as well as their imitative behavior. It also seeks to imitate the use of objects (Sheridan, 2014). In general, imitation abilities of children with autism are substantially impaired and appear to be significantly underdeveloped when compared to those of typical developmental children, but children with higher abilities in pantomime also show greater ability in symbolic play (Gena et al., 2007). With psychotherapeutic methods, imitation and playability of children with autism can be improved (Sheridan, 2014). Children with low imitation autism respond in a shorter time if the therapist mimics their actions, rather than showing them to deal with something (familiar or new). Also, their social behavior improves, they have better visual communication and their play is better quality. Research has shown that mimetic abilities of children with autism can be improved when their role models are peers and play is free (Gena et al., 2007).

Children with autism may also focus more on spontaneous imitation and interaction with younger peers who have similar developmental abilities and interests (Buggey et al., 2010). In contrast, playing with peers or older children requires higher levels of cognitive ability. There is evidence that children with autism are attracted to the observation of a baby or toddler and have fun with their awkward gestures and grimaces, as if they understand their language (Gena et al., 2007).

Finally, one last intervention strategy is social stories, which have been developed by Carol Gray in the mid-1990s. They are daily stories about practical and social

living in everyday life and about children in the autism spectrum (Catherine, 2010). There are short stories describing a child in a social situation and reporting the child's common reactions to this activity. The goal of social stories is to develop the children's ability to perceive social interaction rules during the game (Karkahneneh et al., 2010). The framework provided is as natural as possible, a theoretical background to a social situation and a plan, to know in a given situation what to do according to the logic of cause and effect (Flores et al., 2014). Then the child with autism can dramatize the content of social history with the corresponding games.

UNIT. 2.4

GAME AND FAMILY OF CHILDREN WITH AUTISM

2.4.1 The use of the game in families of children with autism

The role of parents and other members of the family of children with autism is important in enhancing the play of these children. Play interactions between family members and children with autism can provide these children with opportunities to practice and learn new social skills (Papanikolaou et al., 2018). According to Papanikolaou et al., (2018) about these interactions, parents and especially the mother is the one who plays with the child. The siblings of children with autism do not interact and do not play well with them. Children with autism, on the other hand, tend to focus more on their siblings than their parents. Research has also shown that parents of children with autism are more guided in their interactions with the child during play. They have more control than parents of children of standard development (Zisis et al., 2019; Zisis et al., 2016). It is necessary for parents and siblings to be taught how to structure, to give rhythm to play interactions in order to create a framework that promotes the initiation of social interactions by the child. It is also important that families cooperate with teachers and advise them on the play of children with autism (Papanikolaou et al., 2018).

Of course, more research is needed to demonstrate how differences between family members in their interaction with the child can lead to the development of interventions that will help family members promote appropriate social interactions with their children (Papanikolaou et al., 2018). According to research results (Tunali & Power, 2002; Schlebusch et al., 2018; Weiss et al., 2012; Waizbard Bartov et al., 2019), parents, and especially mothers of children with autism, are more likely to

engage in recreational activities with their children and other members of their family than mothers of typical children. The same research has also led to some other important findings about the way mothers of autistic children deal with various aspects of their daily lives compared to mothers of typical developmental children. So (Waizbard Bartov et al., 2019):

- ✓ Mothers of autistic children find it more difficult to pursue a career because they place greater importance on the role of the mother and less on their professional development.
- ✓ Mothers of children with autism have much less leisure time for themselves and place less importance on their personal enjoyment and enjoyment of their leisure time. They also devote most of their time daily to the treatments their children need to follow.
- ✓ Compared to mothers of typical developmental children, mothers of autistic children place less importance on their relationship with their spouse and the time they spend together and more on their role as a mother and on the support they need to provide their child.

In addition instead of to parents and siblings of children with autism can help develop the game. One method that uses siblings as role models for teaching skills is video modeling (Alexander et al., 2013). This method uses a person who is effectively involved in many behaviors as a model. The student watches the video and mimics the observed reactions. In the case of play, the child with autism mimics the appropriate gameplay skills seen in the video and thus participates with their siblings in the game (Cihak et al., 2012). This technique is useful because children with autism particularly benefit from interventions involving their siblings. This technique also enables the generalization of playing skills from school to home

(Papanikolaou et al., 2018). In fact, the video modeling technique can be used to teach other skills besides cooperative play, such as teaching language skills, day-to-day skills, and teaching academic skills (Bereznak et al., 2012). An advantage of this method is that the child with autism can watch the video many times and with this systematic repetition learns the required skills more easily.

The use of technology-based interventions, such as the use of video, enables parents and professionals to work together at home and at school to teach adaptive play skills to children with autism (Cihak et al., 2012). This method has a positive effect not only on the child but also on the whole family. There is very little research on the siblings of children with autism compared to the research on the siblings of other people with disabilities (McPartland et al., 2016). Findings from related research indicate the range of siblings' reactions to autism (Petalas et al., 2012; McPartland et al., 2016; Solmeyer et al., 2014):

- ✓ The brothers are interested in participating in the improvement of the situation. But taking on huge responsibilities for their age causes fatigue, indignation, and anxiety. Many times siblings of children with autism choose a profession related to an assistant or psychologist or specialist for children with autism.
- ✓ In many cases, siblings of children with autism adopt an individualistic lifestyle, ignoring the problem. They are not involved in anything, putting a safety net on their own and differentiating their attitude from the rest of the family.
- ✓ When there are more siblings in the family, the better their course, because the burden is shared by all, they work together, cooperate and support each other.

- ✓ Many times the feelings of siblings of children with autism are ambiguous.

Protection and assistance moods alternate with resignation moods.

However, there is still a lot of research to be done on the impact of autism on siblings with many parameters (gender, age, family profile, behavioral difficulties of children with autism, etc.) (McPartland et al., 2016).

2.4.1.1 Parents involved in the game

Parents already confused about their child's problem and under stressful situations need immediate psychotherapeutic support, valid information about their child's problem, and advice on the sources of help and where to look for. Difficulties affecting the wider family need to be addressed accordingly (Jones et al., 2014; Ζήσης et al., 2013; Russell et al., 2011). The modern therapeutic concept seeks to make parents involved in the therapeutic endeavor. In this endeavor, the therapist often finds one or both parents distanced from the child (Neyyoshi, 2018). Some parents tend to look after the child without failing to provide the care they need as needed (O'Nions et al., 2018). At times, a parent facing a child care gap develops a bond of overprotection and dependency on the child that acts as a deterrent to the child's autonomous development. The therapeutic regimens used for the child with autism require a substantial involvement of the parents in the therapeutic effort within the family, which is continuously supervised by members of the therapeutic team (Neyyoshi, 2018; Solomon et al., 2012).

Therapeutic programs that record positive outcomes require the creation of a home-based therapeutic environment and a dedicated child occupation 1-2 hours a day (Solomon et al., 2012). The therapeutic part of the home program is essentially

a continuation of the treatment offered in a specific program. Parent involvement seeks to use techniques in the same spirit as practitioners of special programs in their work with the child.

The main difficulty that parents face in developing a therapeutic attitude when handling their child is the avoidance of dealing with them, the severe difficulty in communicating and interacting, the stereotypes and the lack of motivation. An obstacle to a child's mobilization is the acquired helplessness that he or she tends to develop. The parent, usually the mother who is close to the child most of the time, should constantly seek to interact with the child. In addition, the child's mobilization should be methodically pursued within the family in accordance with the recommendations in the Applied Behavior Analysis (Lovaas, 2003), Pivotal Response Treatments for Autism (PRT) manuals (Koegel & Koegel, 2006) or Early Start - Intervention - Denver Model [Early Start Denver Model] (Rogers & Dawson, 2010).

For a child with autism in their spare time it is also recommended to engage in activities at home in a playful, comprehensible and feasible way, such as mimicking mother activities (eg, housework), trying to learn self-care behaviors (e.g. cleanliness, dressing, eating, toilet). Parent participation in board games with the child, in songs and movement-dance is also useful, and in any socially acceptable activity that motivates the child (Kotsopoulos et al., 2014). The reward of the child should not be forgotten in every case and should be immediate. In general, therapeutic value is acquired by all cognitive and motor skills as well as any behavior that brings the child closer to the habits and behaviors of a normal, younger child at all times with whom this should be compared (Shawler et al., 2017). Early childhood attendance at kindergarten with formal developmental children with support as

needed (Kotsopoulos et al., 2014) also contributes to the socialization of the child with autism. Early diagnosis and intensive therapeutic intervention in programs that have been experimentally shown to be effective provide an optimistic perspective on the development of the child (Helt et al: 2008; Rogers & Vismara 2008; Dawson et al. 2010).

That is why the role of parents is important. In particular, play interactions between parents and children with autism can provide these children with opportunities to practice and learn new skills (Dawson et al., 2010; Tunali & Power, 2002; Siller et al., 2013). Play is a process of integration and creativity with the child's peers as they learn to interact with and manage different roles in the play (Siller, et al., 2013). The importance of play for children with their parents is essential, as children could contribute to a specific intervention program through play in order to further improve their abilities.

Parents can encourage the child in parallel play, which in turn encourages children to be informed about the activity of others as they play with similar materials in the same play area (Wetherby et al., 2014; Schertz et al., 2013). They can even use shared focus. In other words, as children engage in different aspects of the same play activity and materials, they develop a common focus on play (Jones et al., 2018). When this happens, parents can encourage children to share active materials and expect their turn to play.

The role playing in these children is very important. The kids are working as actors taking roles and using objects in imaginative ways. Parents at this point can guide the child for example to talk to the baby as each mother does and respond as the babies do with their crying (Jones et al., 2018).

Another way in which parents can contribute is by playing on the floor (Dir-Floor-time). This is a technique where the parent sits on the floor with his child to play for a few minutes. This game is based on the fact that emotion plays an important role in the development of the minds and brains of these children, so parents understand their children's emotions better (Κακαβά, 2010).

This game can be played anywhere in the house or in any other outdoor space. There are opportunities for other children to participate and it can happen at any time of the day as long as there is pleasure on both sides (Kakava, 2010). Finally, it is worth noting that parents can help their children with the toys they buy for themselves to realize that they are not the only ones with any particularity. Playing for example with dolls that also have some speciality will learn to love themselves.

In order to have opportunities to participate in the game, the spaces must be designed by the parents taking into account the density and size of the space, the layout of the space and the organization of materials. They should be limited in size while the areas of the game should be defined by boundaries (Kakava, 2010). In addition, a pre-designed space layout helps to provide visual access to materials so that children can easily grasp them. The arrangement of the game materials is not only helpful for the children to organize their play, but also facilitates the gathering to determine the space after the game. Game materials and furniture should be arranged on the basis of specific game themes and activities (Jones et al., 2018).

However, parents regarding their children's play consider that their children prefer to play with themselves and generally with adults rather than with their siblings. This desire of children with autism to interact and play more with adults than with their peers is also confirmed by the literature, as well as the sibling's refusal to play and interact with children with autism is confirmed by the literature (Kakava, 2010).

Parents also note that their children's play is largely parallel, solitary, sensory and exploratory and less companionable, cooperative, functional and symbolic.

It is important for parents to follow a specific intervention program through play so that they can better manage their interaction with children. Specifically, parents can guide intervention programs in which they intervene, that their children attend in the various educational programs being conducted, either at the special school (at the time of exercise or music ...), also programs by specialist teaching staff related to enhancing play interaction, psychotherapeutic intervention by a school psychologist, occupational therapy, speech therapy, sensory integration program, and swimming game enhancement program for swimmers are considered effective their child (Solomon et al., 2012). Using the toy is effective because it helps communicate with other children, socializing the child and joining the group. Parents believe that the game develops the child's skills, communication and, in addition, that the child has fun with the game. Parents also find that intervention through play improves their child's visual contact, reason, and perceptual ability (Crane et al., 2016; Schertz et al., 2017; Mundy et al., 2016). Parents argue that the use of play in their child's intervention benefits the development of critical thinking and co-operation (indirect and direct), as well as the expression of emotions, as well as the learning and use of rules in play for children can generalize these rules in their lives (Solomon et al., 2012; Rahman et al., 2016). Another element highlighted by parents' involvement in the game is that with the toy their child becomes less stubborn and more cooperative.

It is important that the game is displayed in other contexts outside the home, because the knowledge - playing skills that their child develops in other contexts improves his or her home play. Specifically, when a child learns to train in fine

mobility skills, he or she is also assisted in playing with the ball at home, or in running or balancing or jumping without being injured (Kakava, 2010). Also, the game skills he develops in other contexts contribute to the development of the game at home and so while at first the child may not play with toys, he slowly begins to play with simple toys, for example puzzles, bricks and then begins to develop more imagination in the game. Finally, parents find that through their child's developmental skills, they learn to be more organized, to understand certain rules and to adhere to their own boundaries at home (Kakava, 2010). So, parents do not have to clash with their child. Of course, many parents due to anxiety and ignorance need advice - instructions on how to use the game, what to do, how to do an activity to get better results (Weiss et al., 2015).

The need to devote more time to developing play skills is considered necessary as play allows the child with autism to express their feelings, learn to cooperate, obey rules, and communicate with other children (Schertz et al., 2017). Most children with autism have no reason and play improves their imagination and ability to play. Parents believe that if their child succeeds in the game, they will easily develop their writing and reading skills. They believe that academic skills should "pass" through play to all children and much more to children with autism. This will also promote the socialization of the child with autism and improve the cognitive part (Benson, 2014; Schlebusch et al., 2018). However, it is reported that devoting more time to play depends on both the degree of the child's autism and the child's cognitive abilities. The game promotes the interaction between the parents themselves and their child, but also between their child and other children. The game also helps to improve the child's communication skills, while also helping him / her gain knowledge of the surrounding objects, promoting the child's social integration and

contributing to the development of their imagination (Zisis et al., 2016; Zisis et al., 2014).

2.4.2.1 Playing with the participation of the brothers

Children with autism usually have their first social interactions with their siblings and these interactions play a very important role in the social life of a child with or without disabilities (Papacek, 2012). Many researchers have argued that relationships with siblings help develop social skills in general (Ben-Itzhack et al., 2016). The siblings of children with autism adopt an individualistic lifestyle, ignoring the problem. They are not involved in anything, putting a safety net on their own and differentiating their attitude from the rest of the family. Many times the feelings of siblings of children with autism are ambiguous. Protection and assistance moods alternate with resignation moods (Papacek, 2012).

A review of research shows that most interventions between children with autism and their siblings of formal development are based on the principles of behavioral therapy. Conclusions are difficult to draw as there are differences in the number, age of children receiving the intervention, and the methods used (Ben-Itzhack et al., 2016). In addition, most researchers tend to use adults in interventions with children with autism (Ferraioli et al., 2012), and most surveys are based on questionnaires completed by parents (Lubin & College, 2014). This approach is criticized as even though children show improved social interaction with adult intervention, the results are rarely generalized to other persons and environments (Ferraioli et al., 2012). Also, researchers who have studied the relationship between formal developmental

children and their siblings with disabilities point out that improving their relationships has benefits for both (Lubin & College, 2014).

Researchers have suggested some features of the interaction of typical developmental children with their siblings with autism, which may prove useful in future research. Studies show that (Ben-Itzhack et al., 2016), prior to intervention, children with autism had little interaction with their typical siblings. But they react to whatever interaction initiative their brothers take. Unfortunately, however, these initiatives are scarce, perhaps because formal developmental siblings lack the skills to enable them to interact during the game. Trying to improve these abilities would result in improved interaction between members of the whole family, and siblings would gain, as they would be better able to handle situations with children with disabilities (Özen, 2015).

Some studies have used the child's siblings to improve play-by-play transactions, either by providing the child with autism with strategies for approaching another child or helping the typically developing child find ways to engage in play (Shivers & Plavnick, 2014).

Intervention with the help of siblings of children with autism has more advantages than peer-to-peer intervention. This is because the sibling relationship is more permanent and stronger than that of peers and siblings are the best models of language, social behavior and play for children with autism (Shivers & Plavnick, 2014).

Educating siblings of children with autism improves their social behavior for three reasons. First of all, the behavior of the brothers is simplified and thus the perceptual demands of the children with autism are reduced. This makes them feel more comfortable, releases them and responds better to external stimuli (Shivers &

Plavnick, 2014). Second, by simplifying the brothers' behavior, they "release" their intention to work better with the community. Finally, the brothers insist on getting a response from children with autism, and so children are beginning to become familiar with the nature of the commands and become increasingly interested. So, through the game, one acquires another social skill (Shivers & Plavnick, 2014).

Although many researchers have found peer-to-peer social intervention to be highly effective (Ferraioli et al., 2012), studies involving children with autism and their siblings are few. In one study (Tsao et al., 2006), they trained a child's big sister with autism to modify their behavior through addictive learning to fit beads into a thread. Research has shown that children with autism can be helped by their siblings and acquire functional abilities in their natural environment. Many siblings of children with autism do not associate with their siblings as they experience their lack of response and problem behavior (Tsao et al., 2012; Venturella et al., 2019). The solution is to educate siblings of children with autism and to acquire the skills that will allow them to connect with their siblings (Özen, 2015).

UNIT 2.5

THE ROLE OF TEACHERS

2.5.1 Play in the education of children with autism

The role of the teacher in the school is to spend most of his time working with individual children or small groups, to circulate among them offering his help whenever needed, and to evaluate their actions and interactions (Papanikolaou et al., 2018). The teacher makes sure that the environment is interesting for the children, adding or removing materials or corners, proposing ideas, becoming a part of their game and following their ideas, etc. When planning, it is good to take into account the views of parents. When implementing the program, the teacher can inform parents by appointment, by letter, by telephone, of what is happening in the classroom, and by inviting them to participate in activities or separate classroom events. Parents can also help evaluate the effectiveness of the program (Schertz et al., 2017).

Teachers can support and improve family and school collaboration. According to Comer (2007), children need emotional support, and such support can be generated from the environment efficiently, when family and school teachers work together. Furthermore, Rich (2005) points out that one of the effects of parental involvement in school curricula is to improve the behavior of children as well as parent-teacher relationships. The most important principles for more effective family and school collaboration (Sakellariou, 2008):

- ✓ Family and school collaboration should focus primarily on prevention, not reaction. Teachers should address all families during the pedagogical process.

- ✓ It should be dominated by sensitivity and respect for the cultural background of children and their families.
- ✓ It should recognize and value the significant contribution of parents, regardless of their educational background.
- ✓ Family-school collaboration will be effective if it is based on mutual respect and trust, and if parental support is promoted, through positive, meaningful, two-way communication between school and home.

The need for the child's love, sense of security, recognition and acceptance, which are necessary for a smooth psychosocial development, are addressed within the family and school (Zisis et al., 2019). Within the family and school, the child with autism acquires new experiences and knowledge, takes responsibility, learns the boundaries of human behavior by regulating his or her instinctive impulses, discovering himself or herself, slowly becoming independent by doing things alone and socializing with joining his peer group (Papanikolaou et al., 2018).

We understand that school and family play an important role in the development of a child with autism and are role models for these children. Malfunctions either in the family or at school can cause children with psycho-emotional problems, behavior problems, difficulties of adaptation in children (Malikiosi - Loizou, 2012). Teachers value learning difficulties and problem behaviors that impede the learning process as compared to children's interpersonal behavior problems. Specifically, teachers attribute school-related problems to external factors, such as the lack of effort and interest on the part of these children, the low socioeconomic level of the family, and the degree of parental involvement at home and school (Μαλικιωζη - Λοϊζου, 2012).

Especially in the case of children with autism who require special handling and greater classroom support, effective learning can be achieved through a more active

and playful way (Stamatis, 2013). Teaching play is an important learning opportunity and children with special educational needs should have access to it (Stasinou, 2013). These children in every time or educational phase of their lives need opportunities for play and learning through play (DfES, 2004). Mortimer (2001) discussed key aspects of learning in the following five areas:

- ✓ Emotional, personal and social development
- ✓ knowledge and understanding of the world
- ✓ reason and communication
- ✓ expressive and aesthetic development
- ✓ physical-kinetic development

In these five areas of learning and development, children-based play activities can be contributed either by objects, or by free play, theater play, digital, as this educational tool provides children with pleasure, internal motivation, a freedom, active participation as well as the element of pretense or imitation (Tsihlaki et al., 2010). Of course, the relevant literature argues that play is not the same effective tool for all children with disabilities. Suitable for use and is an excellent tool for students with autism. However, even in this case, the teacher can and must teach the child how to play, engage in this process so that the child learns to use the game to learn as much as possible (Stamatis, 2013).

Although children do not play to learn, however, play is both a way of learning for children and a way of learning how to learn. Through the game, learning processes are stimulated and reinforced (Stamatis, 2013). Repetition, practice, exploration, discovery, synthesis, imitation, memorization are just some of the basic learning processes. Children also develop skills that are inextricably linked to the learning process through play (Tsihlaki et al., 2010). Engagement, self-regulation, self-

esteem, confidence, cooperation, internal motivation, perseverance are skills necessary for learning.

Playing as an activity is fun, effortless and free of extraneous purposes, mainly driven by imagination, is biologically dependent (a natural need for playful human nature) and has great social, cultural and pedagogical significance (Stamatis, 2013). Accordingly, the teaching process by adopting the game as an educational tool can be organized more effectively and more pleasantly, giving all students opportunities for participation, action, tension and relaxation (Tsichlaki et al., 2010).

Play contributes to the development of children at many levels, emotional, psychological (sense of self-esteem, joy, satisfaction), social, communicative, cognitive as well as enhancing their motor or visual-motor skills (Stasinis, 2013). In particular, in the field of special education teachers have emphasized the special value of play in the development of programs for children with autism (Stasinis, 2013), as an attractive and effective means of helping children to open up and communicate in engaging roles, to cultivate imagination. to take initiatives, design objects, and co-exist and collaborate with other children with a common goal.

All children, and children with autism, need the game because it is how they learn and grow. Play is an activity for everyone and educators and school programs must provide developmentally appropriate play opportunities that meet the needs of children with autism (Tsichlaki et al., 2010). Children with special educational needs and disabilities are no different from other children. It's just as exciting, though admittedly more difficult for these kids, to show off their playing skills.

Toys practice and expand a wide range of abilities and skills and thus contribute to improving individual abilities and maturing children's personality. Play is associated with both the physical and cognitive as well as the emotional and social

development of the child. That's why Piaget (1962) noted that play is not only an expression but also a prerequisite for the child's development.

During preschool, children experience structured time that can be both fun and educational at the same time. They learn how to connect with their peers, how to follow instructions and how to use a program: all of these skills will prepare them for school (Jones et al., 2018). For children with autism, there are some pre-school activities that work particularly well and help them to concentrate and learn actively.

Both parents and teachers are very interested in children. That is why they must work together to achieve the best development of each child (Stamatis, 2013). Parents know certain aspects of a child's life that teachers do not know, and teachers know other aspects of a child's life that parents are unaware of. By sharing their knowledge, parents and teachers achieve a fuller understanding of the child (Jones et al., 2018). Both parents and teachers are very interested in children. That is why they must work together to achieve the best development of each child.

2.5.2 Classroom reinforcement techniques

Helping autistic children play normally is very important. Sensory play will teach young children about their bodies and objects in their environment. The manipulative and exploratory game will teach older children more about their objects and properties and how they can affect the world around them (Thiesen et al., 2014). "Hard" play and energetic physical play will teach infants motor skills and whole body interaction with others and objects in the environment. Social play will teach them social relationships and how to get involved in them. The pretender, whether social or solitary, will teach them how to remove their thinking from the experience

they are experiencing at the moment and how to use symbols and representations to achieve this way of thinking (Ozaydina, 2015).

Lack of play skills exacerbates the child's social isolation with autism and highlights their differences from other children. If improving kids with autism in their game offers pleasure, a sense of dexterity and motivates them to play, then that is of itself very important. In addition, play in children with autism is valuable because it is a means of expressing oneself (Thiesen et al., 2014). We can learn a lot about a child by watching them play and if children have feelings and thoughts that they cannot express in words, they may be able to express them through their play (Wilkinson et al., 2016). Also, the development of play skills in children with autism is necessary because incomplete, limited or even missing play skills prevent learning opportunities and successful integration into the classroom. Integrating children with autism into the mainstream school, without systematic intervention strategies that promote play and independent child progress, is impossible to achieve (Welch, et al., 2016).

Thus, teachers should use child-centered play augmentation techniques in their classroom and implement appropriate intervention programs to develop the game. The incorporation of play into intervention programs enables the child with autism to develop their language and symbolic thinking (Wittke et al., 2017). Some use behavioral therapies in the education of children with autism. However, behavioral therapies have limited potential for generalization in new, different contexts.

The intervention program should focus on addressing the causes of problems in children's play with autism rather than addressing the symptoms of problem behaviors in play (Wittke et al., 2017). Possible symptoms, for example, are that the child always does the same thing in the game, or that he breaks everything or that he

does not play with other children. These are the visible behaviors. The teacher must address the causes of these behaviors, for example, not understanding the rules of the game, not understanding social behavior well, not understanding the language code of the game, etc. (Wittke et al., 2017).

Some successful game enhancement approaches that the teacher can use are non-directed therapy, pilot reaction training, and integrated play groups (Bagatell, et al., 2015). Indirect therapy is used in children with severe communication difficulties, such as children with autism who have not yet reached the early stages of pre-linguistic social interaction and communication. In this treatment, the teacher works one-on-one with the child using standard play materials. The intervention is child-centered, non-interventionist and does not govern a defined structure (Bagatell, et al., 2015).

Pivotal Response Treatment (PRT) (Lei et al., 2017) applies to children with autism who are able to work one-on-one with a teacher-therapist or parent in activities designed to enhance specific skills play and increase the child's motivation to play (Morfidi et al., 2015). The intervention is adult-led and highly structured, while the intervention itself is based on behavioral techniques. Pilot response training "works" with a central-key behavior to change other behaviors (Lei et al., 2017). Central behavior is a behavior that is central to many functional areas. By positively enhancing central behavior, other behaviors are also positively reinforced (Lei et al., 2017).

Also, integrated Play Groups are aimed at older children who are able to start playing with peers. The immediate goals of intervention are to improve the level and quality of the child's play, while children with autism are taught to participate in social play in small groups (Carter, 2010). The long-term goal is to reduce the effects

of social isolation on the development of the child with autism, and is based on Vygotsky's theory that supportive social interactions play a very important role in formal development (Lei et al., 2017). Embedded play groups are an effective method of teaching play and social interactions between children with autism and peers of formal development within inclusive school environments (Carter, 2010).

Other successful play reinforcement strategies are the interactive teaching and training in a socio-dramatic scenario, using the child's obsessions functionally as a theme for developing a social play (Lee & Vargo, 2017; McCabe, 2016). But the use of music is also indicated in the development of children's play with autism (Φραγκούλη, 2014b). Live music, for example, can be used to make predictable transactions between the child and the teacher. Music intensifies the rhythm of a child's actions. Music adds interest and meaning to social and play situations. Music can also signal the beginning of a movement in the game or help the child relax at the end of the game (Fragouli, 2014b). In addition, children with autism are particularly fond of music, so playing music would be useful. It has been observed that children with autism are more likely to exhibit social involvement when their teacher provides physical or musical stimuli (Fragouli, 2014b; Fragouli, 2014a; Fragouli, 2013).

Another useful method is to use pictures and visual representations that will help the child become familiar with the game's steps and show them how to play (Morfidi et al., 2015). The use of photos to encourage game development has been successful in UK schools. The photos help the child develop "story scripts" for pretend play sequences. This technique captures the important events of a play story and the child is taught to place them in the correct order to construct the story (Morfidi et al., 2015).

Finally, studies have shown that educating or treating children with autism using digital media and educational toys offers several advantages over traditional methods (Ricciardi & De Paolis, 2014). Because people with autism are characterized by poor socialization and problematic social behavior, it is sometimes difficult for them to express themselves fully to the therapist and to express all their feelings and concerns with consequent ineffective treatment of their problems (Rias & Dehk, 2013). In addition, due to the problems they face due to autism, they are sometimes unable to attend treatment and even more so to complete all sessions of the therapeutic method they attend as they do not feel comfortable with the specialist and the environment in which the course progresses (Ricciardi & De Paolis, 2014). Therefore, despite the fact that there are and there are several intervention programs developed by specialists for people with autism, they cannot always be completed or achieved if people with autism have impaired social skills and show behavioral impairments.

2.5.3 Teacher development and organization of the game

In 2001, the National Research Council placed teaching children's play with autism among interventions that should prioritize the design and production of effective educational programs for children with autism (Wolfberg et al., 2012). This action demonstrates the importance of teaching the game in learning the skills of children with autism.

Teachers should pay particular attention to how they teach and how to properly organize children's play with autism. Playing skills to be taught to children with autism must be consistent, properly structured and accompanied by the use of

appropriate language (Benitez et al., 2016). That is, the language must be simple so that the child can understand it.

Proper organization of the environment is also important. The environment should lead to game experiences and be suitable for teaching. Teachers need to design many structured play sections each day. Teachers take care to limit the things that children do during play. They must carefully choose toys to fulfill their specific goals (Morfidi et al., 2015). In this sense, a clear aspect that teachers should keep in mind is that the toys that autistic students usually prefer are those with visual interest (color, Lego games), as well as books where the child can touch them, puzzle, physical activity games such as trampoline, swing, climbing, games that combine music and dance, chess, snake (group games) and computer games (Zogopoulos, 2013). Finally, it is also important to plan the proper start and end of the play periods. However, not all children with autism should be considered to have fun with the same activities and therefore the age, ability and language abilities of children should be taken into account (Hellenic Society for the Protection of Autistic People, 1993) (Zogopoulos, 2013).

In relation to the game enhancement approaches mentioned, in order to ensure their best implementation, teachers should consider some issues (Kaliva, 2005, pp. 213-214):

- ✓ «They need to understand that play has an educational role and is not just a reason for a break or a way for the child to spend time.
- ✓ They must set one goal at a time for each activity of the game that is called upon to conquer the child.
- ✓ They should try to take into account the interests of the child.

- ✓ They should strive to develop in their child social, appropriate and imitative play.
- ✓ They need to teach the child how to play with dolls and puppets.
- ✓ They need to teach the child with autism how to follow play scenarios, add gradually new elements to it, and finally create their own script.
- ✓ Teachers should gradually introduce other people to the game (mainly peers and siblings) who have shown that they need to approach the child with autism and what to expect from it.
- ✓ Teachers also need to make sure that the child can play creatively on his own and that he can generalize his play to other objects and environments.
- ✓ Also, educators need to realize that a child with autism may never go beyond the level of play that has been taught. Thus, understanding symbols, for example, may be better approached in areas that are more directly related to curriculum objects such as teaching the child to read or understand maps or charts».

Finally, teachers should pay particular attention to break time. The break is the most difficult school time for children with autism. Usually, the usefulness of the break is for those children, who have the ability to manage their leisure time by choosing pleasant social activities (Augitidou et al., 2016). For children with autism, both leisure time management and social activities are areas of particular difficulty. The only way teachers can help autistic children cope with the chaos of recess by including it in their curriculum (Pui-Wah, 2010). For children with severe difficulties it is necessary that the break area be provided with a choice of activities to enjoy (swings, bicycles, balls, trampoline, sandblasting, toys, etc.) (Pui-Wah, 2010).

For some children, break time may be the time of relief because it gives them the opportunity to do their stereotypes and thus relax. However, in reality stereotypes are made when there is nothing else the child can do or does not know what to do (Diamadopoulos, 2009). For children with mild autism, and especially those enrolled in general education schools, it would be very helpful if the teacher promoted the child in group play and encouraged other children to engage their classmate in their group activities discreetly. Of course, in order to succeed in this endeavor, the child with autism must be aware of everything that will happen during the break and be well aware of the rules of the game (Diamadopoulos, 2009).

Teaching spontaneous play to children with autism is not easy and it is uncertain whether efforts to develop play skills will have a lasting impact on their behavior. Play, however, should be a valuable part of the school curriculum for students with autism and facilitate all aspects of their development (Smith et al., 2013). There are not too many teachers who use the game simply to get their students busy and to take a break or to be able to complete an activity that they do. The game in children with autism should not be limited to a repeated stereotype, but become a productive opportunity for learning and socialization (Mathur et al., 2015).

2.5.4 Playing as a therapy for autistic students

The form of play therapy described above is not exactly the same as play therapy applied to children with autism. Most specialist therapists who use play therapy in children with autism actually apply the therapy based on the Floor Time model (Silderg et al., 2017). Floor Time is a game enhancement technique that builds on the interests and insights of autistic children with the goal of enhancing their

children's social and communication skills. This model was developed by Greenspan for preschoolers with autism. It focuses on developing relationships and feelings (Silderg et al., 2017). It is essentially a special 20 – 30 minute play time where the child and the teacher or therapist sit on the floor and the child is allowed to play alone. The adult is simply trying to follow the child's directions and interests (Woolf, 2014). The toy, in this model, is child-led and adult-supported. Floor Time provides opportunities to transform the conservative and stereotypical play of children with autism into more important and developmentally beneficial behaviors. It broadens the themes of play in children with autism and helps children with autism develop relationships with others (Neely, 2016). It also enables autistic children to develop their imagination, creativity, more direct communication with their surroundings and, ultimately, to experience success.

The use of the toy in the treatment of children with autism has significant benefits for these children. Autism is a serious social-communication disorder. Children with autism are extremely difficult to relate to others, especially their peers, in normal ways. The game is a great tool that can help children with autism participate in interactions (Silderg et al., 2017). When used properly it can also allow young children to discover their feelings, their environment, their relationships with parents, siblings and peers. Play therapy can be taught to parents and parents can become their child's healers while creating a stronger and more meaningful relationship with their children. Several researchers (Silberg et al., 2017; Neely, 2016; McCloskey, 2016) have highlighted the benefits of the game as a means to improve skills. Research suggests that with game, children with autism learn to respond appropriately to questions, to engage in appropriate and spontaneous social transactions, and to develop aptitude (Silberg et al., 2017). According to Neely

(2016) play therapy helps to develop autonomy and adaptive play, but does not help reduce the typical behaviors of autistic children. While McCloskey (2016) claimed that play therapy develops the already existing capacity of children with autism to build relationships. Also, through the interaction during play therapy, the child with autism develops and personalizes. Another particular point is that teaching the game to children with autism increases their thinking flexibility. In particular, it has been reported (Locke et al., 2016) that teaching play helps reduce repetitive and rigid behaviors and encourages the development of children's communication. But, with proper play instruction, children with autism can learn to participate in fantastic play with other children (Locke et al., 2016).

Play therapy has, therefore, emotional and social benefits for children with autism, and especially non-guided play therapy. In non-instructional play therapy, the child chooses the rhythm of their play and thus increases the child's autonomy in the play area (McCloskey, 2016). In addition, game therapy's orientation to children's and adults' emotional reactions and therapist's use of empathy to penetrate the child's solitary inner words direct areas of development where people with autism have severe deficits (Locke et al. al., 2016).

In non-instructional play therapy, the child with autism becomes more capable and willing to do things on their own. This increases his initiative, initiates interactions by himself and his game (Silderg et al., 2017). The child plays with constantly incorporating new activities. He also learns to accept rules and restrictions.

In therapy through play, the child with autism develops a bonding relationship with the therapist and interactions between them increase. It also increases and improves visual and physical contact and binary play. Non-instructional play therapy provides the right conditions for children with autism to develop therapeutic relationships,

while providing children with autism as well as other children with emotional problems, emotional security and relief (Locke et al., 2016). It provides a protective environment that emphasizes adult play and therapists' acceptance of the ability of autistic children to promote therapeutic change on their own under supportive conditions.

Play therapy leads to the growth and development of children's play with autism. The child is more focused on the game. In addition, his preferences for game activities change (Locke et al., 2016). The child now seeks activities that involve combined attention, and direct social interactions with a therapist, e.g. toy with bricks (Silberg et al., 2017). There is also a growing interest in games with symbolic properties, for example, doll house, telephone, etc.

The teacher usually sits on the floor with the child. It shows him toys that attract the child's interest and lets him choose whatever toy he wants (Silberg et al., 2017). If the child picks up a train for example and slides it continuously forward and backwards, then the teacher picks up another train and places it in front of the child's train to "block the road". If the child responds verbally or non-verbally, then a relationship has begun to form. If it does not react at all, the teacher should look for other toys that may be of interest to the child (Rudy, 2006; Hansen, 2013).

Another point just as important the teachers working with the child are slowly trying to develop some skills, such as sharing, waiting for their turn, imaginative skills, but also abstract thinking skills (using the Puzzle) (Locke et al., 2016). In addition to, the child can develop social skills. Specifically, as a child with autism learns to relate better to others and tolerate the presence of other children in their play, other children are integrated into their play and the child begins to develop more complex social skills (Schaefer et al., 2014; Hansen, 2013). Many parents

believe that they can apply the game therapy themselves at home, using videotapes and books as guides (Silberg et al., 2017). Other authors such as Locke (2016), are based on the experience of trained specialist educators and therapists. In any case, teachers should provide parents with appropriate tools to play with and consult with their children at home.

Other therapies, such as behavioral therapy, may complement the treatment of children with autism through play (Locke et al., 2016; Hansen, 2013). Play therapy is not as effective in areas where behavioral therapy succeeds as in reducing stereotypical behaviors, but it is more effective in developing autonomy, initiating combined attention, the child's ability to focus on what he or she does, pleasure and fun through play, developing interaction with the therapist, and developing symbolic play in children with autism, areas where behavioral therapy fails (Solomon et al., 2012; Preissler, 2006). Indeed, many educators and experts argue that children who are taught how to play by behavioral techniques do not learn to play in a genuine, authentic way (Luckett & Bundy, 2007).

Thus, every treatment program that the various specialties for children with autism carry out, whether they are special educators, speech therapists, occupational therapists, or social workers, must include play (Schaefer et al., 2014). Using the toy will facilitate their work and lead them to better results in the progress of the child with autism (Solomon et al., 2012).

A key tool for occupational therapists dealing with children with autism is intentional activity and play. The use of activity as a therapeutic agent separates occupational therapy from other specialties (Robertson, 2017). The child explores the world around him, his emotions, colors, shapes and other basic concepts through the toys offered by the occupational therapist (Schaefer et al., 2014). Using the game,

occupational therapists can develop some skills and abilities in autistic children, such as the ability to concentrate for a sufficient period of time, to be self-employed and not stereotyped, to handle and to play with objects without flying them or breaking them (Solomon et al., 2012). Occupational therapists also use play to improve a child's fine motor skills (writing, cutting, puzzle and small objects use), as well as rough motor skills (running, jumping, jumping) and child balance (Schaefer et al., 2014). With the game they try to increase the child's ability to explore a new environment on their own. Play also enables children with autism to express their emotions, increase their self-esteem, and develop self-care skills (eating, dressing, etc.) (Solomon et al., 2012). Of course, occupational therapists with the toy also enhance the child's socialization.

For children with autism who have severe problems with concentration and lack of communication, a time management program can be implemented by teachers using photos and images that combine play (Robertson, 2017). The advantage of such a program is that it can be implemented even when children with autism do not speak at all (lack of speech ability). The basis of the image usage program is based on the following four steps (Xanthi, 2015): 1) The child takes the picture of a toy in his hands. 2) The child goes to the place where the hand-painted toys are located and finds the desired toy. 3) Brings the game to the table and deals with it, following the instructions or following the instructions given by the teacher. 4) When the game is over, give the picture to the teacher and return the game to its place.

The process resumes with a new image. The pictures are placed underneath each other, glued to colored cardboard, with the child's photo above all activity pictures (Xanthi, 2015). All construction is glued to the wall. This process increases the concentration and duration of the child's attention, which is why the child is invited

to go to a place with lots of stimuli (toys) and to go back with the right toy (Xanthi, 2015). It also increases its visual perception, as it begins to recognize objects from an image. The child with autism learns through this process the concept of 'after', so he is trained to be able to wait for something he wants. Finally, the child's ability to communicate also increases, because they will later be able to point to the picture and state what they want to do (Robertson, 2017).

The above procedure is relatively simple to train a child with autism. It can also be used to train a child in daily life activities and in keeping up with a great day program. The use of images is especially useful for children with autism (Xanthi, 2015). These children need a routine program, each step of which must be predetermined and expected. The image as it is inserted, satisfies their need for a routine, while displaying it to the adult provides them with a way to express and communicate (Robertson, 2017).

In short, the gaming experiences are essential for all children, and therefore for children with autism, if they are to learn, develop and fully participate in childhood culture (Robertson, 2017). Moreover, play is a guaranteed right for all children: "The child must have full opportunities for play, entertainment and education, society and public authorities must promote respect for this right" (United Nations Declaration of Human Rights, 1948, principle 7; Gordon, B., 2016).

2.5.5 Teacher views on game use

Teachers, therefore, are more likely to use imitation in playing with children, believing that adhering to a specific structure - routine improves children's play with autism. The literature emphasizes the importance of maintaining a specific structure

when designing learning and play environments for all children with disabilities and especially for children with autism (Welch, et al., 2016). When the place of play does not have a specific structure and predictability, children are disturbed and their stereotypical behaviors may increase (Kiparissos et al., 2017). Teachers who work with children with autism on a daily basis know that adhering to a specific program and a specific structure or routine is particularly helpful to those children. Therefore, maintaining a specific structure also improves children's ability to play. Moreover, teachers who work primarily in special schools where there is a well-known structure for the education of children with autism and a specific curriculum may perceive the necessity of play to develop children's abilities (Kiparissos et al., 2017).

Teachers are more likely to use the guiding game in the education of children with autism because they believe that by observing and interacting more with children's play they can better evaluate children's learning and their abilities, while leaving children free to play they can get a good picture of their strengths and weaknesses (Augitidou et al., 2016). It is important that teachers, while often guiding the play of children with autism in the classroom, do not guide the play of children during breaks by providing specific play activities. Break time is a basic requirement and you should pay special attention. Break time is very important for creating friendships between children. Playing during breaks is the main opportunity to create friendships between children. However, the time taken for breaks is limited, due to the increase in teaching time (Avgitidou et al., 2016). The break is the most difficult school time for children with autism. The lack of specific structure and predictability, the noise and the presence of many children during the break create stress for children with autism. In addition, their inability to read other children's body language makes it difficult to learn social rules and make friends with other children. The only way

teachers can help children with autism to cope with the chaos of the break is to integrate the break into their curriculum (Avgitidou et al., 2016).

Teachers' use of the game, the placement of the game in the educational system and the curriculum, factors that influence the development of the game in the classroom and the evaluation of children with autism through play are important factors in enhancing and the skills of children with autism (Lee & Vargo, 2017). About the use of the game by teachers, they use the game as a means of educating children with autism. The majority of teachers often use a guiding game, that is, they guide children in play with specific activities. Also, teachers often use imitation during play, as they emphasize activities that interest the child and give him pleasure. Likewise, it is equally important to always enhance the appropriate children's reactions to the game. Another important element is the placement of play in the educational system, with the aim of providing children with the opportunity to learn new things, develop skills and competences in an organized and coordinated manner (Lee & Vargo, 2017). For this reason, teachers consider play education to be very important and believe that it must be an integral part of the curriculum. For this reason, more time should be devoted to the school's curriculum for playing with children with autism, with the participation of the teacher (Zogopoulos, 2013). However, there are cases where teachers find that sometimes only classroom conditions favor the use of play as a means of educating children with autism. In particular, it is emphasized that program requirements, materials available, and school space sometimes facilitate game development (Zogopoulos, 2013). Of course, the work of teachers is facilitated when there is a positive attitude of the Ministry of Education towards the development of the game. Thus, teachers trying to implement their curriculum, the Ministry of Education sometimes provides them with the

appropriate materials and appropriate training to facilitate their development of the game (Zogopoulos, 2013).

Another point of interest is the need for education and training on the education of children with autism through play is a basic need (Dermitzakis, 2017; Labadari et al., 2018). International literature according to Stidham (2015), has shown that, if general and special education teachers do not have the appropriate training to effectively train students with autism, their education will not be of quality and will have no effect that students with autism need to improve in areas that have major deficiencies. At the same time, if teachers do not provide frequent and meaningful training, it creates stress for both them and the students in the classroom, when this includes a student with a disability and even with autism (Akgul, 2012; Ross Hill, 2009). In general, resistance to inclusion is demonstrated by educators who have limited training in autism (McGillicuddy, & O'Donnell, 2013). Unfortunately, general education teachers often lack the experience and training needed for effective intervention in students with autism in their classrooms. This is because historically, special education teachers are the ones who are involved in the education of these students (Fuchs, 2010).

Regarding the class factors that influence the development of these children's play, adhering to a structure, a routine when playing with a child with autism often improves ability to play. Also, the classroom environment, that is, how it is organized, decorated, always influences the child's play with autism. Finally, evaluation of children with autism through play provides useful information on children's cognitive development, learning and behavior (Dermitzakis, 2017). The game often provides useful information about the child's preferences and interests. In addition, assessment through play illustrates the shortcomings and weaknesses of

autistic children, as well as changes and advances in their behavior. In addition, teachers are able to extract useful information during the play of children with autism in a variety of contexts (school, home), so as to obtain a more complete picture of children's skills, while at the same time it can be done through play and the teaching of other courses is better (Dermitzakis, 2017).

The contribution of play to children with autism brings benefits, as well as contributes to the development of children with autism. However, teachers through play may realize that children with autism often express their emotions through play (Dimopoulou et al., 2015). Regarding the reactions of children with autism at play, children prefer to play with teachers and not with other children in the classroom because they feel more secure and confident. Children with autism often maintain eye contact during play, or smile (Kiparissos et al., 2017). Also, teachers through the game realize that children with autism often express their emotions with greater intensity, while they believe that children with autism sometimes obey rules and restrictions during play. Likewise, they believe that there are times when these children take initiative in the game, and that these children use the toys appropriately and creatively (Kiparissos et al., 2017).

Due to the stereotypical behaviors and persistence they present, children with autism prefer to play with particular toys, that is, they prefer to play mainly with cars and in general with moving toys, but also with different textures, light and repetitive sounds, to play and with dolls, with doll houses, with animals, with teddy bears, with little dolls with sounds, or with something special that attracts their attention (eg a part of an object-toy, such as the big nose) (Stamatis, 2013). Children also play with balls and balloons, but also with puzzles and construction toys, such as bricks and toys (screws, carpenter tools), tombola, identification and memory games, and jenka.

They also like pantomimes, role-playing games, and games that satisfy their obsessions and stereotypes. In addition, they have a lot of fun with computer games, bowling, wreaths, and beads, ball games and music. Such games are used by teachers effectively in educational practice (Stamatis, 2013).

Teachers use the game in a variety of ways in their intervention program during their educational process. It is characteristic that they are trying to implement a specific intervention program through the game as well as the type of program they are implementing (Xanthi, 2015). They use card games to learn numbers, ways of thinking, and most importantly to develop communication, visual and emotional contact with children. They also use the game to learn how to obey autistic children in commands that help them acquire social skills. In particular, they use role-playing games in their program. They implement in-game programming mainly to enhance children's interaction, to learn colors, time sequences, and sequence learning in play (Volkmar et al., 2014). Some teachers use music and play alongside a multi-sensory approach to stimuli provided alongside play and music. They also take advantage of flexible zone time and organize a group game involving all students in the classroom to integrate the child with autism into different groups of children. The composition of these groups changes every time and this change is signaled visually. They also contribute to the social acceptance of a child with autism (Xanthi, 2015). Finally, several teachers use Makaton hardware and implement a game program using both the behavioral model and the TEACCH program. On the playground, teachers use the classroom for children with autism. However, according to the teachers, children sometimes play outside of the classroom (Volkmar et al., 2014). These are mainly the gym, the school yard, the stadium, the park, the music room, the school auditorium, and places where they work and where the child can play with his or her

classmates, eg. x. during physiotherapy and occupational therapy. As for break play, teachers organize children's play breaks with specific activities, but then leave the children free to do whatever they want. However, a large number of teachers are guiding the child's play in the classroom, believing that this way the role of play becomes more effective (Kiparissos et al., 2017).

In collaboration with specialties and parents, teachers often work with both parents of children with autism and other specialties (such as often working with social workers, speech therapists, psychologists, occupational therapists, physiotherapists and trainers for the exchange of information, observations and the implementation of a joint program of activities, such as a program for training children in traffic or learning to shop in supermarkets) to facilitate their work (Solomon et al., 2012). Thus, teachers often set common goals, work alongside and assist in the execution of instructions during play, as well as ways to help children play. Of course, a joint curriculum with specializations can only be implemented and adhered to when experts have the same philosophy of educating children with autism (Lei et al., 2017).

According to the teachers, the gym is the place where the play is mainly played outside the classroom. So often, they work with the fitness trainer at the gym. The trainer creates different groups of children, according to their abilities, and together with the teachers develop playing skills in children with autism (Eskicioglu et al., 2016). Teachers also believe that playing in the gym becomes more organized and more enjoyable for children. The collaboration of teachers with speech therapists is enough of speech therapists and follow a common line of communication in play and in all activities at school (Solomon et al., 2012).

However, one issue that is a difficulty in their program is that they are not given advice on using the game. The unique information they get about autistic children comes from the internet, books and tutorials from private providers, and includes suggestions for those with autism, the curriculum for autistic children created the Pedagogical Institute, but also some specialties (psychologists, occupational therapists and child psychiatrists attending the child) (Tsihlaki, 2010).

The context (special school-general school) in which the child with autism is included for many teachers is considered to be of particular importance and attention. Many educators believe that special school is suitable for the better development of teamwork in children with autism (Dermitzakis, 2017). Teachers argue that integrating children with autism into mainstream school is difficult and that children with formal development cannot understand the behavior of children with autism and play with them (Stamatis, 2013). In addition, as educators typically point out, it is necessary first to integrate autism into a specialized school-provided context, and later to integrate formal learning with children and to develop team play among them. In the special school the program is tailored to the needs of the class and thus there is scope for modifying it (Tsihlaki, 2010). Also, children in special school are more inclined to develop cooperation with the child with autism (Dimopoulou et al., 2015). The teachers who support the development of the play in the special school consider that the classes there are better organized and configured and there is a dedicated staff, special educators who can intervene and help in the development of the group play. In addition, in special school play is a separate subject for children with autism and is taught separately (Volkmar et al., 2014). Given the difficulties of for them in imitation, teachers believe that it is difficult for children with autism to learn to play in the mainstream school, which is also not provided by the Curriculum

(Xanthi, 2015; Student Curriculum with Autism-SCA, 2003). In addition, the child develops team play in the special context (where tolerance for social feelings is greater and therefore less likely to be recorded team play), then can develop similar play in the general school (Stasinou, 2016).

Of course, there is also the opposite view, which argues that the general school allows for the development of cooperative play for children with autism, because it is there that children with autism are challenged by typical developmental children to participate in group play (Giannopoulou et al., 2018). They mimic, help and support children of typical development and thus develop and participate in various play activities. Finally, there is the view of some teachers who find that neither the general school nor the special school can be considered as the best environment for developing group play in children with autism (Labadari et al., 2018). And this is based on the view that where cooperative play develops depends on the severity of each child's autism disorder. Kids who are more functional and better cognitive can develop cooperative play in mainstream school, other children who are more "deep" in the autism spectrum, with severe social problems, communication problems, or self-harm behaviors, will find it difficult in mainstream school. That is to say, they cannot distinguish between special and general school and that the behavior of each child with autism plays an important role (Labadari et al., 2018). Also, these teachers, who do not differentiate between the two frameworks, believe that without the necessary guidance from the teacher these children will not be able to develop cooperative play, neither in special education nor in general school. Appropriate developmental frameworks for group play in mainstream schooling are the inclusion sections where typical developmental children can help with their imagination and co-operation problems faced by autistic children (Bibiri, 2017). However, they

believe that this cannot be done even in schools where integration is not working. Structured curriculum and expert pedagogue input is required (Riccomini, 2016). It is important that either in the special school or in the integration classes, the game has to be structured and guided by the special educator (Bibiri, 2017). It is also possible that children with autism will develop team play in schools specifically for children with autism, where the program will be more organized and will follow specific methods or in a structured environment, where they will be guided by specialized teachers and specialties (Bibiri, 2017). Such structured environments are social skills groups that emphasize the characteristics that the child must learn during group play. In these groups, the game is structured and performed at the pace of each child.

UNIT 2.6

Current status, quality of life, relationships and coping strategies, social support of play

Play is one of the main occupations of the child, as well as a key element in all educational programs. The necessity of play in the educational process of children with Special Educational Needs (SEN), especially of children with autism, is a key factor in developing skills that have a significant impact on the learning process (Lee & Vargo, 2017). Play contributes to the development of many skills such as social, kinetic, linguistic, aesthetic, and lays the foundation for the proper development and shaping of the personality of children with autism by making the learning process enjoyable and creative (Schertz et al., 2012). The purpose of this research proposal is to provide parents and teachers with special education and training views on the importance of play in the learning process of children with autism.

Play is an essential activity for all children and children with autism. Through the play the child shapes and forms a healthy personality. Acquires knowledge, motivation, skills and values that are important in understanding the social environment in which it operates and evolves (Augitidou, 2016). With play, the child develops linguistic, social, spiritual, and emotional functions that will help him or her gain self-control and social adjustment and social integration (Bradshaw et al., 2015; Schertz et al., 2012). Play is a process of integration and creativity with the child's peers as they learn to interact with and manage different roles in the play (Augitidou, 2016). That is why the role of parents and teachers is important. In particular, play interactions between parents and children with autism can provide these children with opportunities to practice and learn new skills (Dawson et al.,

2010). Teachers through school curricula can provide developmental play according to the abilities of each child (Sakellariou, 2012).

Educational research in recent decades has highlighted the need for play in the educational process of children with autism, concluding that these children learn, develop, and enjoy through play (Schertz et al., 2018). The success of the game is not as important as the interaction and joy these children will experience in their lives. This gives these children the opportunity to explore their surroundings and begin to become aware of the various things and materials around them through the senses (Woolf, 2014). They begin to smell, to see, to hear the sounds of their surroundings in order to experience the world around them. According to Piaget, children act on things and acquire knowledge (Diamadopoulos, 2009). Parents need to be taught how to structure and rhythm their play interactions in order to create a framework that enhances the child's initiation of social and other interactions. (Dawson et al., 2010). Equally important is the cooperation of parents with teachers who need to be consulted regarding the play of children with autism. For this reason, teachers need to organize structured school curricula, but also through experiential teaching practices to provide learning opportunities both inside and outside the school (Estes et al., 2015).

Play is a means of learning, interacting, developing skills, communicating and building the child's identity. They acquire a social role and learn social norms through communication and interaction with their peers. Research findings show that playing with children with autism teaches them to communicate, to solve different situations in their own way, to express emotions and desires (Sakellariou, 2012). We also find that through play, teachers can better understand and interpret the needs of

the child, effectively identifying teaching goals and educational planning (Augitidou, 2016).

The use of toys influences the development of social skills of children with autism, as well as contributing to the development of linguistic, motor and aesthetic functions. The child with autism is trained to acquire adaptability, self-control and reasoning skills (Veiga et al., 2016). The experiences gained through structured play encourage creativity, imagination, and the acquisition of basic skills such as mobility. At this point, curriculum intervention through school curricula and structured education is an important factor (Lynch, 2015). The teacher by providing appropriate developmental play opportunities responds to the needs of these children by helping these children acquire better adaptive behavior (Pui-Wah, 2010).

The importance of play in the education of children with autism, as well as the teachers' views on the role of play in the education of these children, has been of interest to researchers. Playing is the child's "job". It is the medium of expression, but also the basic way of learning and developing the child. According to Oikonomidi (2012), appropriate play activities significantly influence a child's development by meeting their learning needs. Thus, children gain active involvement, handle the environment, come in contact with a variety of materials or objects and activities in a variety of contexts (indoor or outdoor such as school, parks) (Varea, 2016). This reduces the tendency for isolation and passivity by engaging in various recreational activities.

Augitidou (2016) states that the role of teachers is important as it is the one that facilitates, organizes and defines the functioning of the game guiding the learning process. It is the one who will implement this practice that will facilitate the child to

understand thoughts and feelings, but also the expressiveness and exploration of the game (Jones et al., 2018).

The development of social, aesthetic / visual, linguistic and emotional skills of children with autism are influenced by the play, which presupposes the teacher's teaching intervention by influencing the development of these skills. Research has shown that play is an important element in the overall development of the child. It affects cognitive-spiritual development as it focuses attention, thinking, memory and imagination (Brock et al., 2016). At the same time, it lays the groundwork for language development as the child is encouraged to create stories, to express thoughts, desires and feelings, to communicate and to talk (Else, 2014). On the emotional level, play evokes pleasure, expression of various positive and intense emotions, such as joy, calm, contentment, anger, fear (Else, 2014). Also, the physical - kinetic development of children through play is considered important as it develops flexibility, endurance, coordination of movements, exercise of fine mobility, strengthening of the muscular system, better breathing function. The game cultivates the child's aesthetic-visual skill by providing rich materials and giving them the opportunity to exploit them, developing their creativity, initiative and self-esteem (Kasari et al., 2014). Finally, group games allow the child to socialize and integrate in the group with their peers, as they are invited to communicate, collaborate and handle roles and rules within their abilities (Brock et al., 2016).

Research findings show that parents and teachers have an important role to play in the educational process (Kasari et al., 2014; Siller et al., 2013). It is they who organize, coordinate the play in order to facilitate the learning path of students with autism (Siller et al., 2013). In this effort they take into account the interests of the pupils, adapt the game to the needs and abilities of the children, select materials and

the way the activity will be carried out, while giving them the opportunity to observe the child during the play by enhancing and encouraging them. children's creativity and initiative at the group and individual level (Siller et al., 2013).

This study will explore the role of play in developing the skills of children with autism. In particular, it will study the importance parents attach to the use of play to develop skills such as social, linguistic, motor, cognitive, emotional and aesthetic. A second element to consider is teachers' views on the use and importance of play in the education of children with autism. In addition, we will emphasize the importance of appropriate play opportunities provided by parents and teachers to these children through school curricula.

Criteria should be laid down in order for teachers to be able to organize appropriate play conditions. Identify the skills that autistic teachers need to have. Know how parents and teachers work together to work together at school and at home. Define the strategies parents use to work with their children. To validate the educational opportunities offered by parents of autistic children. Identify aspects that enhance skills development in autistic children. Identify the factors that influence the motivation of children with autism.

Specifically, the therapeutic regimens used for the child with autism require that parents participate effectively in the therapeutic effort within the family, which is continually supervised by members of the therapeutic team (Neyyoshi, 2018; Solomon et al., 2012). Therapeutic programs that record positive outcomes require the creation of a home-based therapeutic environment and a dedicated child occupation 1-2 hours a day (Solomon et al., 2012). The therapeutic part of the home program is essentially a continuation of the treatment offered in a specific program. Parent involvement seeks to use techniques in the same spirit as practitioners of s

We will consider what are the views of parents who encourage their child with autism in the play, whether it be parallel play, role play, various other home games or some other outdoors. We can see the ways in which the child participates in the game, how he or she uses the various materials, how the play area is organized, and how the child acts in the play.

It is also important to note the involvement of specialist therapists, parents and siblings, as well as other peers in the process of social interaction of the child with autism. Another key element is the ability to follow a specific intervention program related to enhancing play-by-play interaction, psychotherapy intervention by a school psychologist, occupational therapy, speech therapy, sensory integration program, as well as game enhancement program, intervention through play for their child. Using the toy is effective because it helps communicate with other children, socializing the child and joining the group. Parents believe that the game develops the child's skills, communication and, in addition, that the child has fun with the game. Parents also find that intervention through play improves their child's eye contact, reason, and perception.

Children with autism have noticed that play improves their imagination and ability to adapt. Parents believe that if their child succeeds in the game, they will easily develop their writing and reading skills. As well, academic skills need to be "passed" through to all children and much more to children with autism. The game helps to improve the child's communication skills, while helping the child to become familiar with the surrounding objects, promoting the child's social integration and contributing to their imagination.

Another element to consider is the education of siblings of children with autism, which improves their social behavior for three reasons. First of all, the behavior of

the brothers is simplified and thus the perceptual demands of the children with autism are reduced. This makes them feel more comfortable, releases them and responds better to external stimuli. To what extent can children with autism be helped by their siblings and acquire functional abilities in their natural environment?

Another element we will explore is the use of the game by the teachers themselves. Specifically, teachers are more likely to use imitation in playing with children, believing that adhering to a specific structure - routine improves children's play with autism. Teachers who work with children with autism daily know that adhering to a specific program and a particular structure or routine is particularly helpful to these children (Welch, et al., 2016). Therefore, maintaining a specific structure also improves children's ability to play. Moreover, teachers who work primarily in special schools where there is a well-known structure for the education of children with autism and a specific curriculum may perceive the necessity of play to develop children's abilities (Kiparissos et al., 2017).

Teachers are more likely to use the guiding game in the education of children with autism because they believe that by observing and interacting more with children's play they can better evaluate children's learning and their abilities, while leaving children free to play. they can get a good picture of their strengths and weaknesses (Avgitidou et al., 2016). Do teachers take advantage of break time for play? Break time is very important for creating friendships between children. Playing during breaks is the prime opportunity for friendships among children. However, the time taken for breaks is limited, due to the increase in teaching time (Avgitidou et al., 2016).

What do teachers think about the placement of play in the education system and curriculum, the factors that influence the development of play in the classroom and

the evaluation of children with autism through play is an important factor in enhancing and improving the skills of children with autism (Lee & Vargo, 2017). About the use of the game by teachers, they use the game as a means of educating children with autism.

Another important element is the placement of play in the educational system, with the aim of providing children with the opportunity to learn new things, develop skills and competences in an organized and coordinated manner (Lee & Vargo, 2017). For this reason, teachers consider play education to be very important and believe that it must be an integral part of the curriculum. Thus, more time should be devoted to the school curriculum for playing with children with autism, with the participation of the teacher (Zogopoulos, 2013). However, there are cases where teachers find that sometimes only classroom conditions favor the use of play as a means of educating children with autism. In particular, it is emphasized that program requirements, materials available, and the school environment sometimes facilitate the development of the game (Zogopoulos, 2013), as well as the role of the Ministry of Education should facilitate teachers' efforts in this area. direction, providing materials, training.

The need for education and training on the education of children with autism through play is a basic need (Dermitzakis, 2017; Labadari et al., 2018). The opinion of general and special education teachers on the subject of inclusion needs to be considered. The context (special school-general school) in which the child with autism is included for many teachers is considered to be of particular importance and attention.

Concerning the class factors that influence the development of these children's play, adhering to a structure, a routine when playing with a child with autism often

improves a child's ability to play. Also, the classroom environment, that is, how it is organized, decorated, always influences the child's play with autism. Finally, evaluation of children with autism through play provides useful information on children's cognitive development, learning and behavior (Dermitzakis, 2017). The game often provides useful information on the child's preferences and interests. In addition, assessment through play illustrates the shortcomings and weaknesses of autistic children, as well as changes and advances in their behavior. In addition, teachers are able to extract useful information during the play of children with autism in a variety of contexts (school, home), so as to obtain a more complete picture of children's skills, while at the same time making the play possible and teaching the other lessons better (Dermitzakis, 2017).

The teachers can perceive that children with autism often express their feelings through play (Dimopoulou et al., 2015). Due to the stereotypical behaviors and persistence they present, children with autism prefer certain toys. Teachers use the game in a variety of ways in their intervention program during their educational process. It is characteristic that they are trying to implement a specific intervention program through the game as well as the type of program they are implementing (Xanthi, 2015). Some teachers use music and play alongside a multi-sensory approach to stimuli provided alongside play and music. They also take advantage of flexible zone time and organize group play involving all students in the classroom to integrate the child with autism into different groups of children. The composition of these groups changes every time and this change is signaled visually. They also contribute to the social acceptance of a child with autism (Xanthi, 2015). Finally, several teachers use Makaton hardware and implement a game program using both the behavioral model and the TEACCH program. On the playground, teachers use

the classroom for children with autism. However, according to the teachers, children sometimes play outside of the classroom (Volkmar et al., 2014). These are mainly the gym, the school yard, the stadium, the park, the music room, the school auditorium, and places where some specialties work and where the child can play with his or her classmates, during physiotherapy and occupational therapy.

In collaboration with specialties and parents, teachers often work with both parents of children with autism and other specialties (such as often working with social workers, speech therapists, psychologists, occupational therapists, physiotherapists and trainers for the exchange of information, observations and the implementation of a common program of activities, such as a program for training children in traffic or learning to shop in supermarkets , etc.), to facilitate their work (Solomon et al., 2012).

However, one issue that is a difficulty in their program is that they are not given advice on using the game. The unique information they get about autistic children 's play comes from the internet, from books and from attending relevant seminars conducted by private actors (Tsihlaki, 2010).

PART II
RESEARCH
PROCEDURE

UNIT. 3

METHODOLOGY AND RESEARCH DESIGN

This paper is a descriptive review of educational intervention in children on the autism spectrum through play. We explore teachers' positions and parent's positions on the use of play and its importance in educating children with autism (The way we choose to answer our research questions will be quantitative research).

3.1. Definition of the problem and objectives

The definition of the problem of the research is to explore the views of parents on the role of play in developing the skills of children with autism and the views of special education educators about the importance of play in the educational process with pupils with autism.

Objectives

As mentioned earlier, the main purpose of this paper is to identify the intervention in the education of children with autism using play, as well as to investigate the positions of teachers in relation to the use of play and its importance in the education of children with play autism.

- ❖ To determine criteria Teachers to be able to organize the right playing conditions.
- ❖ To identify the skills that teachers of autistic students should have.
- ❖ To know the way at which parents and teachers are employed in order that cooperation exists between the school and the home.

- ❖ To explore the support receiving teachers of autistic students to develop their profession.
- ❖ To Specify aspects that enrich the development of skills in autistic children.
- ❖ To establish the elements that influence the motivation of the autistic children.
- ❖ Assess the child's needs and learning course through play through play.
- ❖ Understand how teachers and other specialties, psychologists, social workers, speech therapists, work to achieve the child's healing.
- ❖ To specify the strategies that the parents use to work with his children.
- ❖ To verify the formative opportunities that one offers them the parents of autistic children.
- ❖ Know how parents and teachers work together to work together at school and at home.
- ❖ To enable parents to discover the particular benefits of playing with these children.
- ❖ Assess the needs and learning path of the child through play.
- ❖ Observe how children use toys.
- ❖ Understand how parents and other specialties, psychologists, social workers, speech therapists, work to achieve the child's healing.
- ❖ Get to know the way children with autism show interest with their siblings and peers.

Given the above objectives, the hypotheses are as follows:

H1: The support of the educational process with the use of the game is a factor that contributes to the development of empathy, practical perception, development of verbal communication, strengthening of cooperation and social interaction.

H2: Through the game they learn to be responsible, to express feelings improving their self-esteem and reducing feelings of anxiety, sadness, anxiety, aggression.

H3: The game affects the development of the social skills of children with autism, as they also contribute to the cultivation of language, motor and aesthetic functions.

H4: Teaching intervention through school programs and structured education is an important factor of a developmental nature, which responds to the needs of these children helping these children to acquire better adaptive behavior.

H5: The cooperation of parents and teachers is an important factor for facilitating their work, for achieving the generalization of the program's goals, for exchanging advice and for following a common program.

3.2. Methodological approach

The aim of this research proposal is the positions and views of parents and teachers of special education and training on the importance of play in the learning process of children with autism. The research was conducted in primary and secondary schools. The research population for the first research question is 80 parents of children with autism and for the second question there are 150 special education teachers in primary and secondary education. Our sample was selected as representative of the population. For this reason, we select selective sampling according to which we select for the sample the school members who are available to participate in the research. The questionnaire was used as a methodological tool, namely 2 questionnaires, one for teachers and one for parents. The type of questions is closed-ended and the Likert scale is graded from negative to positive and the research subject will be asked to choose one of the five points. This scale represents

5 points between which the distances are equal and we have used numbers to find the gradations of the variables.

The methodology of this research is the quantitative and descriptive analysis of the data (averages and frequencies) to identify the main trends in the responses of parents and teachers. For data analysis, we will use SPSS (Social Science Statistical Package). With the help of SPSS it is possible to perform different analyzes, measure functions and present statistical results. For the analysis of the information we used the descriptive statistics, describing the various statistical data after collection and classification of the statistical data which are then presented in the form of analysis in tables, charts with characteristic values, or properties. The results of the research showed that play is one of the main occupations of the child, as well as a key element in all educational programs. The necessity of play in the educational process of children with Special Educational Needs (SEN), especially children with autism, is a key factor in the development of skills, decisively influencing the learning process. The game contributes to the development of many skills, such as social, motor, language, aesthetic, and lays the foundation for a proper development and shaping of the personality of children with autism, making the learning process enjoyable and creative.

3.3. Research phases

In the first phase, the research collection instrument is created and checked by experts.

Then, the sample for the research is selected.

Also, the means of data collection is selected. The questionnaire is given to parents through the school management in a closed envelope so that there is time and confidentiality. To collect the data - to conduct the survey have obtained a special permit from the primary and secondary administration office and the school managers.

The questionnaire is given at the end of the courses so that there is time for teachers to complete it. To collect the data - to conduct the survey have obtained a special permit from the primary and secondary administration office and the school managers. The questionnaire have provided by the researcher's visit to each school on a different day, and questionnaires given to the teachers and the necessary clarifications. The instructions to be given initially relate to the reasons for completing it, completing the demographics of teachers, explanations of the first and second parts of the questionnaire. Also, it has been explained that the numbers from 1 to 5 are given for each question and it has been explained that each number corresponds to one answer - absolutely disagree, disagree, neither disagree nor agree, agree, totally agree. it has been explained them that for each answer they have to circle a number from 1 to 5. It is given a time of 30 minutes to complete. Finally, since all the subjects of the survey complete the questionnaires, gather them by thanking people for their participation.

It has been highlighted for the voluntary participation of the subjects emphasizing that the questionnaires are anonymous and that there is confidentiality of the data they give on the part of the researcher in accordance with the principles of ethics. It has also been pointed out that the information gathered will be used to prepare a thesis within the framework of the doctoral program.

The measurement scale is selected: The measurement scale is used to find the values of the research variables is the Likert scale. This scale is showed 5 points between which the distances are equal and have used numbers to find the gradients of the variables.

In particular, to find out if the respondent agree or disagree we have placed in a row 5 points giving a number for each item. I totally disagree with the number 1, I disagree with number 2, for it neither disagree nor agree 3, I agree with 4 and I totally agree with number 5. These points are set out.

The respondent respond to one point for each answer. The analysis of the answers is done by grouping them in the five categories according to the views of the teachers on the importance of playing in the education of children with autism. Then we add the grouped responses of the subjects we gave and we export the average to see the location of the subjects for the variables we are studying.

Defining the sample population and finally, statistical techniques.

3.4. Sample

The selection of the sample used an incidental or convenience sampling. Finally, was composed by 80 parents which have children with autism, and for the second question is special education 150 teachers in primary and secondary education (in special education and training laboratories).

The sample is selected to be representative of the population. For this reason, selective sampling according to which are selected for the sample those school members who are available to participate in the survey. The survey consist of 80 parents with autistic children and 150 teachers. Of the 80 parents mention separately

the sex number, education, age, and personalized support they offer to children. Of the 150 teachers mention separately the number of men who took part, as well as the years of service and the number of women who took part in the survey with their corresponding experience. From the demographics of teachers, found the gender, marital status, years of service in a general or special school, studies (University, TEI/ Technological Educational Institutions, Postgraduate and Doctoral), special education. From the statements of the first and second parts of the questionnaire find teachers' positions on the importance of play in education of children with autism.

a) Descriptive the sample of the parents

From the table above, the average number of children is 2 with a standard deviation of 1, and the average birth order of a child with autism is in second place with a standard deviation of 1. Initially, the following tables give a picture of gender, order of birth of a child with autism, studies, previous service in general and special school and the participation of parents in training programs.

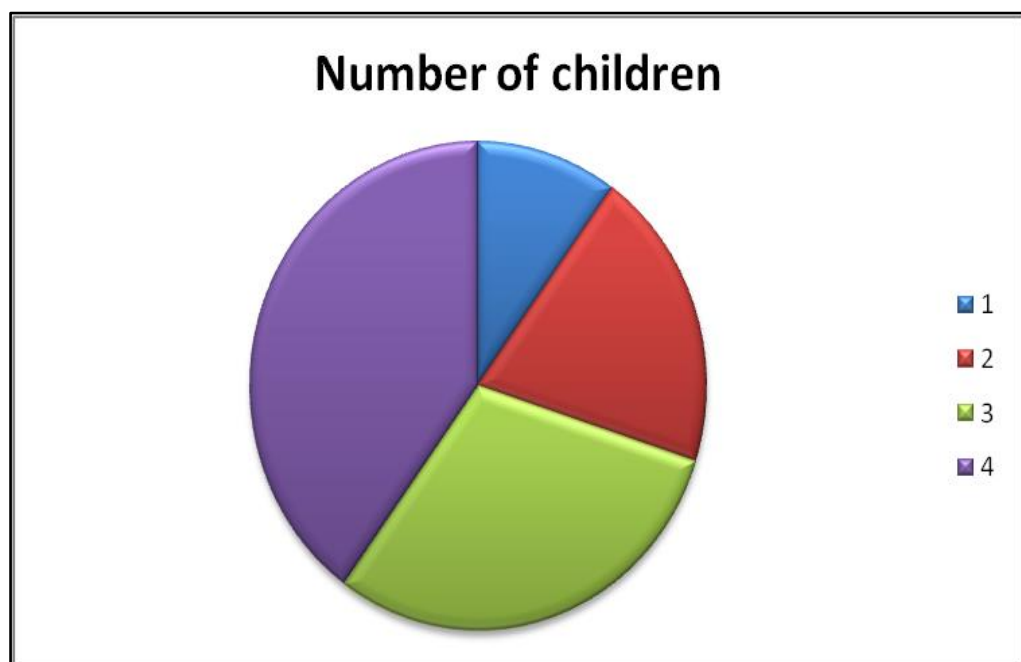


Chart 1: Birth series of a child with autism

Chart 1 shows the order of birth of the child with autism. What we can see is that the highest percentage in the birth order of the child with autism is the second child, followed by the first, after the third child and low percentages show the child born fourth in the series with autism.

Table 10 Distribution of education and training in special education of the parents

		N	%
	primary school	31	38,8%
Education level	Secondary school	42	52,5%
	University	1	1,3%
	technological sciences – TEI	2	2,5%
	Postgraduate	4	5,0%
	Total	80	100,0%
Training in special education	Yes	8	100,0%
	No	0	0,0%
	Total	8	100,0%
	Other	72	90,0%
Identify	400 hours seminar	8	10,0%
	Total	80	100,0%

According to Table 10, out of the total number of parents, 42 (52.5%) have graduated from Secondary and only 1 (1.3%) have graduated from universities, while in total only 8 (10.0%) have received special education, and specifically have attended a seminar of 400 hours (10.0%).

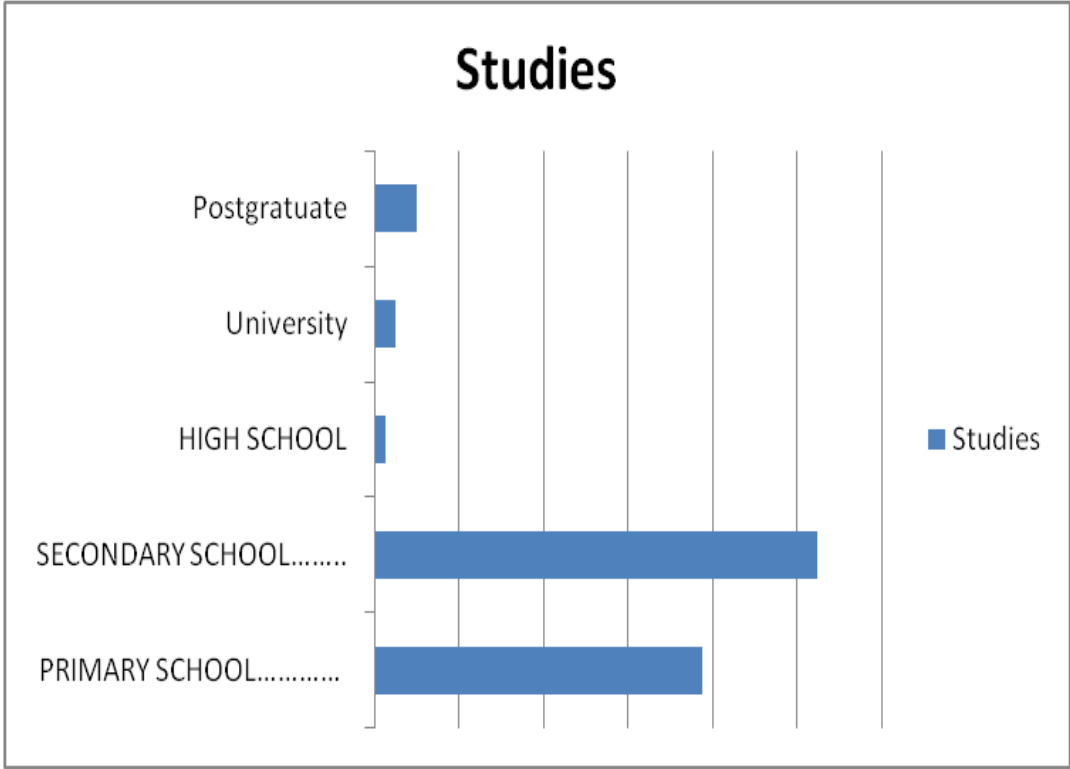


Chart 2 Distribution of education

According to Chart 2, which shows the level of education of parents who have a child with autism, we can see that most parents have completed high school, followed by a fairly large percentage who have graduated from high school. Finally, we can see that a small percentage have studied in higher education and technology education, as well as obtaining a master's degree.

b) Descriptive the sample of the teachers

Initially, the following tables give an overview of gender, studies, previous service in the general and special school and the participation of teachers in training programs.

Table 11 Distribution of specialty and gender of teachers

		N	%
Position / branch	PE01-theologian	3	2%
	PE02-Philologists	18	12%
	PE03-Mathematics	8	5,3%
	PE04-physicists	5	3,3%
	PE08-Artistic	10	6,7%
	PE11-Gymnasts	8	5,3%
	PE60-Kindergarten teachers	19	12,7%
	PE70-Teachers	12	8,0%
	PE78-Sociologists	19	12,7%
	PE79-Musicians	12	8,0%
	PE80-Home economics	8	5,3%
	PE86-computer science	12	8,0%
	PE8801-Agriculture	8	5,3%
	PE8804-Nutritionist	8	5,3%
	Total	150	100%
Gender	Man	62	41,3%
	Woman	88	58,7%
	Total	150	100,0%

Regarding the specialty of the teachers of the sample from 19 (12.7%) are either kindergarten teachers or social science teachers and 3 (2.0%) are theologians, while regarding their gender 88 (58.7%) are women and 62 (41.3%) are men.

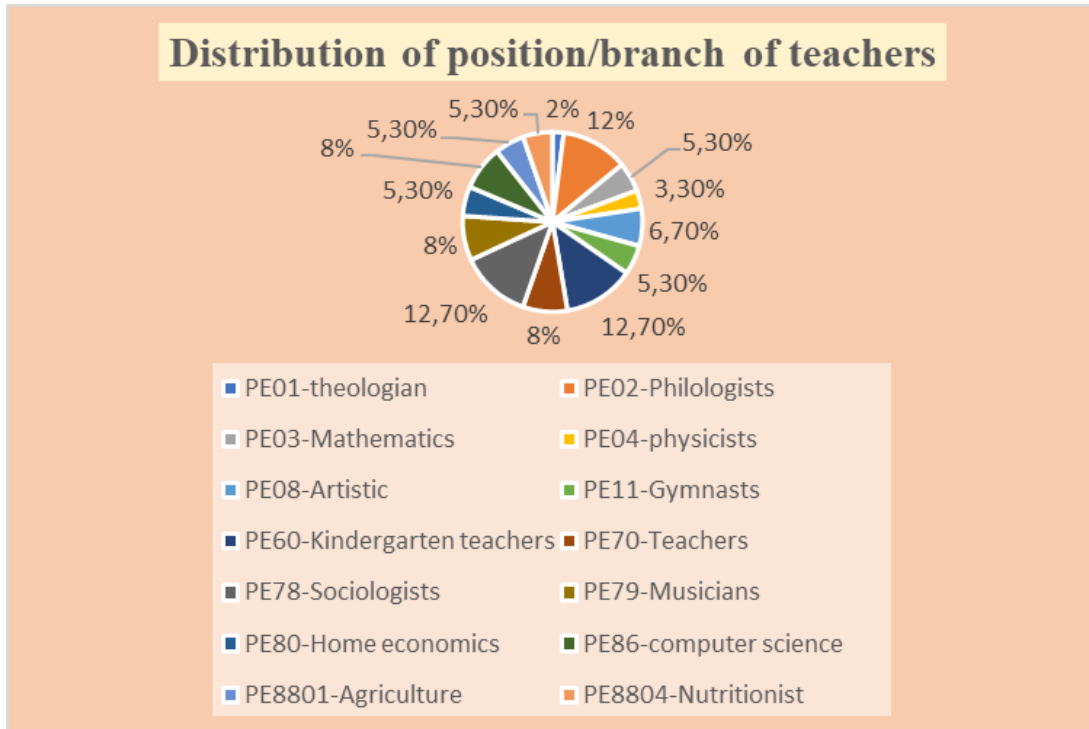


Chart 3 Distribution of position/branch of teachers

In Chart 3 shows the percentage of each specialty of the teachers who participated in the survey. What is observed is that the teachers with the largest percentage are philologists, kindergarten teachers, sociologists.

Table 12 Mean value and standard deviation of years of experience

	Min	Mean	SD	Max
Total years experience Years	3	8	3	15
Experience in general school Years	0	3	3	15
experience in the special school	0	5	3	12

Table 12 shows that the mean value of total experience times is 8 years with a standard deviation of 3, the mean value of experience years in a general school is the years with a standard deviation of 3, and the average value of experience times in a special school is the 5 years with standard deviation 3.

Table 13 Distribution of teacher education

		N	%
Education level	University	9	6,0%
	Technological sciences - TEI	2	1,3%
	Postgraduate	124	82,7%
	Doctorate	15	10,0%
	Total	15	100,0%
Training in special education	Yes	119	79,3%
	No	31	20,7%
	Total	150	100,0%

Regarding the educational level of the sample, 124 (82.7%) teachers have done postgraduate and 2 (1.3%) have graduated from technological studies - TEI, while regarding their training in special education, 119 (79.3%) teachers answered positively and the remaining 31 (negative) 20.7%).

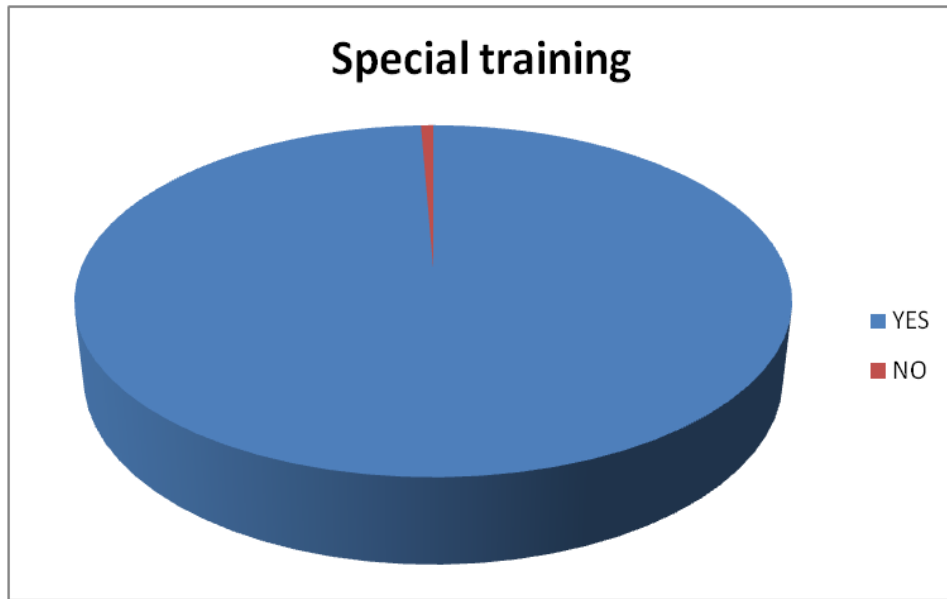


Chart 4 Special education training

In chart 4 we can see the levels of teacher training in special education. Specifically, blue indicates the percentage of teachers who have attended some special education training, while green indicates a smaller percentage of teachers who have not attended any special education.

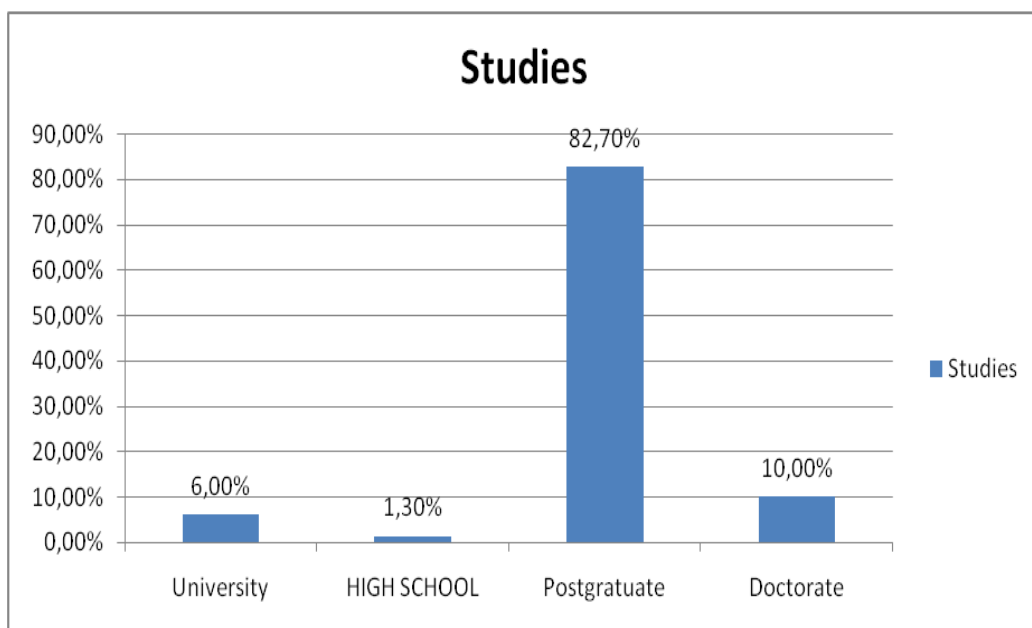


Chart 5 Distribution of education

Chart 5 shows the distribution of training that each teacher has received. Specifically, the largest percentage of teachers has completed the postgraduate program in special education, while the percentages in obtaining a doctoral program are low. At the undergraduate level we can see that the completion rates of undergraduate studies a large percentage of teachers have completed in higher education and a small percentage have completed in technological education.

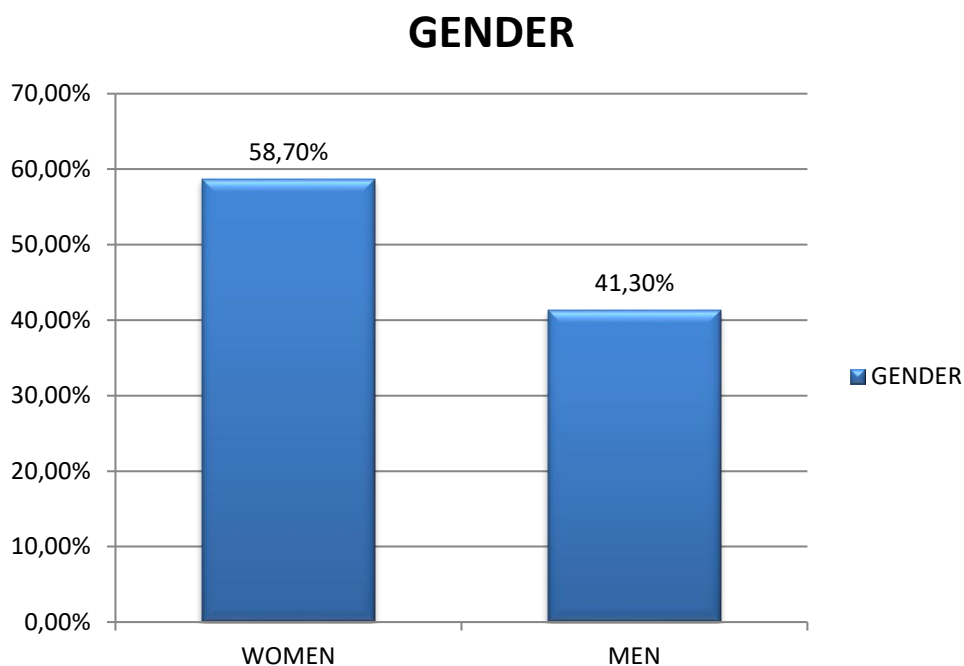


Chart 6 Gender of teachers

Chart 6 shows the gender of the teachers who took part in the research. In blue, which covers the smallest part of the pie, are the male teachers. In green is the section showing the participation of women teachers, which is the largest section. In conclusion we can say that the population of women is larger than the population of men.

3.5. Information collection instruments

For the data collection is chosen for the first research question the questionnaire with which collected the information that given to us by the respondents. Questions are closed-ended and individuals asked to answer by selecting a number from the five. Completing, encoding and analyzing data are easier. Also, with the questionnaire, subjects are given the opportunity to answer all in exactly the same frame of reference.

For the second research question we select *the questionnaire* with which is collect the information that given to us by the respondents. Questions are closed-ended and individuals asked to answer by selecting a number from the five. Completing, encoding and analyzing data are easier. Also, with the questionnaire, subjects are given the opportunity to answer all in exactly the same frame of reference.

The type of questions is of the closed type and is the scale graded from the negative point to the positive and asked by the subject of the survey to choose one of the five.

The method of questioning for the first research question is by submitting the questionnaires in a closed envelope and sent to the parents for their completion. Thus, the aim is to facilitate parents and send questionnaires faster and more efficiently in a minimum of time and at the same time.

The method of questioning is by visiting the researcher in a group of people, that is, at school. So, the aim is to involve many people in the research in a minimum of time and at the same time. The possibility of clarification and more information is provided to resolve questions that may arise when filling out the questionnaire.

The questionnaires were constructed according to the content of the research questions and the theoretical framework of the research, as well as have been used in other research, and have been taken for the purposes of the present research. A personal effort is made to supplement the content and wording of the questions based on the theoretical framework of the research. In particular, report each aspect separately. In a box, the teachers should indicate gender, marital status and number of children, educational status, scientific training - their university status, if they have completed their studies at postgraduate or doctorate level, training in special education. These questions include information on the description of the sample that has taken part in the investigation.

The questions have been formulated so that they are functional, simple and understandable so as not to hinder the subjects. The wording must be clear and accurate so that it is understood by the person who completes it to provide the necessary information. Austerity and avoidance of duplication and duplication of questions in order to give a specific answer and relate to a question, not two parts to a question that makes it difficult for the individual to give one part of the question one answer to the other. The content of the questions must be within the knowledge of the subjects, have a direct relationship with the individuals and relate to the content of the research questions. To relate to the purpose of research by providing answers to the problem that concerns research. Another focal point is the ability of respondents to have alternative answers through the five points given for response, covering a wide range of emotions (from the most negative to the most positive).

The questionnaire is designed to be short and presentable. Specifically it includes questions that parents are asked to answer based on the content of the research question. The first research question is: *What are the parents' views and views on*

the role of play in the development of autism skills in children with autism, there are 33 Likert-type questions with five numbers for each question and corresponding to specific answers.

The questionnaire is divided into two parts so that it is short and presentable. Each part includes questions that teachers are asked to answer based on the content of the research question. For the second research question: *What are the views of special education educators and educators about the importance of play in educating children with autism*, there are 20 queries of the Likert scale with five numbers for each question and corresponding to specific answers.

The second part of the questions concerns the statements related to the role of the curriculum, the educational process. In particular, it consists of 14 queries, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34.

With these questions we try to have a full match between the theoretical framework and the questionnaire. With the questions, we find the different views of the teachers finding the average of their answers to the questions of the first part and the average for the questions of the second part.

3.6 Instrument reliability

In order to have research studies with valid results, it is necessary to use research tools to conduct them, which have previously been tested for their validity and reliability. Therefore, every researcher when studying a research, focuses on the reliability and validity of the measuring instrument of the study (Raftopoulos et al., 2020). Reliability refers to consistency through the repeatability and reproducibility of a series of measurements leading to the same result, the consistency and

homogeneity of a measurement tool, and the extent to which it is free from random error. Reliability is assessed by test-retest, alternate-type reliability, inter-cluster or half-rate reliability, internal consistency, same-observer/rater measurements, and inter-observer/rater measurements (Oppenheim, 2000). Validity concerns the assessment of whether a measurement tool measures what it claims it intends to measure and is associated with the existence of systematic error.

Reliability is the first characteristic that a measurement tool should possess and refers to the stability it exhibits over successive measurements (Bland et al., 1997). A measuring instrument is considered reliable when in repeated measurements on the same sample and at different times, it consistently shows the same results, unless a significant change has occurred between measurements (Papanastasiou et al., 2021). Reliability can be conceptually attributed to the terms "stability" and "internal consistency" which refers to the parameters that researchers should consider in order to use a measurement tool in practice (Galanis, 2013). Also, a measuring instrument is considered reliable to the extent that it is free from random error. 2,8 Statistically, reliability is estimated by the correlation coefficient r (correlation coefficient). The correlation coefficient (r) ranges from a value of 0 according to which the measurement tool is not reliable, up to a value of 1.0 indicating maximum reliability. The closer the correlation coefficient is to 1.0 ($r=1.0$), the more reliable a measuring instrument is considered to have. The correlation coefficient $r \geq 0.70$ is considered as an acceptable level of reliability (Galanis, 2013).

Because a measurement tool can be reliable but not valid, along with assessing the reliability of a scale or a measuring instrument, its validity should also be tested. Specifically, when a measurement tool is indeed valid, it "reflects" the concept (the

variable) it purports to measure. That is, a measurement tool that is stated to measure anxiety cannot measure stress at the same time. A measurement tool is considered valid when it has been used repeatedly with success in the population for which it was designed in research (Saris et al., 2007).

The items (questions or statements/sentences) that can be used in a questionnaire to measure a particular concept are theoretically infinite. For example, to measure quality of life in relation to mental health, the items that can be included in a questionnaire are infinite (Papanastasiou et al., 2021). Thus, to assess the content validity of a questionnaire, the question that arises is whether the questionnaire items are representative of the broader and abstract concept that is to be measured by the particular questionnaire. For example, if a questionnaire with 15 items is used to measure quality of life in relation to mental health, the question that arises is whether these items are representative for the valid measurement of the specific concept.

Content validity, essentially, concerns the items that are chosen to be included in a questionnaire to measure a concept. These elements are created by the researchers based on their experience, their knowledge and of course the appropriate systematic literature review regarding the concept they wish to measure (Papanastasiou et al., 2021). For this reason, it is considered appropriate during the construction of a questionnaire to clearly mention the bibliographic sources of the researchers, so that it is possible to judge the quality of the bibliographic review carried out. In addition, checking the content validity of a questionnaire must include the calculation of the content validity ratio (content validity ratio) for each item in the questionnaire 24,25. In this case, researchers constructing a questionnaire create a list of possible items which they think can be included in the final questionnaire (Παπαναστασίου et al.,

2021). Next, they address a group of researchers who are considered experts in the concept the questionnaire measures. The creators of the questionnaire ask the panel of experts to judge each item of the questionnaire as "necessary", "useful, but not necessary" or "not necessary" and then the content validity ratio is calculated for each item of the questionnaire, according to the following equality:24,25

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

In equality 1, N denotes the total number of experts who judge the questionnaire items and n_e denotes the number of experts who label a questionnaire item as "necessary". For example, if the total number of experts is 10 and a questionnaire item was rated as "necessary" by all 10 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1 (Galani, 2013). Furthermore, if the total number of experts is 10 and a questionnaire item was rated as "necessary" by the 5 experts, then, according to equality 1, it follows that the content validity ratio is equal to 0. If, on the other hand, the total number of experts is 10, and one item of the questionnaire was not rated as "necessary" by any of the experts, then, according to equality 1, it follows that the content validity ratio is equal to -1. The content validity ratio for a questionnaire item takes values from -1 to 1, with larger values indicating greater content validity (Gillham, 2007). When the content validity ratio for an item of a questionnaire is equal to 0, then half of the experts consider this item as "necessary" (Galani, 2013). When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire (Gillham, 2007).

The reliability and validity of measurement instruments is crucial to ensure correct results from conducting a survey (Gillham, 2007). When a measurement tool is used, regardless of whether it has already been weighted or created for the needs of a survey, its reliability and validity should be tested. Also, the types of reliability and types of validity that have supported the measurement tool need to be reported if the research study is announced or published (Papanastasiou et al., 2021). The results of such investigations are serious indications that are considered documented and can be used appropriately. When the reliability and validity of measurement instruments are not reported, the results of a study are accepted with caution, and the study presents many limitations as to the validity of its results.

In the present research, the control of the questionnaires for the validity and reliability of the measuring instruments was carried out by the ethics and bioethics committee of the university, as well as a panel of experts validated the research tools. In the present research we could see the validity and reliability of the instrument through the statistical analysis of the SPSS package and the data shown by Cronbach's Alpha:

- Pearson ratio was calculated, as well as Cronbach's alpha, to show reliability.

Reliability analysis with Cronbach alpha coefficient of the questionnaire of the parents

The reliability of the questionnaire scale on the degree of importance of play in the education of the child with autism was calculated using the Cronbach alpha coefficient. From the Reliability Statistics table we have that the Cronbach rate is highly satisfactory (0.912). So, the 33 questions of the questionnaire compose a fairly satisfactory scale.

Table 14 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,912	,918	33

Reliability analysis with Cronbach alpha coefficient of the questionnaire of the teachers

The reliability of the questionnaire scale regarding the degree of importance of play in the teaching of the child with autism was calculated using the Cronbach alpha coefficient. From the Reliability Statistics table we have that the Cronbach rate is moderately satisfactory (0.683). So, the 14 questions of the questionnaire compose a moderately satisfactory scale.

Table 15 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,683	,693	14

The reliability of the questionnaire scale on the degree of importance of play in the education of the child with autism was calculated using the Cronbach alpha coefficient. From the Reliability Statistics table we have that the Cronbach rate is highly satisfactory (0.836). So, the 20 questions in the questionnaire make up a fairly satisfactory scale.

Table 16 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,836	,836	20

Administration of questionnaires to the experts/experts

For the validity and reliability of the content of the two questionnaires, the teachers' and the parents', special experts on the subject of the research are given and asked to fill out two questionnaires, one for the teachers and one for the parents in the form of google forms. Both forms are sent by email.

https://docs.google.com/forms/d/1FTLWzE0gbsaE7vvKBS1RbT95c5pFE17faiM1mbCIYeg/edit?usp=sharing_eip_m&ts=63a32ddb&urp=gmail_link

https://docs.google.com/forms/d/1rR20Y49vqkig1vn3HO8YS0xuD2cCMwtenRoCCUuZI6k/edit?usp=sharing_eip_m&ts=63a3411a&urp=gmail_link

After sending the google forms, we collect the data and the analysis of our data begins.

Expert results for the teacher's questionnaire:

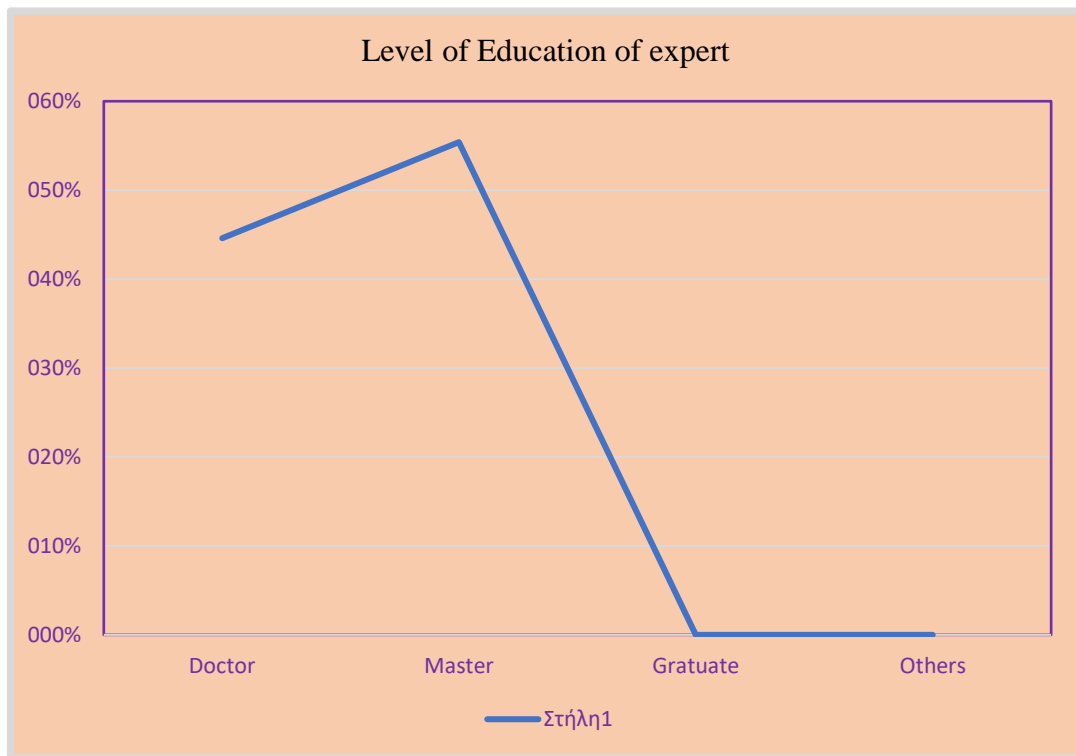


Chart 7: Specialist Training Level

Chart 7 shows the level of training of the experts who were asked to judge the questionnaire for reliability and content validity of the questionnaire. What is shown is that 44.6% of the rate is for specialists who hold a doctorate in educational sciences with a specialization in special education and autism, while 55.4% is for specialists who hold a master's degree in educational sciences with a specialization in special education and autism. The Gratuate and Others criteria show 0% of the rate.

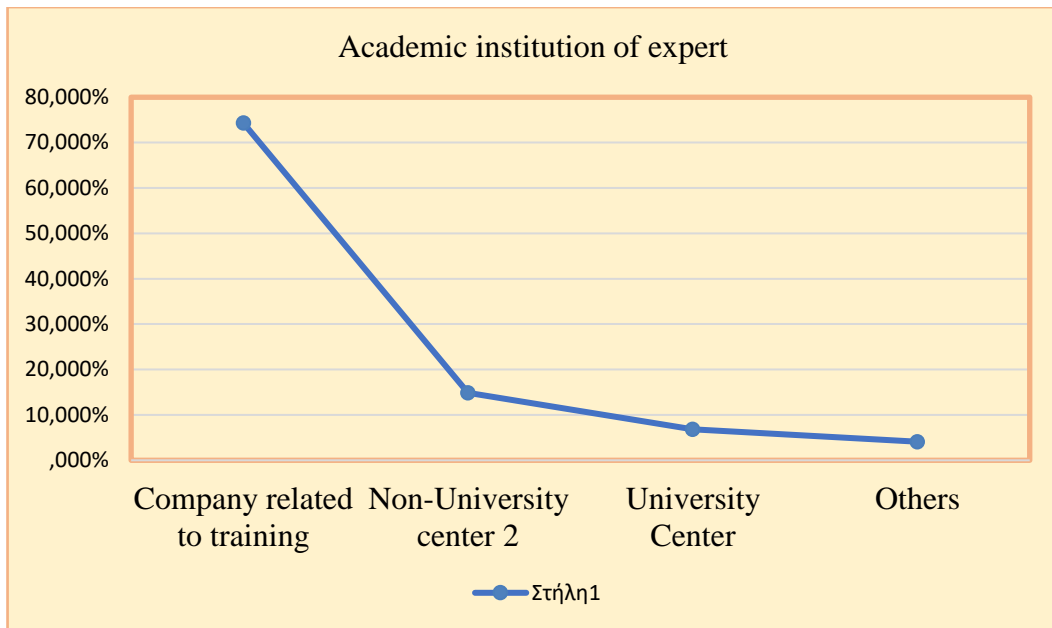


Chart 8: Academic position of experts

In Chart 8 we can see the academic position of the experts. Specifically, 74.3% indicate that they are employed in an education-related company, while 14.9% are employed at a non-university center, 6.8% are employed at a university center, and 4.1% are employed at criterion elsewhere.

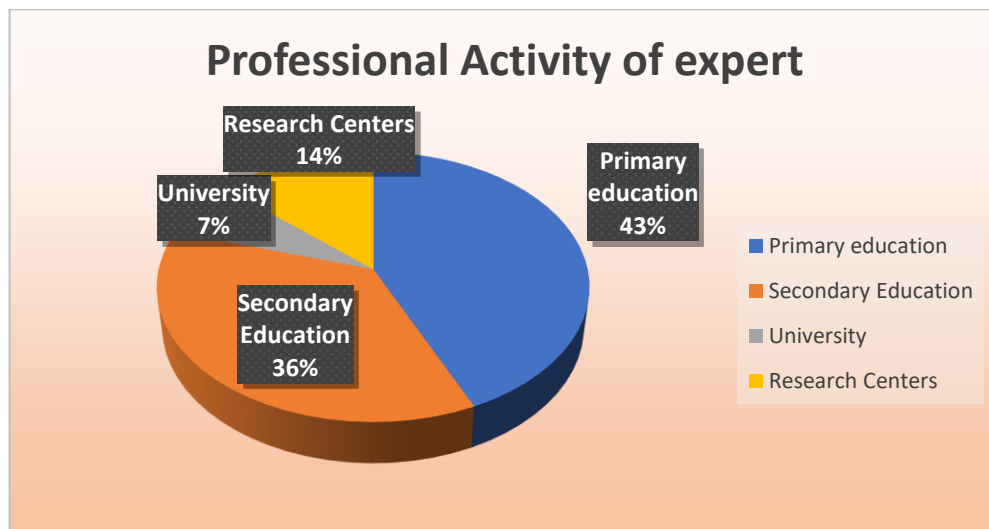


Chart 9: Professional status of experts

Regarding the professional status of the specialists, as shown in chart 9, it appears that a large percentage of the sample 43% is related to primary education, 36% to

secondary education, 7% to university education and finally, 14% related to research centers.

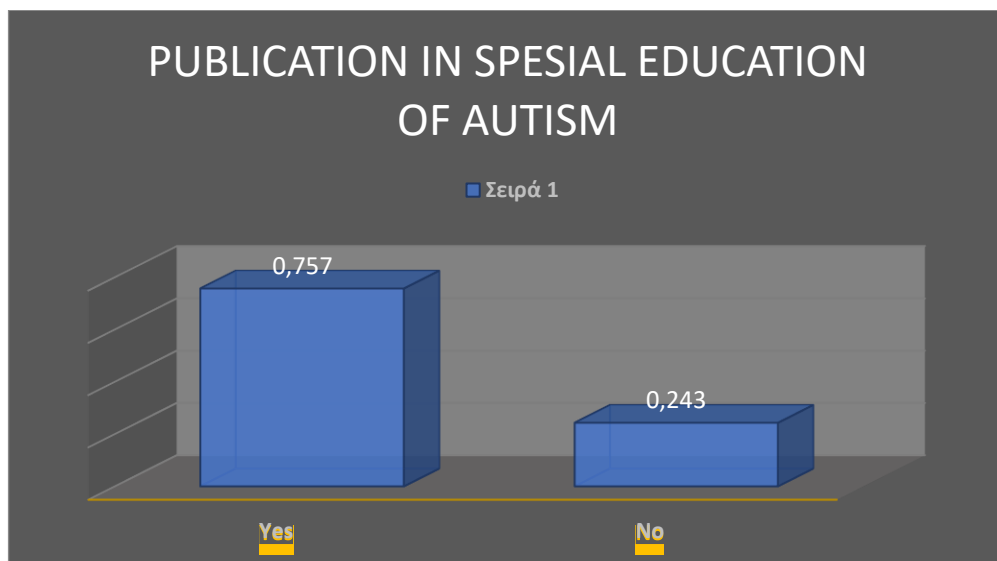


Chart 10: Publishing in special education in autism

Chart 10 shows that 75.7% say YES, that they have publications related to autism, while 24.3% say NO, that they have not published anything.

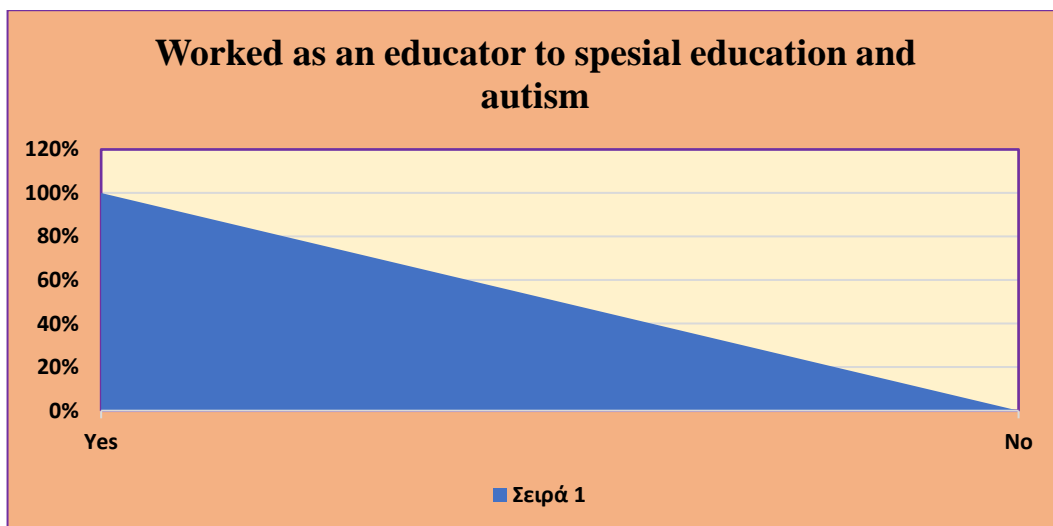


Chart 11: Work of specialists in special education and autism

From Chart 11, we find that 100% of the expert sample has worked in special education and in the education of children with autism.

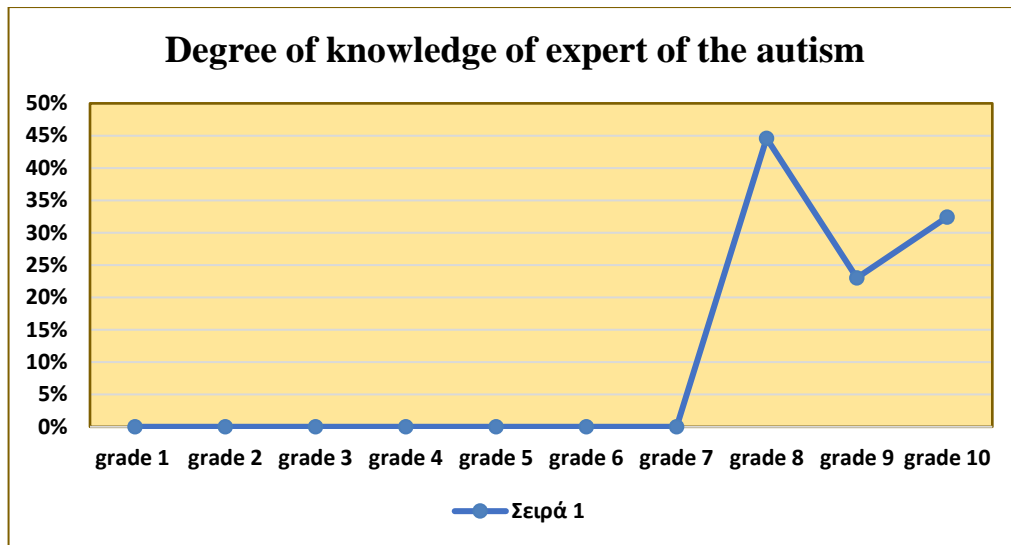


Chart 12: Degree of knowledge of autism experts

In Chart 12, the degree of knowledge experts have about autism is shown. 44.6% declare a grade of 8, 23% declare a grade of 9, while 32.4% declare a grade of 10.

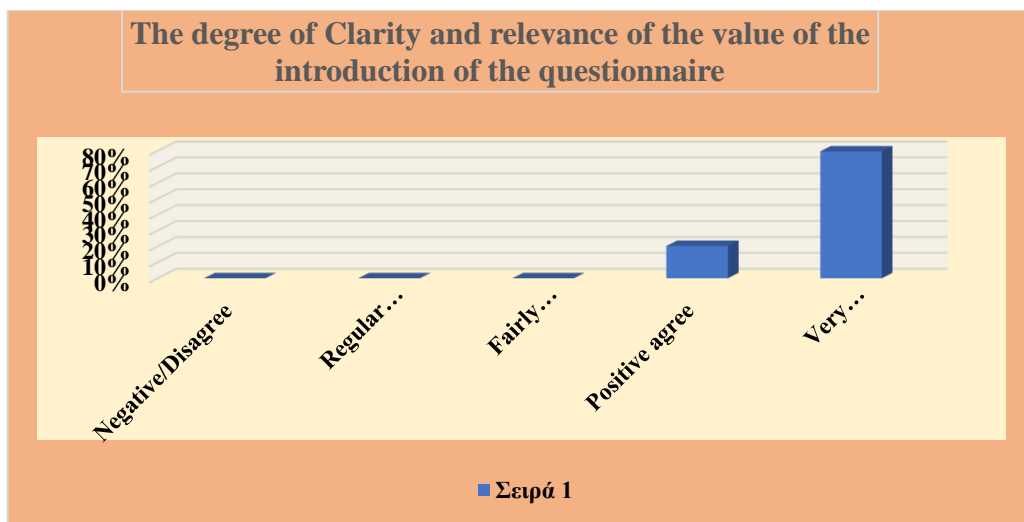


Chart 13: The degree of clarity and relevance of the value of the questionnaire input

Chart 13 shows the degree of clarity and relevance of the value of the introduction of the questionnaire, stating that 79.7% consider it to be very positive/strongly positive, while 20.3% state that it is very positive. 100% of the sample claims that the introduction is clear and relevant, appropriate and can be given without reservation to the sample serving the purposes of the research. When the content

validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 74 and the validity ratio of the questionnaire in terms of the relevance and clarity of the input value was rated as "very positive/strong positive" and "very positive" by the 74 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

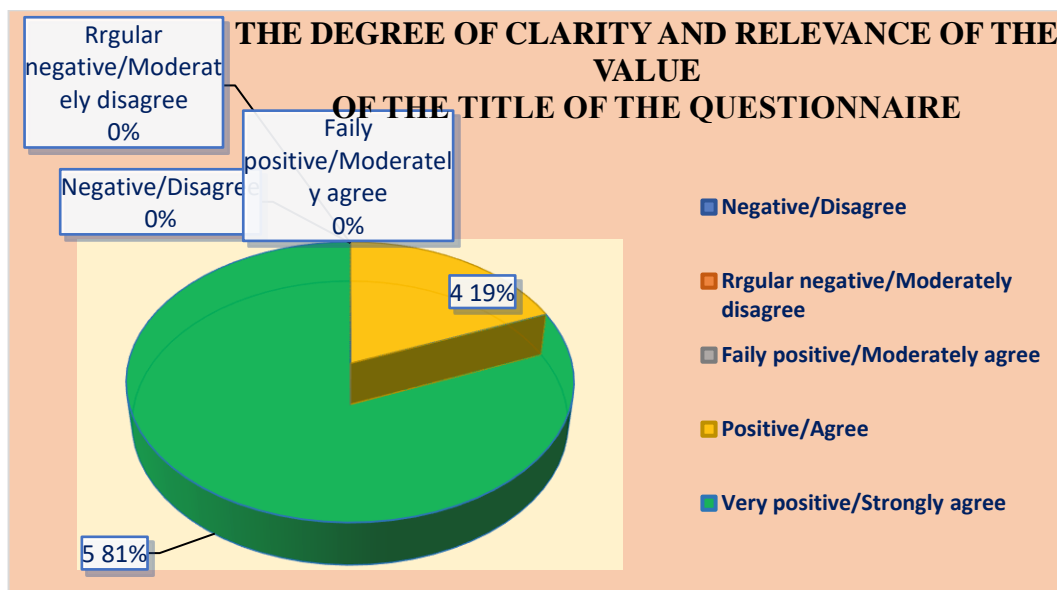


Chart 14: The degree of clarity and relevance of the questionnaire title value

Chart 14 shows the degree of clarity and relevance of the value of the questionnaire's title, with 81% declaring that it is very positive/strongly positive, while 19% state that it is very positive. 100% of the sample supports that the title is characterized by clarity and relevance, is appropriate and can be given unconditionally to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the

experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 74 and the validity ratio of the questionnaire regarding the relevance and clarity of the value of the title was rated as "very positive/strong positive" and "very positive" by the 74 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

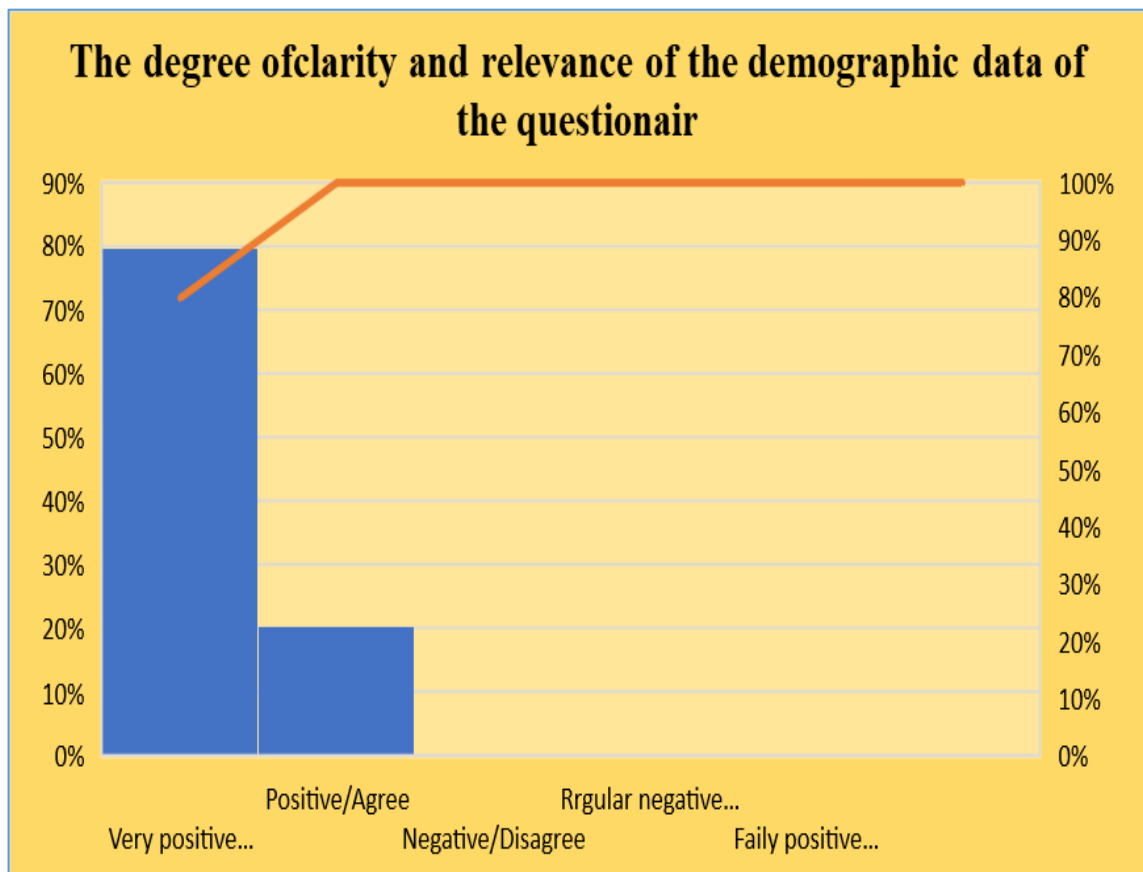


Chart 15: The degree of clarity and relevance of the value of questionnaire demographic data

Chart 15 shows the degree of clarity and relevance of the value of the questionnaire's demographics, with 79.7% stating that they consider it to be very

positive/strongly positive, while 20.3% state that it is very positive. 100% of the sample agrees that the demographic information is clear and relevant, appropriate, and can be freely administered to the sample serving the purposes of the survey. They also stated that they cover much of the necessary information for the sample. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 74 and the validity ratio of the questionnaire in terms of the relevance and clarity of the value of the demographics was rated as "very positive/strong positive" and "very positive" by the 74 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

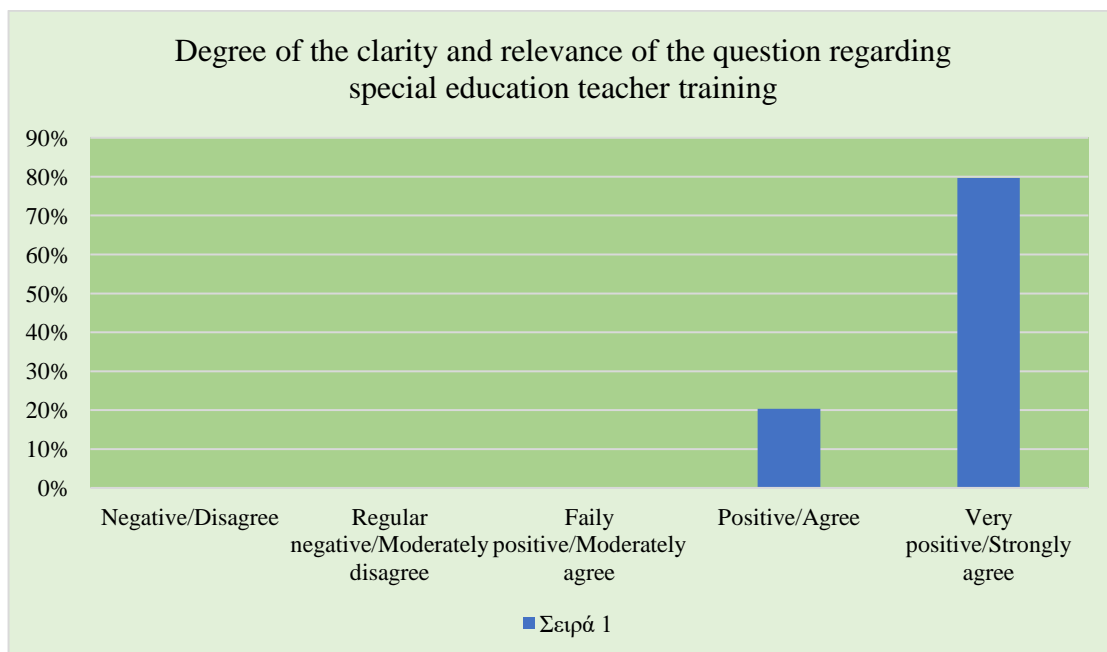


Chart 16: The degree of clarity and relevance of the question on the question about teacher's education in special education of the questionnaire

Chart 16 shows the degree of clarity and relevance of the value regarding teacher training in special education of the questionnaire, with 80%% stating that it is very positive/strongly positive, while 20% state that it is very positive. 100% of the sample claims that the specific question in the questionnaire is characterized by clarity and relevance, is appropriate and can be unconditionally administered to the sample serving the purposes of the research. They also stated that special education training covered important information for the sample. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 74 and the validity ratio of the questionnaire in terms of relevance and clarity of value about special education teacher training was rated as "very positive/strong positive" and "very positive" out of 74 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

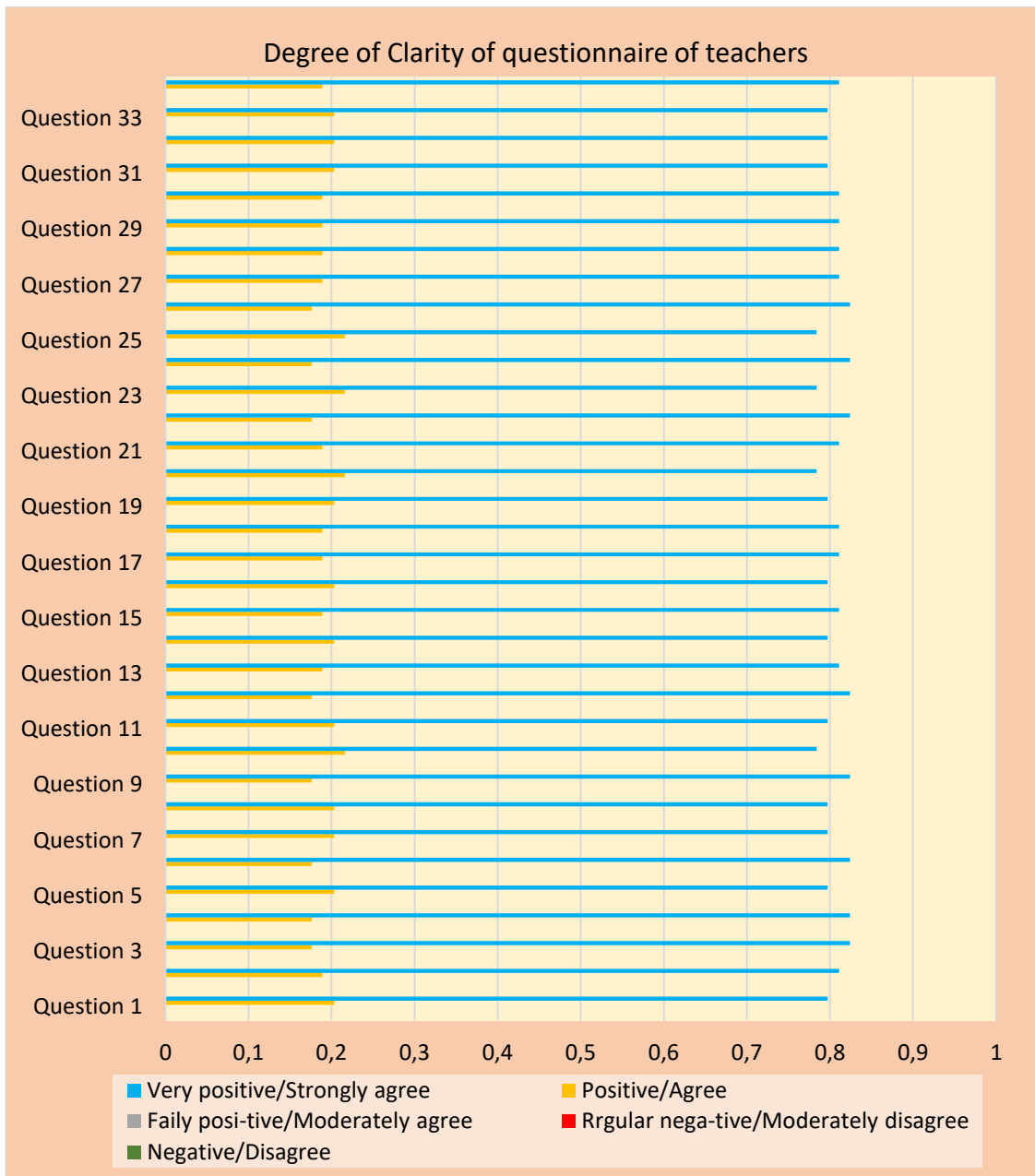


Chart 17: The degree of clarity of the teachers' questionnaire

Chart 17 shows the degree of clarity of the value of the 34 questions of the questionnaire, stating that the average of the sample of experts 80% consider it to be very positive/strongly positive, while the average of the sample of experts 20% declares very positive. 100% of the sample supports that the specific questions of the questionnaire are characterized by clarity and appropriateness and can be administered unconditionally to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than

half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 74 and the validity ratio of the questionnaire in terms of the clarity of the value of the 34 questions are characterized as "very positive/strong positive" and "very positive" by the 74 experts, then, according to equality 1 , it follows that the content validity ratio is equal to 1. Content validity ratio = $\frac{\sum_{i=1}^n r_i}{N}$ (1)

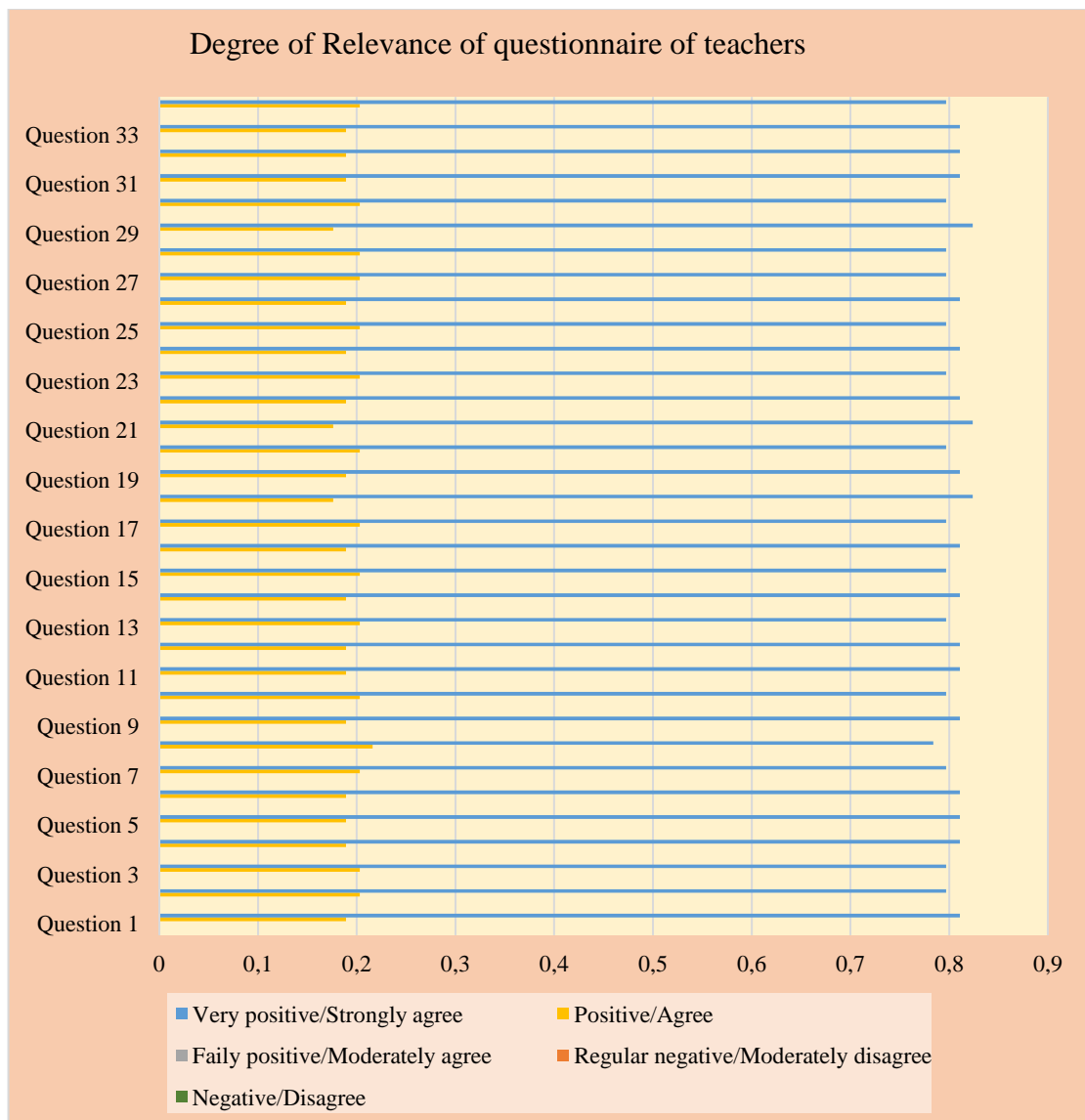


Chart 18: The degree of relevance of the teachers' questionnaire

Chart 18 shows the degree of relevance of the value of the 34 questions of the questionnaire, stating that the average of the sample of experts 80% consider it to be very positive/strongly positive, while the average of the sample of experts 20% declares very positive. 100% of the sample supports that the specific questions of the questionnaire are characterized by relevance, are appropriate and can be unconditionally administered to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 74 and the validity ratio of the questionnaire in terms of the relevance of the value of the 34 questions are characterized as "very positive/strong positive" and "very positive" by the 74 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

According to the judgment of the experts, the questionnaire is deemed appropriate in terms of relevance and clarity. It responds to the relevance and clarity of the research objectives. The questionnaire can be administered as a response, as it adheres to the questionnaire drafting specifications, with appropriately worded questions that are concise, clear and understandable to the respondent. The questions are related to the problem and purpose of the research. This means that the questionnaire can be administered. The questions refer to the sample that may take part in the research and describe it clearly and relevantly. The questions are related to the respondents, are familiar to them and respond to the level of the respondents.

The questions are clearly and relevantly worded and do not allow for any misinterpretation. They are related to the research problem and serve the purposes of the research. Also, the questions have a functional meaning, they are judged for their accuracy, simplicity, clarity and relevance to the topic. The questions are simple and direct, prompting the person to provide the requested information and are relevant to the respondents so that the latter can respond. The questions are short and to the point, with clarity and relevance. The questionnaire can be forwarded unconditionally for completion by the sample. The wording of the questions is judged to be clear, neutral and does not indicate a certain type of answer. It also avoids confusing duplicate questions. There is precision, clarity and relevance to the purpose of the problem and research. Clarity and relevance are evident in all questions. This means that the questionnaire is judged suitable for relevance and clarity, so it can be administered to the sample and the results given in the interest of the research. It covers all aspects of the subject concisely and coherently, giving a comprehensive picture of autism. It is granted because it meets the purposes and results of the research.

Expert Results for Parents Questionnaire:

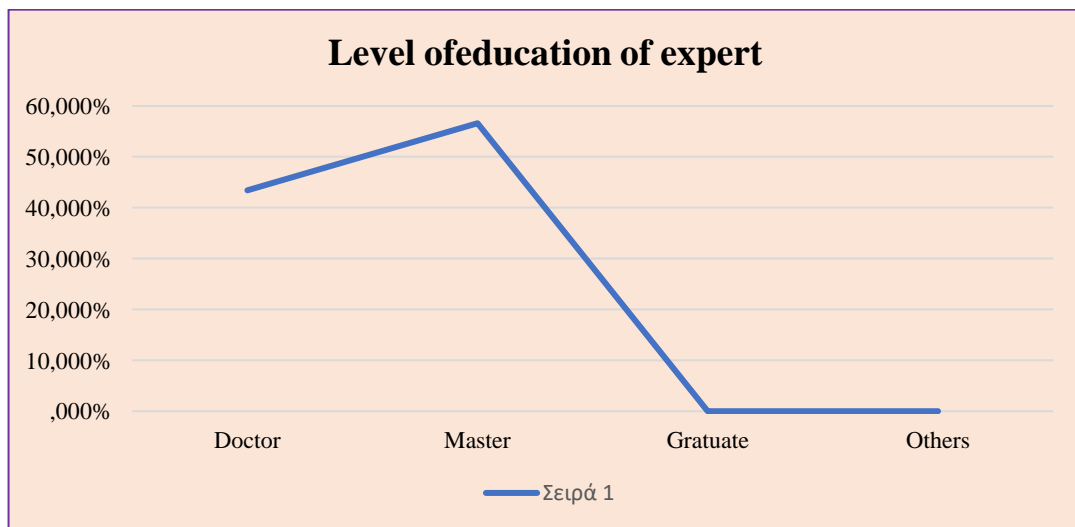


Chart 19: Level of Education of Specialists

Chart 19 shows the level of training of the experts who were asked to judge the questionnaire for reliability and content validity of the questionnaire. What is shown is that 43.4% of the rate is for specialists who hold a doctorate in educational sciences with a specialization in special education and autism, while 56.6% is for specialists who hold a master's degree in educational sciences with a specialization in special education and autism. The Graduate and Others criteria show 0% of the rate.

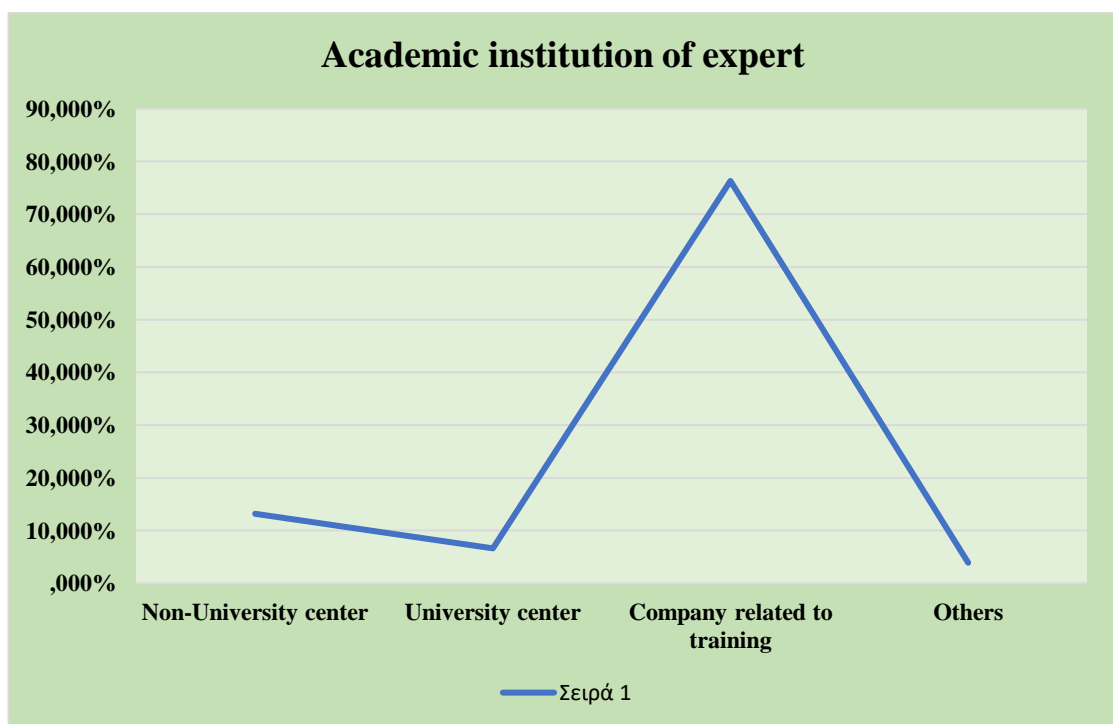


Chart 20: Academic position of experts

In Chart 20 we can see the academic position of the experts. Specifically, 76,3% indicate that they are employed in an education-related company, while 13,2% are employed at a non-university center, 6,6% are employed at a university center, and 3,9% are employed at criterion elsewhere.

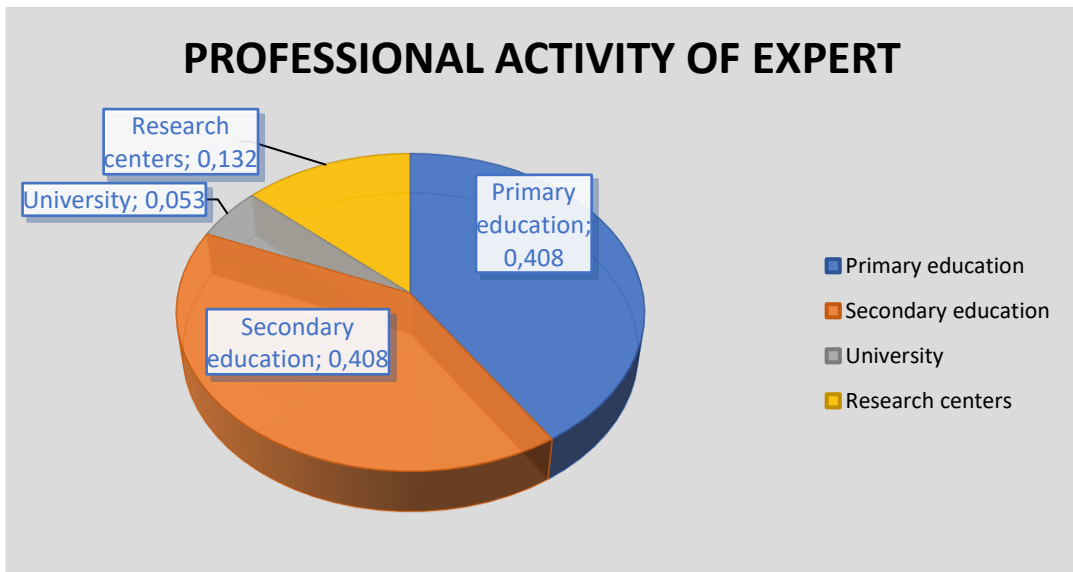


Chart 21: Professional status of experts

Regarding the professional status of the specialists, as shown in chart 21, it appears that a large percentage of the sample 40,8% is related to primary education, 40,8% to secondary education, 5,3% to university education and finally, 13,2% related to research centers.

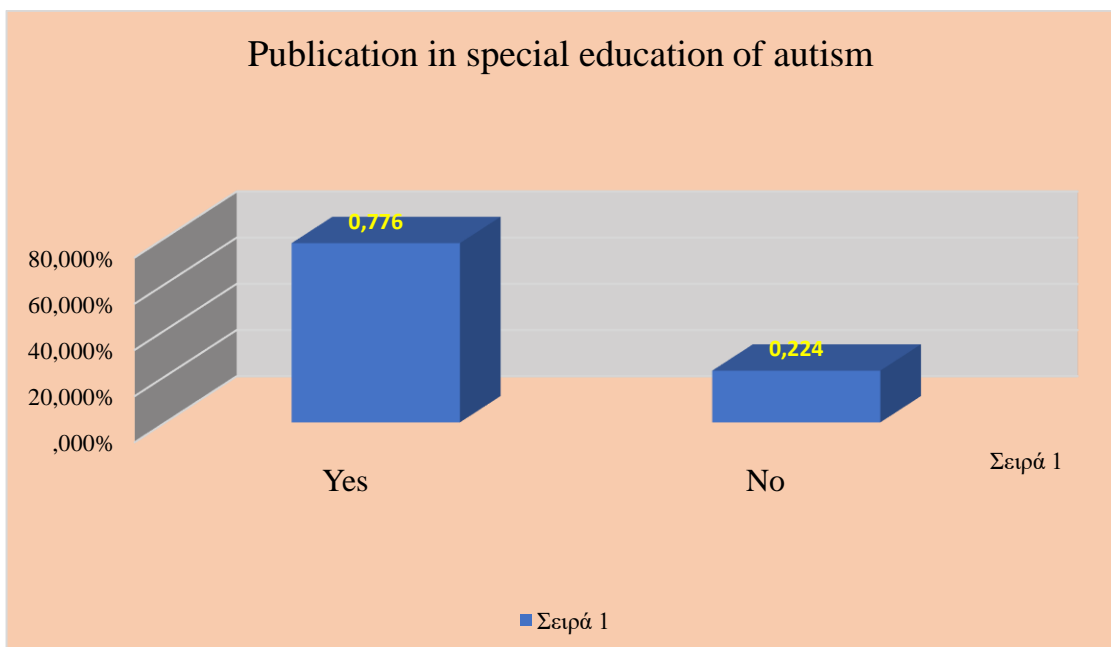


Chart 22: Publishing in special education in autism

Chart 22 shows that 77,6% say YES, that they have publications related to autism, while 22,4% say NO, that they have not published anything.

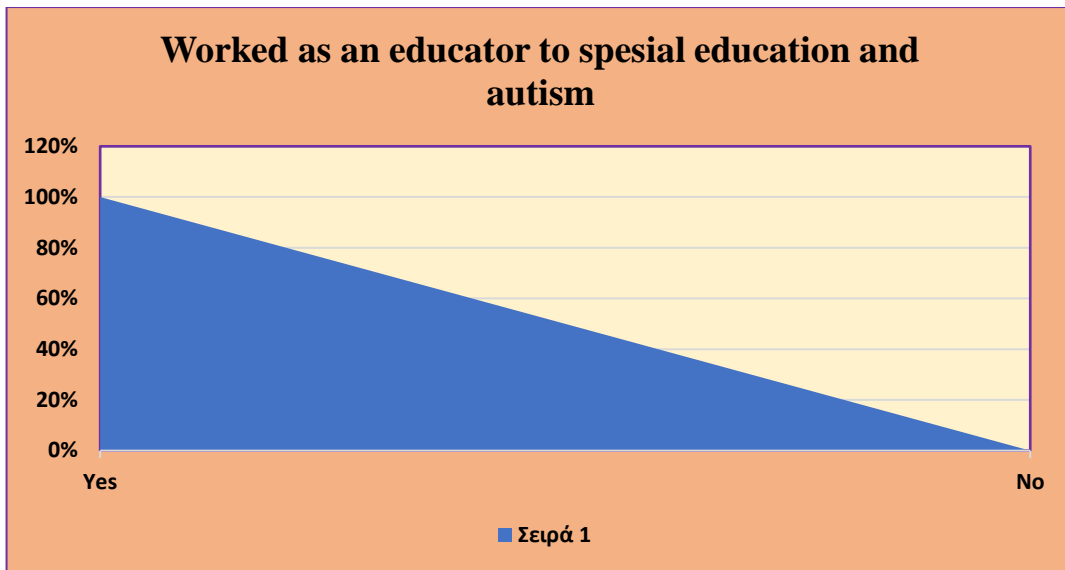


Chart 23: Work of specialists in special education and autism

From Chart 23, we find that 100% of the expert sample has worked in special education and in the education of children with autism.

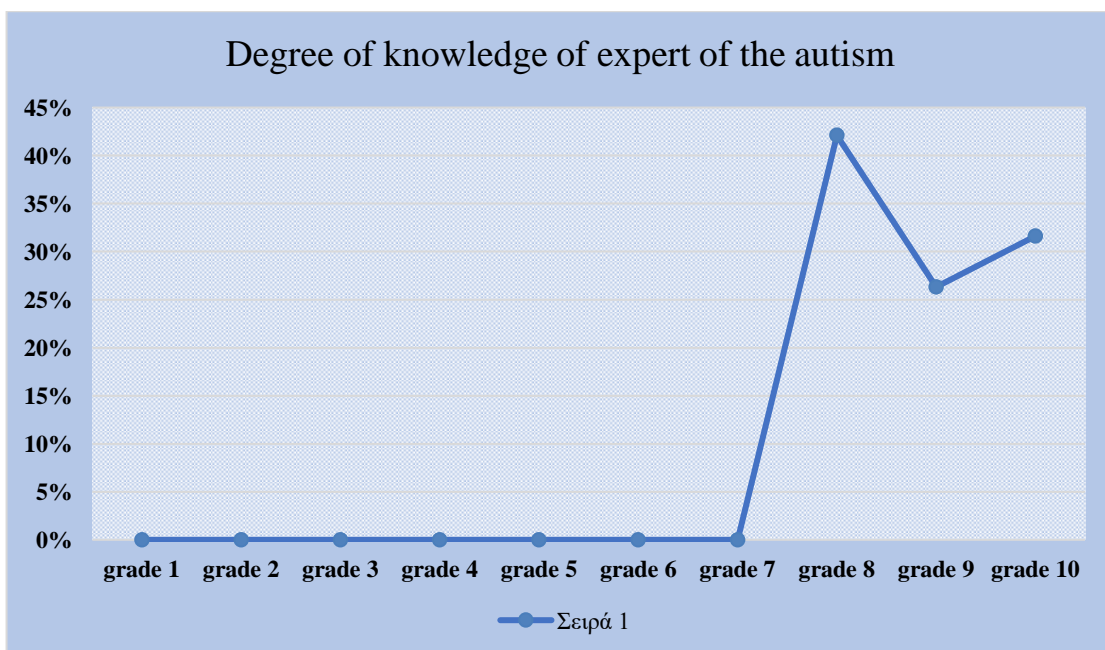


Chart 24: Degree of knowledge of autism experts

In Chart 24, the degree of knowledge experts have about autism is shown. 42,1% declare a grade of 8, 26,3% declare a grade of 9, while 31,6% declare a grade of 10.

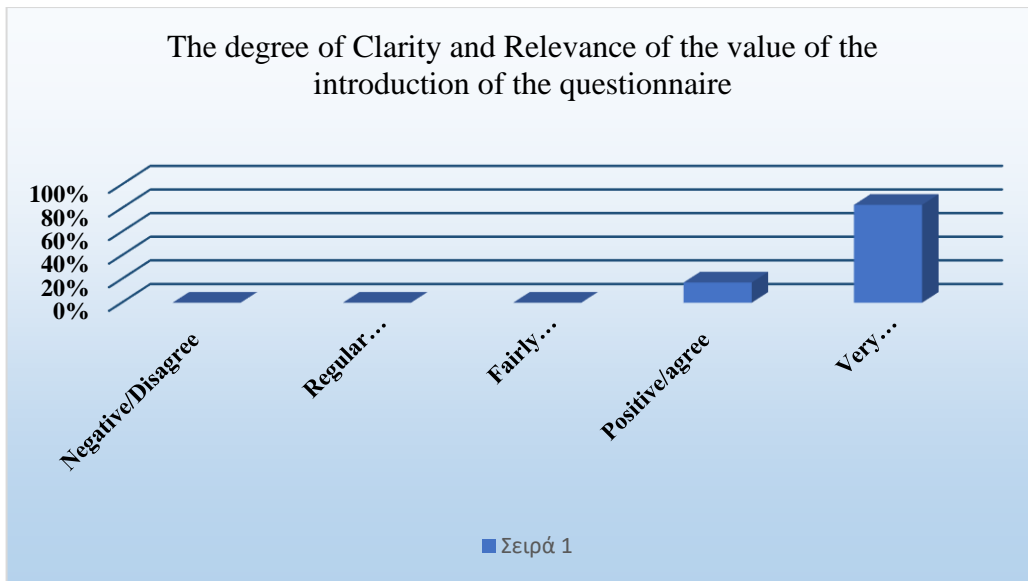


Chart 25: The degree of clarity and relevance of the value of the questionnaire input

Chart 25 shows the degree of clarity and relevance of the value of the introduction of the questionnaire, stating that 82,9% consider it to be very positive/strongly positive, while 17,1% state that it is very positive. 100% of the sample claims that the introduction is clear and relevant, appropriate and can be given without reservation to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 76 and the validity ratio of the questionnaire in terms of the relevance and clarity of the input value was rated as "very positive/strong positive" and "very positive" by the 76 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

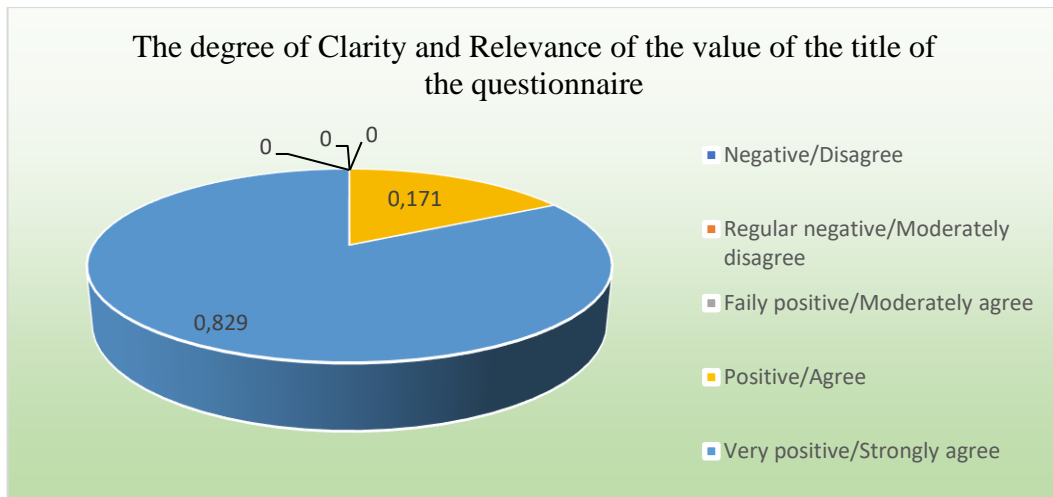


Chart 26: The degree of clarity and relevance of the questionnaire title value

Chart 26 shows the degree of clarity and relevance of the value of the questionnaire's title, with 82,9% declaring that it is very positive/strongly positive, while 171% state that it is very positive. 100% of the sample supports that the title is characterized by clarity and relevance, is appropriate and can be given unconditionally to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 76 and the validity ratio of the questionnaire regarding the relevance and clarity of the value of the title was rated as "very positive/strong positive" and "very positive" by the 76 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{ne - N/2}{N/2} \quad (1)$$

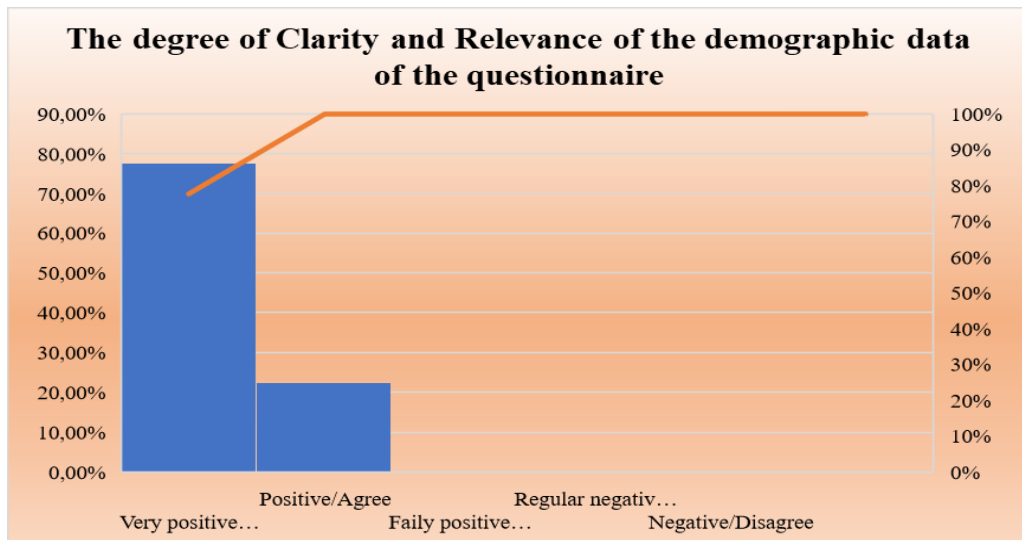


Chart 27: The degree of clarity and relevance of the value of questionnaire demographic data

Chart 27 shows the degree of clarity and relevance of the value of the questionnaire's demographics, with 77,6% stating that they consider it to be very positive/strongly positive, while 22,4% state that it is very positive. 100% of the sample agrees that the demographic information is clear and relevant, appropriate, and can be freely administered to the sample serving the purposes of the survey. They also stated that they cover much of the necessary information for the sample. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 76 and the validity ratio of the questionnaire in terms of the relevance and clarity of the value of the demographics was rated as "very positive/strong positive" and "very positive" by the 76 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

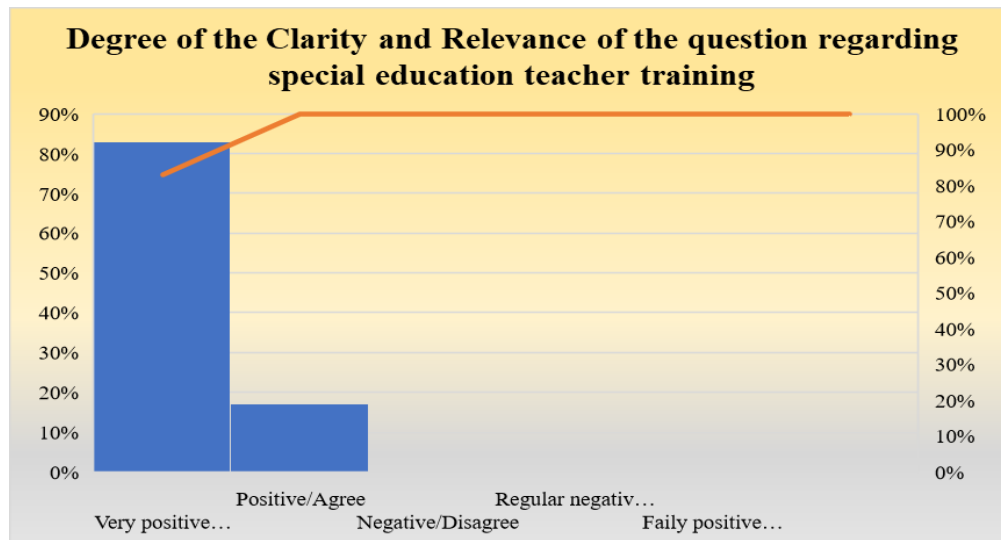


Chart 28: The degree of clarity and relevance of the question on the question about parents education in special education of the questionnaire

Chart 28 shows the degree of clarity and relevance of the value regarding teacher training in special education of the questionnaire, with 83% stating that it is very positive/strongly positive, while 17% state that it is very positive. 100% of the sample claims that the specific question in the questionnaire is characterized by clarity and relevance, is appropriate and can be unconditionally administered to the sample serving the purposes of the research. They also stated that special education training covered important information for the sample. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 76 and the validity ratio of the questionnaire in terms of relevance and clarity of value about special education parents training was rated as "very positive/strong positive" and "very positive" out of 76 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1. Content validity ratio = $\frac{ne - N/2}{N/2}$ (1)

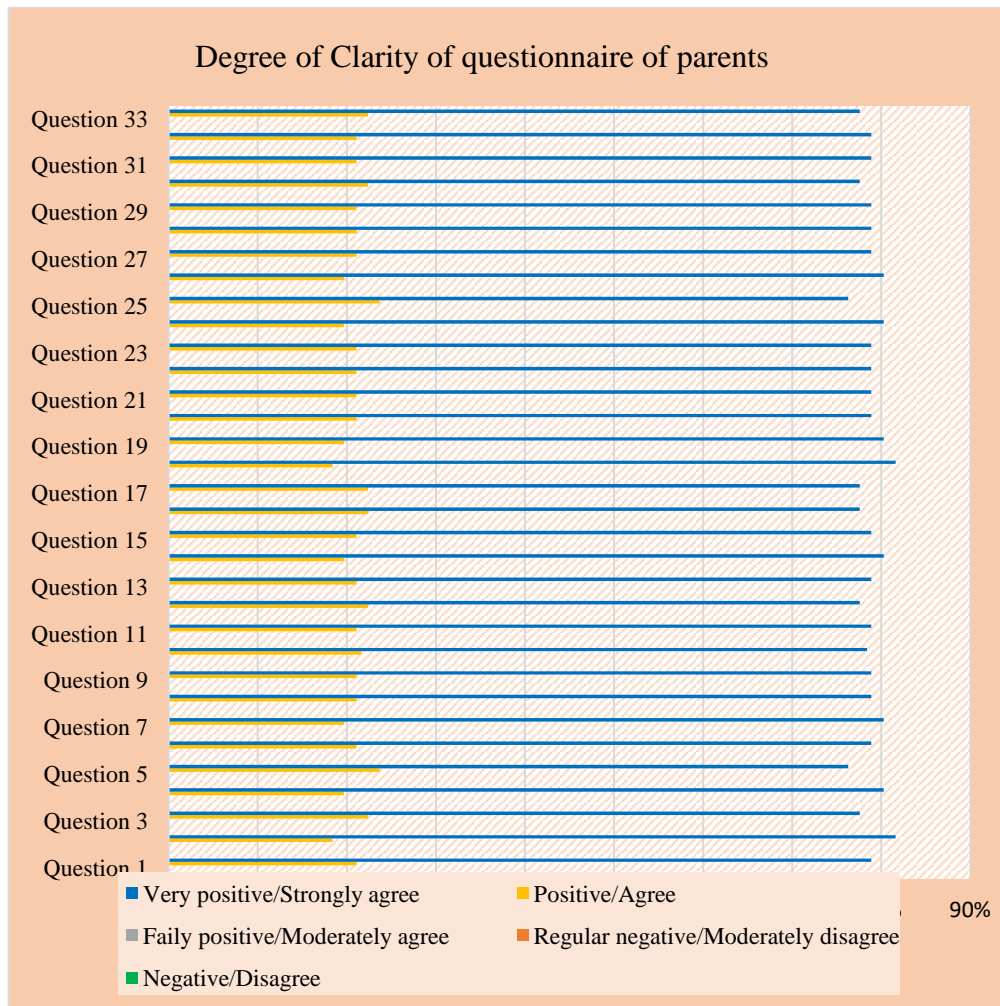


Chart 29: The degree of clarity of the parents' questionnaire

Chart 29 shows the degree of clarity of the value of the 33 questions of the questionnaire, stating that the average of the sample of experts 80% consider it to be very positive/strongly positive, while the average of the sample of experts 20% declares very positive. 100% of the sample supports that the specific questions of the questionnaire are characterized by clarity and appropriateness and can be administered unconditionally to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more

necessary to be included in the final questionnaire. Therefore, the total number of experts is 76 and the validity ratio of the questionnaire in terms of the clarity of the value of the 33 questions are characterized as "very positive/strong positive" and "very positive" by the 76 experts, then, according to equality 1 , it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

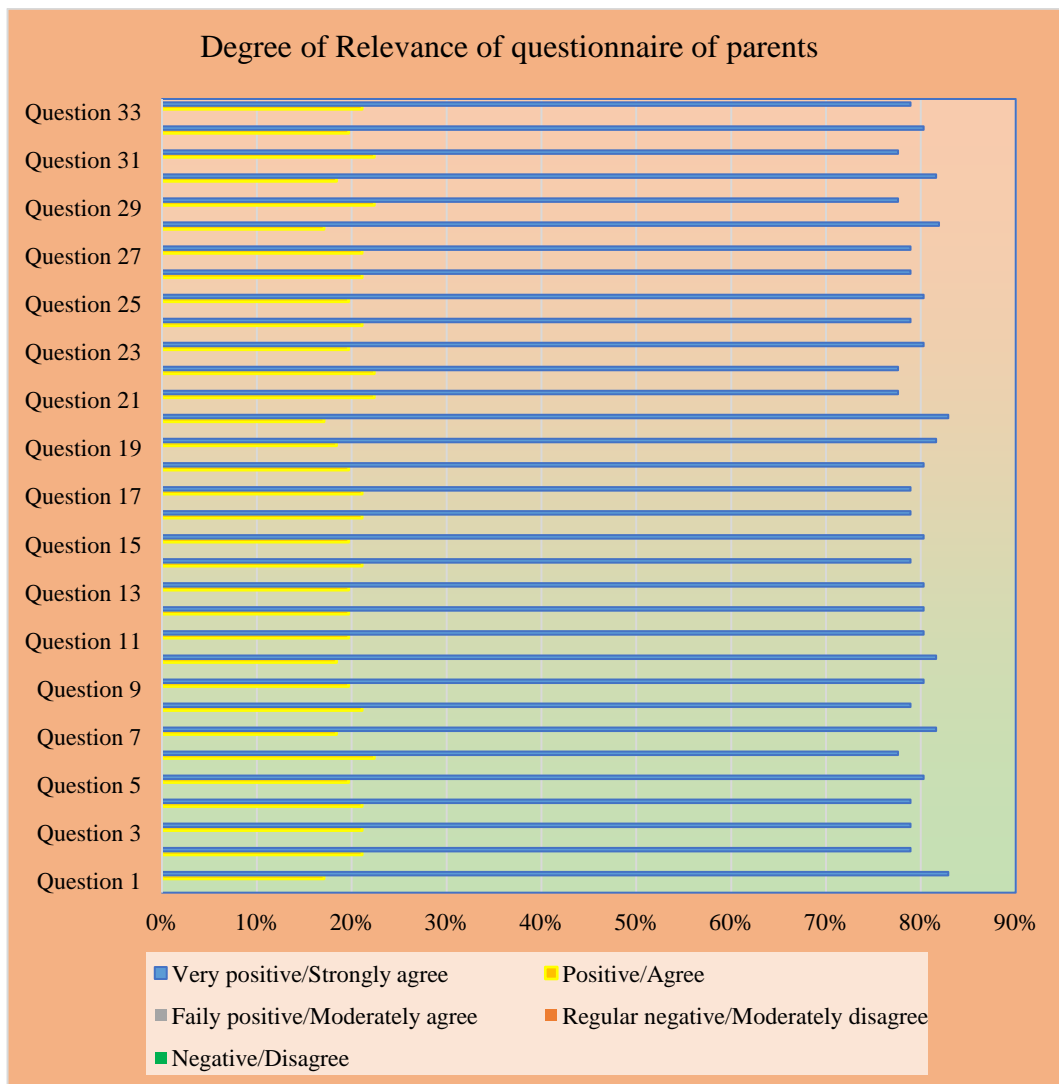


Chart 30: The degree of relevance of the parents' questionnaire

Chart 30 shows the degree of relevance of the value of the 33 questions of the questionnaire, stating that the average of the sample of experts 80% consider it to be very positive/strongly positive, while the average of the sample of experts 20%

declares very positive. 100% of the sample supports that the specific questions of the questionnaire are characterized by relevance, are appropriate and can be unconditionally administered to the sample serving the purposes of the research. When the content validity ratio for an item of a questionnaire is >0 , then more than half of the experts consider that item as "necessary". When the content validity ratio for an item of a questionnaire is half experts consider that item as "necessary". It is clear that the items of a questionnaire with a greater content validity ratio are more necessary to be included in the final questionnaire. Therefore, the total number of experts is 76 and the validity ratio of the questionnaire in terms of the relevance of the value of the 33 questions are characterized as "very positive/strong positive" and "very positive" by the 76 experts, then, according to equality 1, it follows that the content validity ratio is equal to 1.

$$\text{Content validity ratio} = \frac{n_e - N/2}{N/2} \quad (1)$$

According to the judgment of the experts, the questionnaire is deemed appropriate in terms of relevance and clarity. It responds to the relevance and clarity of the research objectives. The questionnaire can be administered as a response, as it adheres to the questionnaire drafting specifications, with appropriately worded questions that are concise, clear and understandable to the respondent. The questions are related to the problem and purpose of the research. This means that the questionnaire can be administered. The questions refer to the sample that may take part in the research and describe it clearly and relevantly. The questions are related to the respondents, are familiar to them and respond to the level of the respondents. The questions are clearly and relevantly worded and do not allow for any misinterpretation. They are related to the research problem and serve the purposes of the research. Also, the questions have a functional meaning, they are judged for

their accuracy, simplicity, clarity and relevance to the topic. The questions are simple and direct, prompting the person to provide the requested information and are relevant to the respondents so that the latter can respond. The questions are short and to the point, with clarity and relevance. The questionnaire can be forwarded unconditionally for completion by the sample. The wording of the questions is judged to be clear, neutral and does not indicate a certain type of answer. It also avoids confusing duplicate questions. There is precision, clarity and relevance to the purpose of the problem and research. Clarity and relevance are evident in all questions. This means that the questionnaire is judged suitable for relevance and clarity, so it can be administered to the sample and the results given in the interest of the research. It covers all aspects of the subject concisely and coherently, giving a comprehensive picture of autism. It is granted because it meets the purposes and results of the research.

3.7 Data Analysis - Results

(Descriptive and Inductive Analysis)

Data analysis:

Data analysis was descriptive to see the frequency of teachers' responses and the percentage in each response.

The following analytical tests were performed with the SPSS statistics package (v.23):

- Descriptive study of all the elements of the questionnaire (centrality measures - average) and dispersion (standard deviation).

- Descriptive study of all the elements of the questionnaire (centrality measures - average), and dispersion (standard deviation).
- Dispersion analysis to verify the relationship between the 3 dimensions of the questionnaire and the independent variables: teachers and parents.
- The relationship between the dimensions that constituted the questionnaire was verified with two-way correlations.
- ANOVA, t-test, post-hoc analysis was performed.

A) Analysis of the Parents' questionnaire

Table 17 Mean value and standard deviation of children and their order of birth

	Min	Mean	SD	Max
Number of children	1	2	1	5
Birth order of child with autism	1	2	1	4

From the table above, the average number of children is 2 with a standard deviation of 1, and the average birth order of the child with autism is second with a standard deviation of 1.

Table 18 Distribution of parents' views

	N	%
I agree	34	42,5%
totally agree	46	57,5%

1. Using the game in the educational process enhances the child's creativity with autism	Total	80	100,0%
2.I use the game as a means to educate my autistic children.	neither disagree nor agree	2	2,5%
	I agree	38	47,5%
	totally agree	40	50,0%
	Total	80	100,0%
3.Implementation of an intervention program through the game offers the possibility assessment of the child's cognitive skills	I agree	23	28,8%
	totally agree	57	71,3%
	Total	80	100,0%
4.The game helps the child with autism to improve its communication with other children	neither disagree nor agree	1	1,3%
	I agree	43	53,8%
	totally agree	36	45,0%
	Total	80	100,0%
5.The game helps to reduce the repetitive stereotyped movements	I agree	13	16,3%
	totally agree	67	83,8%
	Total	80	100,0%
6.Play therapy increases the child's interactive abilities with autism	neither disagree nor agree	2	2,5%
	I agree	46	57,5%
	totally agree	32	40,0%
	Total	80	100,0%
7.Children maintain eye contact during the game	neither disagree nor agree	25	31,3%
	I agree	53	66,3%
	totally agree	2	2,5%
	Total	80	100,0%
8.Children establish physical contact during the game.	neither disagree nor agree	24	30,0%

	I agree	56	70,0%
	Total	80	100,0%
9.Children obey the rules when they playing.	neither disagree nor agree	31	38,8%
	I agree	49	61,3%
	Total	80	100,0%
10.The children take the initiative during the game.	neither disagree nor agree	27	33,8%
	I agree	52	65,0%
	totally agree	1	1,3%
	Total	80	100,0%
11.Children use toys properly.	neither disagree nor agree	20	25,0%
	I agree	58	72,5%
	totally agree	2	2,5%
	Total	80	100,0%
12.Children use a variety of toys.	neither disagree nor agree	21	26,3%
	I agree	59	73,8%
	Total	80	100,0%
13.Children prefer particular toys.	neither disagree nor agree	1	1,3%
	I agree	12	15,0%
	totally agree	67	83,8%
	Total	80	100,0%
14.Autistic children show nterest in new games.	neither disagree nor agree	5	6,3%
	I agree	38	47,5%
	totally agree	37	46,3%
	Total	80	100,0%
15.The game provides information about the preferences and interests of autistic children.	I agree	14	17,5%
	totally agree	66	82,5%
	Total	80	100,0%

16.It is important for the game to manifest itself in other frames outside the home.	I agree	40	50,0%
	totally agree	40	50,0%
	Total	80	100,0%
17. The game improves the autistic child's reactions.	neither disagree nor agree	5	6,3%
	I agree	55	68,8%
	totally agree	20	25,0%
	Total	80	100,0%
18.The game provides information about the development and learning of autistic children.	I agree	27	33,8%
	totally agree	53	66,3%
	Total	80	100,0%
19.The game allows assessing deficiencies and changes in behavior in children.	I agree	27	33,8%
	totally agree	53	66,3%
	Total	80	100,0%
20.It is enough to play 1-2 hours a day.	I agree	13	16,3%
	totally agree	67	83,8%
	Total	80	100,0%
21.The environment affects the productivity of the game.	I agree	44	55,0%
	totally agree	36	45,0%
	Total	80	100,0%
22.The constant training program of the child improves his ability to play.	neither disagree nor agree	3	3,8%
	I agree	30	37,5%
	totally agree	47	58,8%
	Total	80	100,0%
23.The child use the game to expresses his feelings	neither disagree nor agree	1	1,3%
	I agree	33	41,3%
	totally agree	46	57,5%
	Total	80	100,0%
24.The child must be guided during the game	neither disagree nor agree	11	13,8%
	I agree	65	81,3%
	totally agree	4	5,0%
	Total	80	100,0%

25.I collaborate with other specialties, (psychologists, social workers, speech therapists), to enrich the treatment of the child.	neither disagree nor agree	23	28,8%
	I agree	54	67,5%
	totally agree	3	3,8%
	Total	80	100,0%
26.The therapeutic programs used in the treatment of children with autism, parental involvement is mandatory.	neither disagree nor agree	1	1,3%
	I agree	13	16,3%
	totally agree	66	82,5%
	Total	80	100,0%
27.The game positively encourages relationships between siblings.	neither disagree nor agree	1	1,3%
	I agree	12	15,0%
	totally agree	67	83,8%
	Total	80	100,0%
28.Relationships with siblings help develop social skills in general.	I disagree	2	2,5%
	neither disagree nor agree	16	20,0%
	I agree	62	77,5%
	Total	80	100,0%
29.The brothers of autistic children show interest in play with him.	I disagree	1	1,3%
	neither disagree nor agree	13	16,3%
	I agree	53	66,3%
	totally agree	13	16,3%
	Total	80	100,0%
30.The education of autistic siblings influences the child' s social behavior.	totally disagree	1	1,3%
	I disagree	1	1,3%
	neither disagree nor agree	19	23,8%
	I agree	59	73,8%
	Total	80	100,0%

31.Children with autism can be helped from their brothers in order to acquire functional abilities in their natural environment.	I disagree	2	2,5%
	neither disagree nor agree	12	15,0%
	I agree	43	53,8%
	totally agree	23	28,8%
	Total	80	100,0%
32.The child becomes more social with his peers.	I disagree	1	1,3%
	neither disagree nor agree	12	15,0%
	I agree	39	48,8%
	totally agree	28	35,0%
	Total	80	100,0%
33.The child becomes more social with his peers through the game.	neither disagree nor agree	20	25,0%
	I agree	57	71,3%
	totally agree	3	3,8%
	Total	80	100,0%

The results of the table 18 show that out of the total of 80 respondents 46 (57.5%) completely agree with the use of play in the educational process in order to enhance the creativity of the child with autism while the remaining 34 (42.5%) agree and 40 (50.0%) strongly agree with the use of the game for the education of children with autism while 2 (2.5%) neither agree nor disagree. Also, in the implementation of an intervention program through the game to have an evaluation of the child's abilities completely agree 57 (71.3%) of the respondents and the remaining 23 (28.8%) agree, while in the view that the game helps the child with autism to improve his communication with other children, 36 (45.0%) parents completely agree and 1 (1.3%) neither agrees nor disagrees.

According to the table above, 67 (83.8%) parents of the participants strongly agree that play helps to reduce repetitive stereotyped movements, while 13 (16.3%) agree,

46 (57.5%) parents agree with play therapy to increase of the child's interactive abilities in play, while only 2 (2.5%) neither disagree nor agree, 53 (66.3%) agree with the fact that the child maintains eye contact during play, while 2 (2.5%) completely agree, and finally 56 (70.0%) parents agree that they themselves develop physical contact with the child during play, while the remaining 24 (30.0%) neither disagree nor agree.

The results of the above table show that 49 (61.3%) of the respondents completely agree with the fact that children obey the rules during the game and the remaining 31 (38.8%) neither disagree nor agree, while 52 (65.0%) agree that children take initiatives during play and only 1 (1.3%) completely agree. Also, in the opinion that children use toys properly agree 58 (72.5%) of the participants and absolutely agree only 2 (2.5%), while in the opinion that children use a variety of toys agree 59 (73.8%) of the participants and the rest 21 (26.3%) neither disagree nor agree.

Of the total number of respondents in this table, 67 respondents (83.8%) completely agree that children prefer specific toys and only 1 (1.3%) neither disagree nor agree, while the fact that children with autism are interested in new toys agree 58 (47.5%) parents and 5 (6.3%) parents neither disagree nor agree. Also, in the view that the game gives useful information about the preferences and interests of the children, 66 (82.5%) parents completely agree and the remaining 14 (17.5%) agree. Finally, 40 (50.0%) parents either completely agree or agree that it is important for the game to take place in other contexts outside the home.

From the results of table, 55 (68.8%) parents agree that the appropriate reactions of the child are enhanced in the game, while 5 (6.3%) neither disagree nor agree, 53 (66.3%) parents agree that the evaluation through the game provides data on children's cognitive development and learning, while the remaining 27 (33.8%) agree, also 53

(66.3%) strongly agree that play-based assessment reflects children's shortcomings and changes in their behavior, while The remaining 27 (33.8%) agree and 67 (83.8%) parents fully agree that their role is important in enhancing children's play, while 13 (16.3%) agree.

According to table of all participants, 44 (55.0%) agree that their employment with the child 1-2 hours a day is satisfactory and 36 (45.0%) completely agree. Also, 47 (48.8%) strongly agree that the environment affects play, while 3 (3.8%) neither disagree nor agree, and 46 (57.5%) strongly agree that following a routine improves the child's ability to game, while only 1 (1.3%) neither disagree nor agree. Finally, 65 (81.3%) people agree with the fact that the child expresses his emotions during the game and 4 (5.0%) people completely agree.

The results of the table above show that in the question "Do you guide the child during the game?" 54 (67.5%) parents agree while only 3 (3.8%) completely agree with the question "Do you cooperate with the other specialties for the treatment of the child?" 66 (82.5%) parents completely agree and only 1 (1.3%) disagrees or agrees. In fact, 67 (83.8%) parents completely agree with the view that the therapeutic regimens used seek substantial involvement of the parents in the therapeutic effort and only 1 (1.3%) disagrees or agrees, while 62 (if the child plays with his siblings agree (62) 77.5%) parents and only 2 (2.5%) disagree.

Out of the total number of respondents who help their siblings in order to develop their social skills in general, 53 agree (66.3%) and only 1 (1.3%) disagree, while 59 (73.5%) agree on whether their siblings want to play with them) and either disagrees or strongly disagrees with 1 (1.3%). Also, in the opinion that "Education of siblings of children with autism, improves the social behavior of the latter" agree 43 (53.8%) parents and disagree only 2 (2.5%), and 39 (48.8%) parents agree and 1 (1.3%)

disagree with the view that "Children with autism can be helped by their siblings to acquire functional abilities in their natural environment". Finally, 57 (71.3%) respondents and (3.8%) completely agree on whether the child plays with his peers.

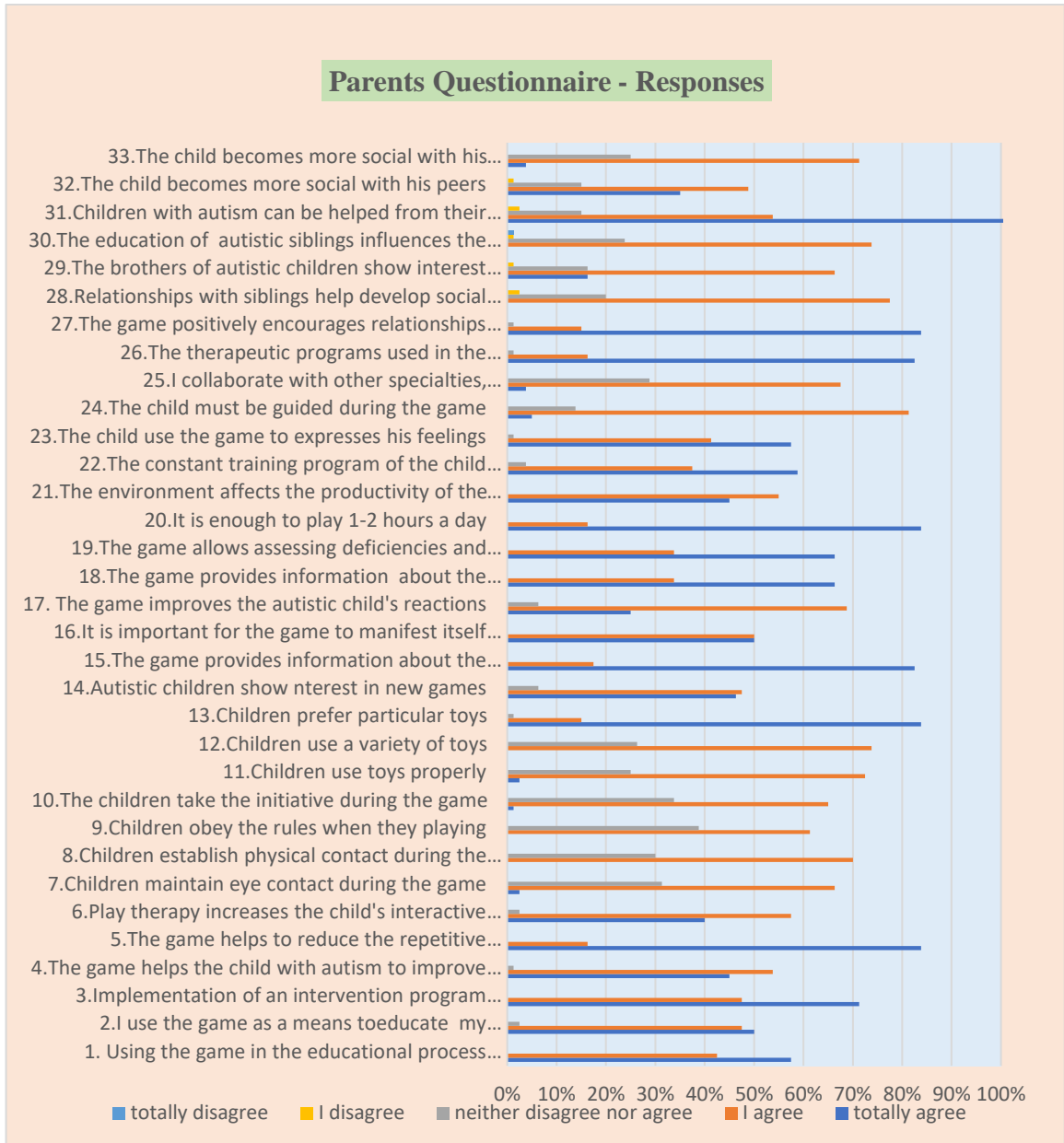


Chart 31 Parents Questionnaire - Responses

In chart 31, it can be seen that parents emphasize the importance of play, because it enhances the creativity of the child with autism, is a means of assessing cognitive skills, improves his communication and interactions, reduces stereotyped movements,

learns to work with rules, to takes initiative, to use varied and new toys. Also, home education and

employment is important, as well as the collaboration with the school and the specialties improves the abilities of the child with autism. Finally, it can be seen from the depiction of the questions that the participation of the brothers and interlocutors is decisive.

b. ANALYSIS OF VARIANCE (ANOVA)

In order to check whether the average values of a quantitative variable differ between the categories of a qualitative variable when it has more than two categories, use the One-Way ANOVA. The ANOVA table shows whether the dispersions are equal, in this case for the relation of the importance of play in the education of children with autism but in relation to the level of education of the parents, gives the level of importance $p < 0.05$. It is therefore true that there is a significant difference between dispersions. ($p = 0.026 < 0.05$).

Table 19 Interpretation of ANOVA results

SIGNIFICANCE_THE_GAME_IN_EDUCATION_THE_CHILDREN_WITH_AUTISM					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	790,342	4	197,585	2,923	,026
Within Groups	5069,146	75	67,589		
Total	5859,487	79			

B) Teacher questionnaire analysis

Table 20 Distribution of teachers' views

		N	%
1.The game help the child with autism to improve its communication with other children	I agree	50	33,3%
	Totally agree	100	66,7%
	Total	150	100,0%
2.The use of play in education improves the creativity of the child with autism	I agree	35	23,3%
	totally agree	115	76,7%
	Total	150	100,0%
3.I use the game in education of children with autism	neither	8	5,3%
	disagree nor	102	68,0%
	agree	40	26,7%
	I agree totally agree		
Total	150	100,0%	
4.The game helps reduce repetitive stereotyped movements.	I agree	21	14,0%
	totally agree	129	86,0%
	Total	150	100,0%
5.The game provides useful information about preferences and interests of children	I agree	25	16,7%
	totally agree	125	83,3%
	Total	150	100,0%
6.Play therapy increases the child's interactive abilities with autism	I agree	56	37,3%
	totally agree	94	62,7%
	Total	150	100,0%
7.Children express emotions them through the game	neither	3	2,0%
	disagree nor		
	agree	60	40,0%
	I agree	87	58,0%
Total	150	100,0%	

8.Children maintain eye contact during the game	neither disagree nor agree	19	12,7%
	I agree	108	72,0%
	totally agree	23	15,3%
	Total	150	100,0%
9.Children develop physical contact with you during the game	neither disagree nor agree	21	14,0%
	I agree	107	71,3%
	totally agree	22	14,7%
	Total	150	100,0%
10.Children obey the rules when they playing	neither disagree nor agree	16	10,7%
	I agree	99	66,0%
	totally agree	35	23,3%
	Total	150	100,0%
11.Children take the initiative during the game	neither disagree nor agree	16	10,7%
	I agree	81	54,0%
	totally agree	53	35,3%
	Total	150	100,0%
12.Children use toys properly	neither disagree nor agree	16	10,7%
	I agree	91	60,7%
	totally agree	43	28,7%
	Total	150	100,0%
13.Children use a variety of toys	neither disagree nor agree	15	10,0%
	I agree	80	53,3%
	totally agree	55	36,7%
	Total	150	100,0%
14.Children prefer particular toys	neither disagree nor agree	1	0,7%
	I agree	44	29,3%
	totally agree	105	70,0%

	Total	150	100,0%
15.Implementation of an intervention program through the game offers the possibility assessment of cognitive skills of the child	neither disagree nor agree	1	0,7%
	I agree	33	22,0%
	totally agree	116	77,3%
	Total	150	100,0%
16.The child with autism show interest in new games	neither disagree nor agree	10	6,7%
	I agree	98	65,3%
	totally agree	42	28,0%
	Total	150	100,0%
17.Evaluation through play provides data for children's cognitive development and learning	I agree	36	24,0%
	totally agree	114	76,0%
	Total	150	100,0%
18.Information from the children's game in different contexts are important in order to get a more complete picture of children's skills	I agree	43	28,7%
	totally agree	107	71,3%
	Total	150	100,0%
19.Evaluation through play illustrates the shortcomings of children and changes in their behavior	I agree	54	36,0%
	totally agree	96	64,0%
	Total	150	100,0%
20.The game is important for the development of children	neither disagree nor agree	5	3,3%
	I agree	80	53,3%
	totally agree	65	43,3%
	Total	150	100,0%
21.Reorganizing the curriculum to provide	I agree	51	34,0%
	totally agree	99	66,0%

more flexibility and freedom is considered important in educating children with autism			
	total	150	100,0%
22.The type of school (general or special) within it inclusive education affects the social interaction of children with autism with their peers	I agree	61	40,7%
	totally agree	89	59,3%
	Total	150	100,0%
23.More time should be devoted in the school 's schedule playing with children with autism	I agree	107	71,3%
	totally agree	43	28,7%
	Total	150	100,0%
24.The requirements of the program, available materials and school space facilitate the game	totally disagree	12	8,0%
	I disagree	87	58,0%
	neither disagree nor agree	45	30,0%
	I agree	4	2,7%
	totally agree	2	1,3%
	Total	150	100,0%
25.Provides the Ministry with materials and equipment teacher training	totally disagree	17	11,3%
	I disagree	104	69,3%
	neither disagree nor agree	29	19,3%
	Total	150	100,0%
26.Class conditions are appropriate for use of the game as an educational tool	totally disagree	18	12,1%
	I disagree	102	68,5%
	neither disagree nor agree	29	19,5%
	Total	150	100,0%

27. You use imitation as a treatment	I disagree	1	0,7%
	neither disagree nor agree	8	5,3%
	I agree	105	70,0%
	totally agree	36	24,0%
	Total	150	100,0%
28. The training on the education of children with autism through play is sufficient	totally disagree	82	54,7%
	I disagree	63	42,0%
	neither disagree nor agree	4	2,7%
	I agree	1	0,7%
	Total	150	100,0%
29. The game helps make the lessons better	I agree	88	58,7%
	totally agree	62	41,3%
	Total	150	100,0%
30. It is more interesting the game take place elsewhere (in the school yard, in the gym, in the library)	neither disagree nor agree	2	1,3%
	I agree	112	74,7%
	totally agree	36	24,0%
	Total	150	100,0%
31. Organize the game at break time of children with autism	neither disagree nor agree	34	22,7%
	I agree	106	70,7%
	totally agree	10	6,7%
	Total	150	100,0%
32. I let the boys and girls free at recess to do what he wants	neither disagree nor agree	47	31,3%
	I agree	97	64,7%
	totally agree	6	4,0%
	Total	150	100,0%
33. I collaborate with other specialties, (psychologists, social workers, speech therapists), to enrich the treatment of the child	I agree	72	48,0%
	totally agree	78	52,0%
	Total	150	100,0%

34. You believe that the role of parents is important to enhance children's play	neither disagree nor agree	3	2,0%
	I agree	78	52,0%
	totally agree	69	46,0%
	Total	150	100,0%

From the results of the above table it appears that 100 (66.7%) teachers completely agree that the game helps the child with autism to improve his communication with other children, while 50 (33.3%) agree, 115 (76.7%) strongly agree that the use of play in the educational process enhances the creativity of the child with autism and 35 (23.3%) agree, 102 (68.0%) agree that they use play as a means of educating children with autism, while 8 (5.3%) neither disagree nor agree, and finally 129 (86.0%) strongly agree that play helps to reduce repetitive stereotyped movements and 21 (14.0%) agree.

According to the above table, out of the total of 150 teachers in the opinion that "The game gives useful information for the preferences and interests of children" 125 125 teachers fully agree and the remaining 25 (16.7%) agree, in the opinion that "With treatment play enhances the child's interactive abilities in play "94 (62.7%) strongly agree and the remaining 56 (37.3%) agree, 87 (58.0%) teachers fully agree and 3 (2.0%) strongly disagree with the view that "Children express their emotions through play" and finally 108 agree with the view that "Children maintain eye contact during play" (72.0%) agree while 19 (12.7%) neither disagree nor agree.

From the results of this table to the fact that children develop physical contact through play agree 107 (71.3%) people and neither disagree nor agree 21 (14.0%), to the fact that during play they obey rules agree 99 (66.0%) people neither disagree nor agree 16 (10.7%) and that they take initiatives agree 81 (54.0%) and neither

disagree nor agree 16 (10.7%), and finally whether children use toys properly agree 91 (60.7%) people and neither disagree nor agree 16 (10.7%).

The results of the above table on teachers' views show that if children use a variety of toys, 80 (53.3%) people agree and 15 (10.0%) neither disagree nor agree, while 105 (70.0%) completely agree with the preference for specific toys. teachers and neither disagrees nor agrees only 1 (0.7%). Also, 116 (77.3%) people agree with the possibility of assessing the child's cognitive skills through the implementation of an intervention program through play and only 1 (0.7%) disagrees or agrees, while the interest of children with autism in 98 (65.3%) people agree with new games and 10 (6.7%) neither agree nor disagree.

Out of a total of 150 respondents to the question "Do you think that play assessment provides data on children's cognitive development and learning?" 114 (76.0%) teachers fully agree and 36 (24.0%) agree that "Information from children's play is important to get a complete picture of children's skills" 107 (71.3%) strongly agree) teachers and the remaining 43 (28.7%) agree, 96 (36.0%) teachers fully agree with the view that "Assessment through play reflects the shortcomings of children and changes in their behavior" while the remaining 54 (36.0%) agree, and finally, on the importance of play for the development of 80 (53.3%) children teachers agree and only 5 (3.3%) neither disagree nor agree.

The table above shows that 99 (66.0%) teachers fully agree that the reorganization of the curriculum provides more flexibility and is considered important in the education of children with autism and the remaining 51 (34.0%) agree. Also, 89 (59.3%) teachers fully agree that the type of school affects the social interaction of children with autism with their peers and the remaining 61 (40.7%) agree, while 107 (71.3%) teachers agreed on whether more time should be devoted to the school

timetable in the game with children with autism and the remaining 43 (28.7%) completely agreed. Finally, whether the game is facilitated by the requirements of the program, the available materials and the school space disagreed 87 (58.0%) and only 2 (1.3%) completely agreed.

According to the results of the above table, out of the total of 150 respondents 104 (69.3%) disagree with the fact that the ministry provides materials for teachers to be properly trained, while 17 (11.3%) completely disagree, 102 (68.5%) disagree with the conditions prevailing in the classroom so that the game is a means of education, while 18 (12.1%) completely disagree, 105 (70.0%) people agree that they use imitation as a means of treatment, while only 1 (0.7%) completely disagree, and finally 82 (54.7%) people completely disagree on whether the training related to the education of children with autism through the game is sufficient and only 1 (0.7%) agrees.

Also, 88 (58.7%) teachers agree with the opinion that "Through the game you can improve the teaching of other subjects" and the remaining 62 (41.3%) completely agree, 112 (74.7%) agree with the opinion that "The game takes place in another place" teachers neither disagree nor agree only 2 (1.3%) and in the opinion that "During the break you organize the play of children with autism" 106 (70.7%) teachers agree and 10 (6.7%) strongly agree.

According to this table , out of the total of 150 respondents, 97 (64.7%) agree with the question "Do you leave the child free to do whatever he wants during the break?", While 6 (4.0%) completely agree, 78 (52.0%) completely agree with the view that "Cooperation with other specialties, psychologists, social workers, speech therapists, is important for the treatment of the child", while the remaining 72 (48.0%) agree, and finally 78 (52.0%) agree with the question "Do you think that the role of parents

is important for enhancing children's play?", while only 3 (2.0%) neither disagree nor agree.

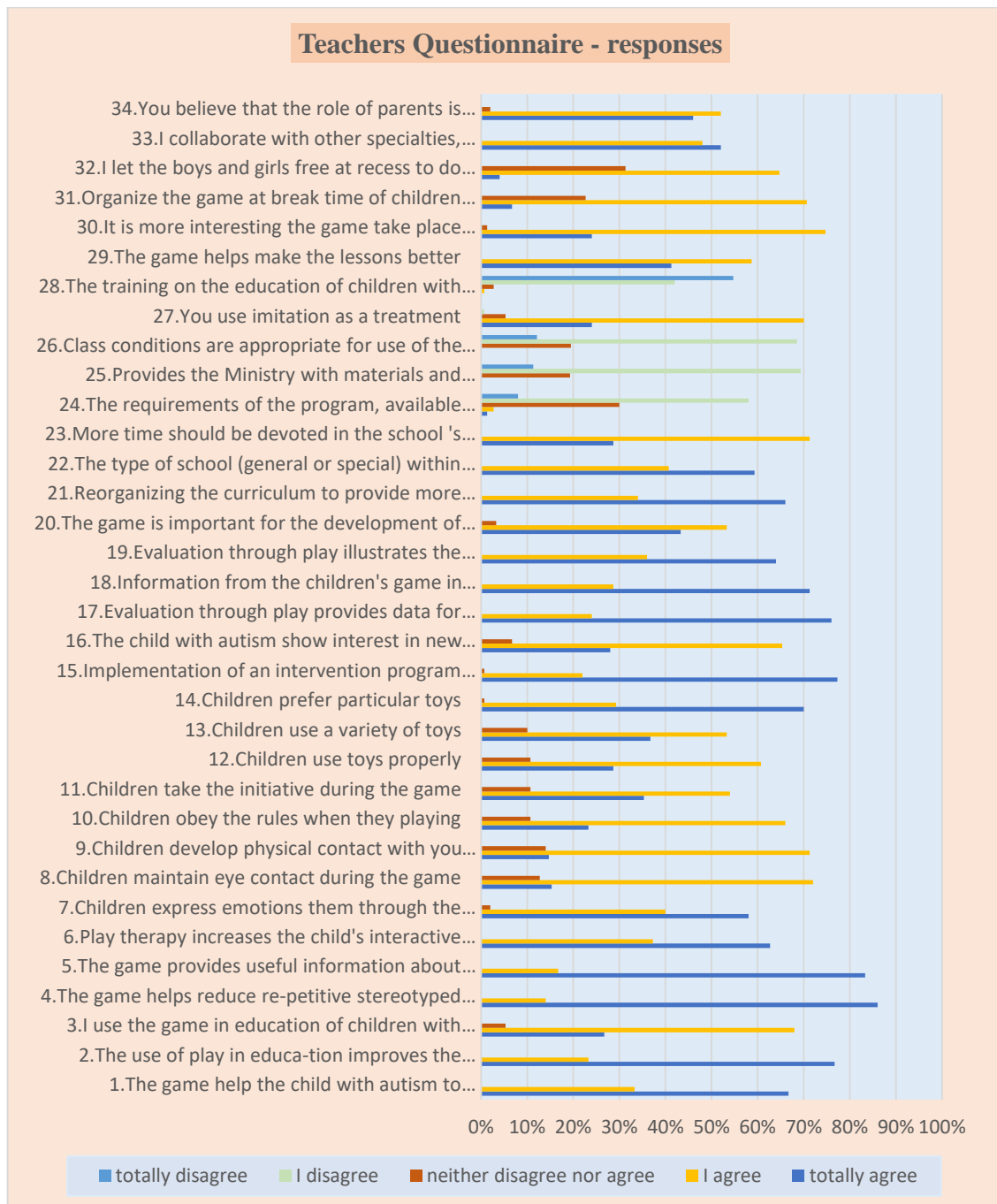


Chart 32 Teachers Questionnaire – Responses

In chart 32, it can be seen that teachers emphasize the importance of play, because it enhances the creativity of the child with autism, is a means of assessing cognitive skills, improves his communication and interactions, reduces stereotyped

movements, learns to work with rules, to takes initiative, to use varied and new toys. Also, home education and employment is important, as well as the collaboration with the school and the specialties improves the abilities of the child with autism. The assessment of the child through play gives information about the child's cognitive development, as well as information about the child's deficits, his emotions and changes in his behavior. In the depiction of the questions, it appears that it is deemed necessary by the teachers to reorganize the syllabus, providing more freedom and flexibility to the teachers, giving more time to the timetable in the game. Also, the appropriate equipment, the provision of material and the possibility of training are considered important for teachers. Recess is an important time for organizing play activities. Finally, it can be seen from the depiction of the questions that the participation of the brothers and interlocutors is decisive.

Comparing the importance of play in the education of children with autism in relation to the gender of the teachers who participated in the study, it was observed that there is no statistically significant relationship between the two variables examined. The first table contains the averages and the standard deviations of the values of the dependent variable of the two groups (men-women). In the second table the first line refers to the Levene test for equality of variations. Depending on the value of the significance of this test we accept the hypothesis of equal variations or not (here the power of the equation of equal variations is 0.126, greater than 0.05 so we accept that the variations are equal. Therefore, we check the significance of the t-test in the first. The power of the null hypothesis is π from 0.05 ($p = 0.901$) so the averages of the stop values do not differ between the two sexes.

Table 21 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
SIGNIFICANCE OF THE GAME IN EDUCATION OF THE CHILDREN WITH AUTISM	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
	Equal variances assumed	2,371	,166	-,115	148	,901	-,065	,54879	-1,15303	1,01594
	Equal variances not assumed			-,112	119,63	,9035	-,06855	,56221	-1,18173	1,04464

Table 22 Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Man	62	50,8065	3,57514	,45404
	Woman	88	50,8750	3,11028	,33156

b. Analysis of variance (ANOVA)

Interpretation of ANOVA results

In order to check whether the average values of a quantitative variable differ between the categories of a qualitative variable when it has more than two categories, use the One-Way ANOVA. The ANOVA table shows whether the dispersions are equal, in this case for the relationship between the importance of play in the education of children with autism but also the importance in teaching in relation to the level of education, gives the level of importance $p > 0.05$. It is therefore true that there is no significant difference between dispersions. While from the ANOVA table there is a statistically significant effect between the effect of the importance of play in the education of children with autism in relation to the educational level. ($p = 0.048 < 0.05$).

Table 23 ANOVA

		Sum of Squares	df	Mean Square	F	Sig .
SIGNIFICANCE THE GAME IN EDUCATION ON THE CHILDREN WITH AUTISM	Between Groups	56,891	3	18,964	1,770	,156
	Within Groups	1564,582	146	10,716		
	Total	1621,473	149			
SIGNIFICANCE THE GAME IN EDUCATION ON THE CHILDREN WITH AUTISM	Between Groups	196,487	3	65,496	2,695	,048
	Within Groups	3548,346	146	24,304		
	Total	3744,833	149			

c. Correlational analysis - t-test

Independent Samples Test: t – test

Comparing the importance of play in the education of children with autism in relation to the gender of the teachers who participated in the study, it was observed that there is no statistically significant relationship between the two variables examined. The first table contains the averages and the standard deviations of the values of the dependent variable of the two groups (men-women). In the second table the first line refers to the Levene test for equality of variations. Depending on the value of the significance of this test we accept the hypothesis of equal variations or not (here

the power of the equation of equal variations is 0.126, greater than 0.05 so we accept that the variations are equal. Therefore, we check the significance of the t-test in the first. The power of the null hypothesis is from 0.05 ($p = 0.901$) so the averages of the stop values do not differ between the two sexes.

Table 24 Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
SIGNIFICANCE THE GAME IN_EDUCATION THE CHILDREN WITH AUTISM	Man	62	50,8065	3,57514	,45404
	Woman	88	50,8750	3,11028	,33156

Table 25 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
SIGNIFICANCE THE GAME IN_EDUC	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper

ATTITUDE OF THE CHILDREN WITH AUTISM	Equal variances not assumed					iled			wer	per
		2,371	,126	- ,125	148	,491	- ,0685	,5489	- 1,1530	1,11594
				- ,122	119,63	,903	- ,0685	,5621	- 1,18173	1,1464

d) Interpretation of ‘post hoc’ result

Equally analyzing the post hoc table through Tukey’s HSD, there is a difference between the level of university education with postgraduate and doctoral. All other correlations are not different.

Table 26 Multiple Comparisons

Dependent Variable	(I) Education level	(J) Education level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Technological	University	1,72222	2,55907	,907	-4,9285	8,3729

SIGNIFICANCE_TH E_GAME_ IN_EDUC ATION_T HE_CHIL DREN_WI TH_AUTI SM	scien ces - TEI	Postgr atu ate	2,5806 5	2,33 336	,686	-3,4835	8,64 47
		Docto rate	4,1666 7	2,46 426	,332	-2,2376	10,5 710
		Techn ologic al scienc es - TEI	-1,72 222	2,55 907	,907	-8,3729	4,92 85
	Univ ersit y	Postgr atu ate	,85842	1,13 010	,872	-2,0786	3,79 54
		Docto rate	2,4444 4	1,38 026	,291	-1,1427	6,03 16
		Techn ologic al scienc es - TEI	-2,58 065	2,33 336	,686	-8,6447	3,48 35
	Post gratu ate	Unive rsity	-,85 842	1,13 010	,872	-3,7954	2,07 86
		Docto rate	1,5860 2	,894 90	,291	-,7397	3,91 17
		Techn ologic al scienc es - TEI	-4,16 667	2,46 426	,332	-10,5 710	2,23 76
	Doct orate	Unive rsity	-2,44 444	1,38 026	,291	-6,0316	1,14 27
					-3,9117		

LSD	Technological sciences - TEI	Postgraduate	-1,58602	,89490	,291		,7397
		University	1,72222	2,55907	,502	-3,3354	6,7798
		Postgraduate	2,58065	2,33336	,271	-2,0309	7,1922
		Doctorate	4,16667	2,46426	,093	-,7036	9,0369
		Technological sciences - TEI	-1,72222	2,55907	,502	-6,7798	3,3354
	University	Postgraduate	,85842	1,13010	,449	-1,3750	3,0919
		Doctorate	2,44444	1,38026	,079	-,2834	5,1723
		Technological sciences - TEI	-2,58065	2,33336	,271	-7,1922	2,0309
	Postgraduate	University	-,85842	1,13010	,449	-3,0919	1,3750
		Doctorate	1,58602	,89490	,078	-,1826	3,3547
		Technological sciences	-4,16667	2,46426	,093	-9,0369	,7036

Bonferroni	Doct orate	es - TEI					
		Unive rsity	-2,44 444	1,38 026	,079	-5,1723	,283 4
	Tech nolo gical scien ces - TEI	Docto rate	-1,58 602	,894 90	,078	-3,3547	,182 6
		Unive rsity	1,7222 2	2,55 907	1,00 0	-5,1225	8,56 69
		Postgr atuate	2,5806 5	2,33 336	1,00 0	-3,6604	8,82 17
		Docto rate	4,1666 7	2,46 426	,558	-2,4244	10,7 578
		Techn ologic al scienc es - TEI	-1,72 222	2,55 907	1,00 0	-8,5669	5,12 25
		Univ ersit y	Postgr atuate	,85842	1,13 010	1,00 0	-2,1642
	Docto rate		2,4444 4	1,38 026	,472	-1,2473	6,13 62
	Techn ologic al scienc es - TEI		-2,58 065	2,33 336	1,00 0	-8,8217	3,66 04
	Post gratu ate		Unive rsity	-,858 42	1,13 010	1,00 0	-3,8811
		Docto rate	1,5860 2	,894 90	,471	-,8075	3,97 96

SIGNIFICANCE_TH E_GAME_ IN_EDUC ATION_T HE_CHIL DREN_WI TH_AUTI SM	Doct orate	Techn ologic al scienc es - TEI	-4,16 667	2,46 426	,558	-10,75 78	2,42 44	
		Unive rsity	-2,44 444	1,38 026	,472	-6,1362	1,24 73	
		Postgr atuate	-1,58 602	,894 90	,471	-3,9796	,807 5	
	Tech nolo gical scien ces - TEI	Unive rsity	Unive rsity	-4,38 889	3,85 387	,666	-14,4 046	5,62 68
			Postgr atuate	,08871	3,51 395	1,00 0	-9,0436	9,22 10
			Docto rate	1,2333 3	3,71 108	,987	-8,4113	10,8 779
		Univ ersit y	Techn ologic al scienc es - TEI	4,3888 9	3,85 387	,666	-5,6268	14,4 046
			Postgr atuate	4,4776 0*	1,70 189	,046	,0546	8,90 06
			Docto rate	5,6222 2*	2,07 862	,038	,2202	11,0 243
			Techn ologic al scienc es - TEI	-,088 71	3,51 395	1,00 0	-9,2210	9,04 36

LSD	Post graduate	University	-4,47760*	1,70189	,046	-8,9006	-,0546
		Doctorate	1,14462	1,34768	,831	-2,3578	4,6471
		Technological sciences - TEI	-1,23333	3,71108	,987	-10,8779	8,4113
	Doctorate	University	-5,6222*	2,07862	,038	-11,0243	-,2202
		Postgraduate	-1,14462	1,34768	,831	-4,6471	2,3578
		University	-4,38889	3,85387	,257	-12,0055	3,2277
	Technological sciences - TEI	Postgraduate	,08871	3,51395	,980	-6,8561	7,0335
		Doctorate	1,23333	3,71108	,740	-6,1010	8,5677
		Technological sciences - TEI	4,38889	3,85387	,257	-3,2277	12,0055
	University	Postgraduate	4,47760*	1,70189	,009	1,1141	7,8411
		Doctorate	5,62222*	2,07862	,008	1,5141	9,7303
					,980	-7,0335	

Bonferroni	Postgraduate	Technological sciences - TEI	-,08871	3,51395			6,8561
		University	-4,47760*	1,70189	,009	-7,8411	-1,1141
		Doctorate	1,14462	1,34768	,397	-1,5189	3,8081
		Technological sciences - TEI	-1,23333	3,71108	,740	-8,5677	6,1010
	Doctorate	University	-5,62222*	2,07862	,008	-9,7303	-1,5141
		Postgraduate	-1,14462	1,34768	,397	-3,8081	1,5189
		University	-4,38889	3,85387	1,000	-14,6968	5,9190
		Technological sciences - TEI	,08871	3,51395	1,000	-9,3100	9,4874
	Technological sciences - TEI	Doctorate	1,23333	3,71108	1,000	-8,6926	11,1593
		Technological sciences - TEI	4,38889	3,85387	1,000	-5,9190	14,6968
		Technological sciences - TEI			,057	-,0744	9,0296

	University	Postgraduate	4,47760	1,70189	,046	,0626	11,1819
		Doctorate	5,62222*	2,07862	1,000	-9,4874	9,3100
		Technological sciences - TEI	-,08871	3,51395		-9,0296	,0744
	Postgraduate	University	-4,47760	1,70189	1,000	-2,4600	4,7492
		Doctorate	1,14462	1,34768	1,000	-11,1593	8,6926
		Technological sciences - TEI	-1,23333	3,71108		-11,1819	-,0626
	Doctorate	University	-5,62222*	2,07862	1,000	-4,7492	2,4600
		Postgraduate	-1,14462	1,34768			

*. The mean difference is significant at the 0.05 level.

Unit 4

DISCUSSION

The findings of the present research show that there is absolute agreement from the teachers regarding the elements that influence the motivation of children with autism. Specifically, regarding the need to achieve the motivations, such as the requirements of the program, the available materials and the school space, the material provided by the ministry to the teachers, the difficult conditions in the classroom for the use of the game in the classroom, the insufficient education and training of teachers regarding children with autism create factors that make it difficult to achieve motivation in the context of everyday life. However, improving the definition of criteria so that teachers can organize appropriate play conditions, the majority of teachers stated that it is a basic need to reorganize the curriculum that provides more flexibility and freedom, the type of school (General or Special) in the context of inclusive education affects the social interaction of children with autism with their peers, the need to devote more time in the timetable to play, as well as the need to use play as a means of therapy.

Regarding the skills that teachers of autistic students should have, most teachers stated the need to reorganize the syllabus to provide more flexibility and freedom, the teaching of lessons is made better through play, and imitative play helps significantly in education of these children, while cooperation with other specialties and with parents is an important factor for a more effective intervention.

The majority of teachers seem to agree on the identification of the aspects that enrich the development of skills in autistic children, as well as agree that teachers should evaluate the child's needs and learning process through play. In particular, the game helps the child with autism to improve his communication, his creativity, the game is

a means of education, it contributes to the reduction of repetitive stereotypical movements. Also, the game gives useful information about the interests and preferences of children, they maintain eye contact, develop physical contact with the adult, obey rules during the game, while at the same time they can use a variety of toys, show interest in new and to maintain their preferences for specific games. The implementation of an intervention program through play offers the possibility of evaluating the child's cognitive skills, but also the children's cognitive development and their all-round development. Most educators agree that play is an important means of assessing children with autism, both their cognitive and learning progress, as well as the ability to better capture the image of their skills, their deficiencies and changes in their behavior.

Other factors such as the improvement of the teaching of other subjects through the game, the need to carry out the game in another place, the organization of the game during the break, but also the creation of conditions for free play during the break strengthen the outlets that exist for the development of the occupation of autistic children. Also, the majority of teachers consider it necessary for teachers to collaborate with the other specialties, psychologists, social workers, speech therapists, in order to work together to achieve the child's treatment. Finally, an important condition for enhancing children's play is the role of parents, who play an important role in children's education and for this reason cooperation with teachers is deemed necessary.

The results of the research regarding the strategies used by parents to work with their children, showed that the majority of parents use the game as a means of assessing the child's cognitive development, his learning, the changes that may occur in his behavior, but also the identification of the child's shortcomings. It is also an important

factor, according to the majority of parents, the creation of a suitable environment for play, as well as the reinforcement of play by parents and their employment with play 1-2 hours a day is considered satisfactory. Regarding the educational opportunities offered by parents, most parents stated that an environment for appropriate play plays an important role, as well as maintaining a routine improves the child's ability to play. At the same time, the child's interactive abilities increase as they develop physical contact with the adult.

From the findings of the research, it appears that parents discover the special benefits that play offers to these children, as it seems that the majority of parents state positively about the importance of play in the child's creativity, in the reduction of repetitive stereotypical movements, in that children obey rules during play, use them appropriately, varied and specific games, so that children with autism are interested in new games. Also, parents state that play gives useful information about children's preferences and interests, it is important that play occurs in other contexts outside the home, but they state that it is important to reinforce the child's appropriate reactions to play.

In order for there to be cooperation between school and home, parents and teachers, according to the majority of parents' answers, should use the game as a means of education both at home and at school, the implementation of an intervention program through the game offers the ability to assess the child's cognitive skills, while the game helps the child with autism to improve his communication with other children. Another point that most parents agree on is that they can assess the child's needs and learning through play, as his communication skills improve, he maintains eye and body contact during play, and he develops initiative. In the observation that children use toys, the majority of parents emphasize that it is important to strengthen children's

appropriate reactions to the game, the manifestation of their emotions during the game, the need to guide the child, the cooperation with the other specialties for the treatment of the child, as well as the involvement of the parents in the various treatment regimens used for the child with autism. Also, the majority of parents consider it necessary for parents to collaborate with the other specialties, psychologists, social workers, speech therapists, in order to work together to achieve the child's treatment, but also the need for parents to participate in the treatment regimens used for children with autism.

The results showed that according to the parents' perceptions, the way in which children with autism show interest with their siblings and their peers, is demonstrated by the child's participation with his siblings and peers in the game, the relationships with the siblings help the development of social skills, the de Also, the majority of parents stated that the education of the siblings of children with autism improves the social behavior of the latter, while in a large percentage of the answers it seems that it is important that children with autism are helped by their siblings in order to acquire functional abilities in their natural environment, sire of the siblings themselves to participate in the play with siblings with autism.

From the analysis of the research data in combination with the review of the literature regarding play and its contribution to the cognitive, sensory and communicative development of children with autism, it appears that the way parents of children with autism perceive the contribution of the game, is influenced by the way it affects the level of education they have received, but also the number of children and the order of birth of the autistic child. Specifically, what is of particular interest is the level of education of the parents, as well as the possibility of training in special education. That is, we can see that the largest percentage of the sample has graduated from high school, while a significant part of the sample has completed basic

education, high school. It seems that the educational level greatly affects the ability to provide important activities in terms of helping children by providing motivation and support in the play process utilizing the benefits for the development of the child.

The findings of the research regarding the opinion of parents about gambling and autism, showed that factors such as the number of children and the order of birth of the child with autism. In this way it seems that the more children the parents of the child with autism have, the more they realize that the game of the child with autism with his siblings improves their social behavior and they use the game less as a means of education. Furthermore, it seems that the education of parents is a factor that influences their view on the contribution of play to the education of children with autism. More educated parents are more likely to express their opinion about the contribution of play to the development of communication skills of children with autism, while they believe that play helps to adapt the person to be obedient to rules and maintaining interest. of children fixed.

One of the most important factors in a child's development is play, which plays a key role in it and in the learning process (Schertz et al., 2018). The constructive game contributes to the proper development of the child through the development of his aesthetic, motor, mental and social skills, offering ideal conditions for his entertainment. Another area that is affected by the game is the child's taste, which will contribute to a better understanding of his social, physical and spiritual environment (Estes et al., 2015).

The importance of play in order for the child to develop properly mentally and physically can be seen. In fact, the game has a variety of forms and types and different benefits that a child can obtain, which makes it accessible to any category of children

(Veiga et al., 2016). It does not discriminate according to the economic, social, mental and physical condition of children.

The game is especially important for children with disabilities, and especially for children with autism, whose main problem is communication (Schertz κ.ά., 2012). The most common difficulties concern symbolic and social games. The game should be used for the education of these children by the teachers and for their treatments by the respective therapists.

The game has many benefits for children. Through the game they develop their thinking, memory and ability to solve problems that concern them, mainly through puzzles. Through play children can develop many kinds of learning and language skills (Arizandi, 2018). From playing in-house with role-playing creations of other family members where they mimic family situations and experiences, they understand the difference between members, especially in terms of the obligations and requirements they have from other members. Especially the toys that refer to preschool children, help them to better understand the size, shape and texture. Also, through the involvement of children with books, they come in contact with pictures and words, thus enhancing their vocabulary and their understanding of the world (Ginsburg, 2007).

Through games, children develop their imagination and become more creative, something that is essential for the healthy development of their brain. With toys, the child makes the first discovery of the world. It also offers him the development of self-confidence and skills capable of helping him recover from difficult situations (Veiga et al., 2016). When more than one child is involved, they can share experiences and situations, pleasant and unpleasant, make decisions, move at their own pace, discover

their interests and express their views. They therefore learn how to participate and act within a group (Bailey, 2006).

Unorganized play offers the child physical activity and therefore better health. Helps the child to adapt smoothly to the school environment, enhances his learning readiness and cognitive development (Ayotte-Beaudet et al., 2017).

The amount of time spent playing in the school promotes the development of skills and social skills. More specifically, children through play have the opportunity through interaction to get to know themselves better and to develop relationships of trust with their classmates, realizing that each child has the opportunity to have his own role in the group. The exploration offered by the game enables students to become familiar with their environment. It is important that the game begins in childhood and continues throughout the life of the individual changing form. The process of play educates children in addition to the field of socialization and in terms of problem solving, without losing their childhood. Also, through play, children significantly enhance their imagination and critical thinking, while it can improve children's relationships with parents, their family and the world (Peppler, 2017).

Both the dynamic and the imaginative type of play contribute to the intellectual and cognitive development of children. This is mainly because the game works for children as a "lens" with the help of which children perceive the world, both in relation to themselves and in relation to other people. Deprivation of the game leads to negative results such as the creation of unhealthy and productive people (Veiga et al., 2016).

The benefits of play for many researchers are not only summed up in improving children's motor activity and fitness but are related to all that has been mentioned before regarding the child's cognitive skills. The game is beneficial for children who

are distinguished in immediate benefits and are related to motor function and aerobic exercise of children (Neely et al., 2016). The long-term benefits of play are related to the ability of children to function as members of a team while maintaining their principles and respect for others. In this way children learn to live as a "part of the whole", develop their emotional intelligence and ability to understand and accept the feelings of others. Through play, children's sense of justice is enhanced and the development of healthy competition is promoted (Neely et al., 2016).

According to Brown (2009) free play without time limit is associated with better brain development, as unstructured play contributes to problem solving, creative thinking and the development of children's motor skills. Especially during preschool play has multiple benefits for children affecting most areas of their lives. More specifically, play seems to have emotional and behavioral benefits in the child's life, as play reduces the child's fear, anxiety and irritability (Avgitidou et al., 2016). In addition, the game cultivates joy and a sense of intimacy in children, enhancing their sociability and improving their emotional flexibility. The child through the process of play is trained to maintain calm and acquire the ability to adapt and resilience to change and difficult situations (Manichander, 2016).

On the other hand, through play the child gains significant social benefits, as it increases compassion and understanding for others, improves non-verbal communication between children, while the relationships that are created between children are based on the inclusion model and not the model of exclusion. Finally, analyzing the natural benefits of play in a child's life, it seems that they are related to the better functioning of the immune and cardiovascular system of children (Avgitidou et al., 2016). At the same time, through play children are able to reduce stress, negative thoughts, feeling tired and depressive behaviors. Children's movement through sports

activities changes significantly, as they increase their flexibility, coordination ability, balance and physical strength of children (Manichander, 2016).

The importance of play in the educational process is extremely important, as through play the child will be able to acquire additional skills and cognitive skills regardless of the age at which the child is. Professionals working in the special education industry place great emphasis on the game's contribution to understanding how it operates and develops (Avgitidou et al., 2016). Children with disabilities can participate in play activities, provided some adjustments are made first. The most common problem faced by children with disabilities is the fact that these children are often marginalized and do not participate in group activities that offer knowledge and entertainment because of the characteristics that differentiate children with autism from children of normal development. In order to enhance the participation of autistic children in the play process, efforts have been made to create educational programs that will meet the needs of children and are the result of the cooperation of teachers and parents. The problems and obstacles that arise in creating these programs vary. In those cases where children do not want to participate in the play process or are not interested in the game, the factors that make the children uncooperative should be identified and the goals of the game should be defined from the beginning (Lynch, 2015). The communication and cooperation of children with autism with their peers through the process of play, is part of the therapeutic intervention applied to treat autism (Woolf, 2015).

Parents also argued the importance of play for their children and stated that their children attend a specific intervention program through play. Parents reported on their children's play that their children prefer to play with themselves and their siblings in general. Therefore, we can see in cases where there are siblings, it is important the involvement of siblings in the game process, because their participation contributes to

the development of social skills. For this reason, educating siblings of children with autism improves the social behavior of the latter and helps their siblings with autism to acquire functional skills in their natural environment (Wilkinson et al., 2016). Regarding the siblings of children with autism, the parents stated that they usually want to play with the child with autism. Siblings' desire for play and interaction with children with autism is based on siblings' love and interest in children with autism. As mentioned in a related chapter, there are times when siblings of children with autism adopt an individualistic lifestyle, ignoring the problem. They do not participate in anything, putting a safety valve on their person and differentiate their attitude from the rest of the family (Wilkinson et al., 2016). Many times the feelings of siblings of children with autism are ambivalent. Moods of protection and help alternate with moods of resignation. Finally, playing with his peers is an equally important factor.

Parents' views on what the play process offers to children with autism show that the use of play in the education of the child with autism enhances creativity, helps the child to improve his communication with other children, as the application is important an intervention program through play to assess the child's abilities. Also, play therapy helps to increase children's interactive abilities in play, and on the other hand significantly reduces repetitive stereotyped movements, significantly maintaining visual and physical contact during play (Tugrul et al., 2014). On the other hand, we can see that through organized play children can learn rules and obey them in the context of group interaction, while it turns out that with proper manipulation they can take the initiative and use appropriate and varied games with the right guidance, although they have some particular preferences with specific games due to autism (Morfidi et al., 2015). Clearly through the game we can draw useful

information for both the interests and the preferences of the children, which is why it is important that the game manifests itself in other contexts outside the home.

Assessment through play provides data on the cognitive development and learning of children, as well as the shortcomings of children and it is possible to identify any change in the behavior of the child to address an unpleasant attitude of the child or to reinforce a positive one. stand. For this reason it seems that the role of parents is important in enhancing the game and in observing it while it is playing (Augitidou et al., 2016). Another important factor in this process is the daily working time of the parents with the child. It is considered that 1-2 hours a day is sufficient to offer the child the joy of playing. At this point it should be emphasized the importance of the environment and how it can affect the child, while following a routine improves the child's ability and can feel safe and express his feelings.

According to the research data, we conclude that the guidance during the game is considered important according to the answers given by the parents. Also, the cooperation of the parents with the specialties for the treatment of the child is important, as well as its participation in the therapeutic regimens used for the treatment of the children is important and essential.

On the other hand looking at the conclusions drawn from the sample of special education teachers regarding play and the way in which it affects the population of children with autism. There are certain characteristics of the teacher that affect their view of the game. One of them is the position of the teacher, his specialty, more specifically, kindergarten teachers seem to understand more the importance of play for the smooth development of cognitive skills and communication skills of children with autism, compared to secondary school teachers (Morfidi et al., 2015).

At the same time, the gender of the teachers is a factor that significantly influences their views regarding the game. Female teachers express the view that the selection of appropriate toys affects the development of autistic children as each toy affects the development of children's abilities in a different way. Also, years of experience in general and special school are factors related to how they evaluate the role of play in children's development. The level of training of teachers and the training they have received regarding special education affects the teachers' view on how much the child's contact with the play process offers, but also the communication of the children with their classmates. According to the research of Kalpakoula et al. (2017), teachers recognize the fact that play helps to improve the child's senses, to create strong social bonds and to enable the autistic child to participate in an inclusive class, enhancing cognitive, his educational, aesthetic and social skills (Garanis, 2008).

Also, the opinion of teachers regarding what the play process offers to children with autism is determined by their specialty and the gender of the teachers. The work experience in general and special school, as well as the education and additional training of teachers in special education determine the view of teachers on how play can affect children with autism (Thiesen et al., 2014). It is important that the majority of teachers reported that they have attended a relevant training program or seminar. We observe, therefore, that teachers may have received some training on their own initiative, however they consider that they are lacking in proper training and education for the use of the game in the education of children with autism (Tsihlakis, 2010). Moreover, the teachers themselves consider the training provided by the Ministry of Education to be insufficient and claim that the ministry does not even provide them with the appropriate materials for the development of the game (Dermitzakis, 2017).

Teachers and parents, therefore, do not differ much in their views on how to use play in the education and treatment of children with autism (that is, in their emphasis on activities of interest to the child and in their support for appropriate responses). children's play. They also agree on the factors that influence the development of the game in the classroom, such as the classroom environment, the requirements of the program and the materials available (Silderg et al., 2017). Both groups agree on their views on the use of evaluation through play. The importance of evaluation through the game was emphasized in a previous relevant chapter. Assessment in the context of the game can lead to specific interventions and a mechanism for monitoring student progress. Helps to define appropriate intervention goals and to control the effectiveness of the interventions. Using free play in a natural environment is a good way to evaluate cognitive functionality. In addition, play assessments help to examine the developmental level of children through play (Dermitzakis, 2017). Using play as an assessment tool also collects important information about children 's game preferences and discoveries and assesses children' s ability to play. In fact, the game provides a better framework for assessing the cognitive level of children with autism compared to traditional psychological tests.

In addition, teachers and parents agree on the contribution of play to the development of communication in children with autism, as well as the contribution of play to the emotional expression of children with autism (Stasinis, 2016). The identification of teachers 'and parents' views on the use and contribution of the game suggests that both groups recognize the game as an important alternative method of evaluation and intervention. Both groups also recognize the importance of play in the development of children with autism, in improving their communication and enhancing their interaction.

However, when asked about the contribution of play to children with autism, educators believe that children with autism develop satisfactory eye and physical contact during play, which enhances children's interest and further development. Teachers also believe that children with autism often prefer specific toys, while at the same time arguing that children express a particular preference for new toys (Labadari et al., 2018). At this point we must emphasize how important the role of parents is. Parents who know their child better and preferences better than anyone can inform teachers about the toys their child prefers, as well as other information that will be useful for the educational intervention.

Teachers, therefore, use more imitation in playing with children and believe more that following a specific structure-routine improves the play of children with autism. The literature highlights the importance of adhering to a specific structure when designing learning and play environments for all children with disabilities and especially for children with autism. When there is no specific structure and predictability in the play area then children are upset and it is possible to increase their stereotypical behaviors (Giannopoulou et al., 2018). Teachers who "work" with children with autism on a daily basis know that following a specific program and routine helps these children. This is why, perhaps, parents believe to a greater extent that following a certain structure also improves their children's ability to play. Besides, the teachers of our sample worked mainly in special schools in which, as is well known, a specific structure is observed in the education of children with autism and a specific program.

This research, therefore, showed that, when the teacher did not interfere in play interactions, children with autism were closer to toys and played with them

appropriately. High rates of positive play behaviors were also observed during interactions with their peers.

Teachers, therefore, are quite guided in the play of children with autism, considering that the guiding therapy of the game is the best. So they often use the guidance therapy and direct the children to their play. Interventions that facilitate children and not guiding interventions are those that improve the child's functionality, independence and increase interactions with peers. Guidance therapy through play brings more emotional and social benefits to children with autism (Labadari et al., 2018). Teachers using the guiding game in educating children with autism, believe that by observing and interacting more in children's play they can better assess children's learning and abilities, as well as letting children play freely can to get a correct picture of their strengths and weaknesses.

It is important that teachers while stating that they often guide children with autism play in the classroom as well as during break time by providing specific play activities. It has been mentioned in a previous chapter that break time should be given special attention (Bibiri, 2017). The time of the break is very important for creating social gatherings between the children. Playing during the break is the main opportunity to create kisses between children. However, the time devoted to breaks is limited due to the increase in time devoted to teaching. The break is the most difficult time of school for children with autism. The lack of specific structure and predictability, the noise and the presence of many children during the break create stress in children with autism. In addition, their inability to "read" other children's body language makes it difficult to learn social norms and make friends with other children (Bibiri, 2017). The only way teachers can help children with autism cope with the chaos of the break and integrate the break into their curriculum.

The teachers therefore argued that play should be part of each child's individualized program. In order to do this, however, those who will implement the game program must know how to use it. There must also be a good knowledge of all the types of play and the stages of development of these different types of play (from birth to seven years), in a child of typical development (Augitidou, 2016). Thus, in a child with autism who does not tolerate another child next to him, the teachers will not try to develop a cooperative game, but the goal will be for the child to gradually move from solitary to parallel play. Finally, most teachers pointed out that the special school mainly favors the development of cooperative-group play in children with autism. Of course, some children with autism can benefit socially and academically from joining the general school and developing their play. However, this depends on the appropriate support from qualified staff.

It is also important that the type of school that helps children with autism develop group play depends on each child and the severity of his or her condition. A child who has many behavioral and communication problems and is "deep" in the autism spectrum will benefit most in special school. The research supports the development of cooperative-group play and the creation of social contacts of children with autism with their peers in the general school. But in order to achieve this, teachers must take into account the different educational and emotional interests of children with autism and their special needs.

Finally, teachers and parents, as well as communication with specialties, consider cooperation between them, the exchange of information and the exchange of advice very important. Thus, the cooperation between them is an important factor for the facilitation of their work, for the achievement of the generalization of the objectives of the program, for the exchange of advice and for the observance of a common

program. Teachers also said they often work with specialties, such as occupational therapists, speech therapists, psychologists and social workers. Many educators have reported that they work with gymnasts in the gym, and that together they develop play skills in children with autism. The teachers also said that they advise the parents of children with autism on the development of play skills and work with them on a regular basis. The teachers stressed that it is very important to provide advice and support to parents, so that the goals of the program are generalized at home. Also, parents can inform them, better than anyone, about the child's history, about the toys he prefers, about what the child likes and enjoys during his play and all this information is very important for the planning a game program (Schertz et al., 2018).

The game has a particularly beneficial effect on children with autism both in terms of the developmental development of children and their educational development, although they often show weaknesses and do not respond to the game like the children of the general population. More specifically, the classic way of approaching the game process does not work effectively for children with autism, this happens as these games lack imagination, creativity and spontaneity, so they do not arouse the interest of children, who consider this game immature. and less fun (Kalpakoula et al, 2017). Through the participation of autistic children in the process of play, the bridge of the gap of the deficiencies that these children present in comparison with the population of their peers who do not present with developmental disorders is achieved, enhancing the abilities of these children (Garani, 2008).

Sensory play enables children to discover their body, to come into contact with objects in their environment, while exploratory play allows children to perceive the properties of each object. On the other hand, beneficial physical play develops children's motor skills and the way in which the child's body interacts with the objects

in their environment (Kalpakoula et al, 2017). Social play helps children get rid of their loneliness, acquire social skills, create social bonds and self-identify through contact with other children their age. In this way, the participation of children with autism in the game is considered necessary in order to develop their skills, cognitive, educational, aesthetic and social so that it is possible to include them in the classes of the general school. It is important for teachers to adapt play activities to facilitate the participation of autistic children and to design educational intervention programs aimed at their development (Garani, 2008).

The value of play in the process of child development is great as through this process children learn themselves and others and highlights problems that may exist. However, play as a process causes problems especially in children with special needs compared to children of normal development. More specifically, children with autism have problems because of the peculiarities of autism disorder (Kalpakoula et al, 2017). The greatest difficulty of children with autism is related to the externalization of children's emotions and the way in which children perceive the stimuli they receive from their familiar environment. In this way it is observed that the autistic child can not develop through the typical form of play as he has considerable difficulty in spontaneous reaction and participation in imitation or construction activities (Stasinos, 2016). Characteristic of children with autism is their inability to socialize and integrate into social play with their classmates, but they prefer to play alone. This is mainly due to the difficulty of autistic children to keep up with their classmates and to adapt to the environment in which the game takes place. Especially those toys that require a combination of actions, prevent children from participating in games due to the inability of children to adapt (Stasinos, 2016).

Teachers and parents, therefore, believe in the positive contribution of play to children with autism and the importance of play in the education and treatment of children with autism. However, it is necessary to educate and train teachers, but also parents on how to use the game in the educational and therapeutic program of children with autism. Play is the most enjoyable activity for all children and should be included in the school curriculum as a separate unit. It is necessary for the officials of the ministry to realize the value of the game for children with autism and its contribution to the improvement of the social and communication sector. The ministry should also take care of the proper organization of the school space and classrooms, in order to favor the development of the game and in addition to provide teachers with the appropriate materials for the development of the game in children with autism.

The game is an inexhaustible tool, but also a learning field for children with autism and for all children, exploring their cognitive, emotional, social and mental world by understanding the world around them and creating links with their social environment resulting in participate and be part of the culture of their peers. Thus, children with autism turn to the world around them and not to themselves.

UNIT 5

Conclusions limitations and future lines

The importance of play in the education of children with autism, as well as teachers' views on the role of play in the education of these children, has concerned scholars. The game is the "work" of the child. It is the means of expression, but also the basic way of learning and development of the child. According to Guldberg (2016), appropriate activities through play significantly influence the child's development by meeting their learning needs. Thus, children acquire active participation, manipulate the environment, come into contact with various materials or objects and activities in various contexts (indoor or outdoor spaces such as school, parks) (Bradshaw et al., 2015). In this way, the tendency of isolation and passivity is reduced by participating in various recreational activities.

Guldberg (2016) states that the role of teachers is important since it is he who facilitates, organizes and determines the functioning of the game by guiding the learning process. He is the one who will implement this practice that will facilitate the child to understand thoughts and feelings, but also the expressiveness and exploration of play (Ashburner et al., 2014).

The development of social, aesthetic/visual, language and emotional skills of children with autism are affected by play, which requires the teaching intervention of the teacher affecting the development of these skills. Research has shown that play is an important element in a child's all-round development. It affects mental-spiritual development, as attention, thinking, memory and imagination are exercised (Bottema-Beutel, 2016). At the same time, it lays the foundations for the development of language, as the child is encouraged to create stories, to express thoughts, desires and

feelings, to communicate and to discuss (Guldberg, 2016). At the emotional level, the game causes pleasure, the expression of various positive and intense emotions, such as joy, calmness, satisfaction, anger, fear (Bottema-Beutel, 2016). Also, the physical-motor development of children through play is considered important since flexibility, endurance, coordination of movements, fine motor skills, strengthening of the muscular system, better breathing function are developed. The game cultivates the child's aesthetic-imaginative skill by offering rich materials and giving him the opportunity to utilize them, developing his creativity, initiative and self-esteem (Bottema-Beutel, 2016). Finally, through group games, the child is given the possibility of social integration and inclusion in the group with his peers, as he is called upon to communicate, cooperate and handle roles and rules within his capabilities (Bradshaw et al., 2015).

From the research results, it appears that teachers have an important role in the use of the game during the educational process. They are the ones who organize, coordinate the game with the aim of facilitating the learning process of students with autism (Anagnostou et al., 2014). In this effort they take into account the interests of the students, adapt the game to the needs and abilities of the children, choose materials and the way the activity will be carried out, while they are given the opportunity to observe the child during the game, reinforcing and encouraging children's creativity and initiative at a group and individual level (Schertz et al., 2018).

From the results of the research, it appears that the game is the appropriate means of learning and effective intervention for all children, but especially for children with autism. According to Schertz et al., (2018) the contribution of play to the child's life enhances the knowledge of new social skills, the development of new and creative solutions for difficulties and problems they encounter by developing successful

strategies, but also the development of respect and acceptance of both themselves as well as other people. Through the game they learn to be responsible, to express feelings improving their self-esteem and reducing feelings of anxiety, sadness, anxiety, aggression (Anagnostou et al., 2014).

It is very important to help children with autism to develop skills and abilities for normal play. Through sensory play, children will learn about different objects, get to know materials, develop fine motor skills, and get to know their physical and social environment (Anagnostou et al., 2014). The motor-physical game will contribute to the development of motor skills, the child's orientation in relation to others and objects. The social-drama will enhance social interaction, communication and group integration. Bottema-Beutel (2016) emphasize the importance of pretend play in the development of symbols and representations, offering the child pleasure and creativity. Play is important and valuable to children with autism because it is a means of expressing thoughts, feelings, it is the child's self (Bottema-Beutel, 2016). While playing, the child can give a lot of information about himself, which he cannot express through speech, he expresses through play. The lack of skills reinforces the isolation of these children, making them feel different from their peers. According to Morisson, Sainato and Sayaka (2002) an early strategic intervention that supports learning in play and less in school progress enables children with autism to join mainstream school.

The opinions of the teachers from the research results show that they are positive towards the importance of play in the education of children with autism. Their role is important in the development of the game (Avgitidou et al., 2016). The teacher has the possibility to strengthen the child's game taking into account his interests, to examine what the child likes, what he does not like, why the child chooses a certain

game, how he can suggest another game (Schertz et al., 2018). During play he has the opportunity to observe the child's behavior, reinforce the positive points, while at the same time he can perceive the thoughts and feelings from the way he plays, the materials he uses and the way he interacts with his peers (Anagnostou et al., 2014).

The role of the teacher seems to be important in the education of these children considering both Vygotsky's "zone of imminent development" theory and Bruner's "scaffolding" theory, which emphasize the supportive role of the teacher in the learning and development process of the child according to the needs and capabilities of each child. The teacher has a supporting and coordinating role and not a leading one (Ashburner et al., 2014). He is the one who will intervene, organize the game, letting it move freely to develop its autonomy, creativity and imagination. He must have the flexibility and readiness to look for alternative forms of play and to respond to the stimuli given to him by the children (Ashburner et al., 2014).

Educators emphasize the importance of play in the education of children with autism, considering play as the appropriate means for acquiring knowledge and developing skills. According to research, teachers consider it important to reorganize the curriculum to provide more flexibility and freedom to the teacher, with defined goals, the creation of suitable conditions for play and the appropriate training of teachers to respond effectively (Avgitidou et al., 2016).

In conclusion, the game affects the development of the social skills of children with autism, as they also contribute to the cultivation of language, motor and aesthetic functions. The child with autism is trained to acquire skills of adaptability, self-control and the ability to think logically. The experiences they gain through structured play encourage creativity, imagination, and the acquisition of basic skills such as fine motor skills. At this point, teaching intervention through school programs and structured

education is an important factor. By providing appropriate developmental play opportunities, the teacher responds to the needs of these children by helping these children acquire better adaptive behavior.

In the future, further research is needed, which will be able to demonstrate the attitude of teachers and parents towards the development of skills of children with autism in relation to play. A further research, which will be able to give useful and specific information and knowledge about the use of play in the life of children with autism, both by teachers and parents. It will be important to give special emphasis to the effectiveness of the use of play in education and in the treatment of children with autism, as well as in the organization and design of appropriate intervention programs with the use of play in education (Stasinou, 2016). Also, it would be important to investigate the educational effects of play on children with autism in order to highlight different levels of functioning. Each child with autism is different and needs different treatment, so it is difficult to reach more general conclusions about the play of all children with autism. Furthermore, research should focus on those factors that influence or may facilitate the play of children with autism. Another point on which research could focus is the knowledge of teachers and parents of play for typically developing children, with the aim of better planning and designing intervention programs for children with autism. Equally important is the appropriate design of assessment practices for children with autism to explore the utility of play in assessing child development. Finally, it is also important for the further research of the game in the therapeutic intervention, placing particular emphasis on the effectiveness of combined behavioral treatment methods and play therapy in children with autism.

The primary limitation of the research is that the selected sample is considered binding and the reason is that it comes from specific areas. At the same time, this fact

is not a major problem in the sense that the purpose of the research is not to generalize the conclusions of the entire population, but to record the views of a portion of teachers and parents. As mentioned above, in a previous paragraph, it is possible to draw certain conclusions in populations that are similar to the sample we are studying. In addition, Creswell (2011) states that this limitation, although important, can be bypassed as such studies may have some utility in future research on similar topics.

Another limitation is the fact that most of the teachers interviewed did not have many years of experience in autism. In particular, it turned out that a large part of the sample held up to five years in the field of autism. This may immediately imply that due to the lack of sufficient experience the answers they would give if they had more experience.

One last limitation is that characterized by the training that the two groups had in the field of autism. More specifically, mainly the parents but also some of the professionals may not have the necessary training regarding autism. The lack of corresponding training and specialization may have created the corresponding answers which may have differed if all the participants had the necessary specialization.

Based on what was stated in both parts of the present research, some changes could be proposed for the purpose of further and future research on a similar topic. Primarily, as far as this questionnaire was concerned, it was characterized by closed-ended questions of a five-point Likert scale. Finally, in the future, it would be useful to change the format of some questions in the questionnaire, in order to achieve a good factor analysis. Thus, a possible change could be made in the type of questions, where open-ended questions could be added, so that the answers are more detailed and specific. However, the questionnaire could take the form of an interview, as this would

allow participants to express their views on the topic in more detail. The use of the same questionnaire in combination with the interviews would help to evaluate the personal opinion of the respondents about the use of the game. Interviewing is a more direct method of data collection. The issuance of the questionnaire in combination with the personal interviews would better and more accurately reflect the views of both groups regarding play in children with autism.

At this point it should be noted that the questionnaire used for the present survey has been applied to previous surveys as well. It is also important to mention that a test-retest was performed, the questionnaires were redistributed to the teachers and parents who completed the initial questionnaires in order to check whether their views on the use and contribution of the game to children with autism remain the same.

In addition, further research for more reliable conclusions could focus not only on parents of children with autism as well as special education professionals who belong to specific regions, but also in different regions of many states. Through this, the opinions of a larger percentage of participants could be taken into account, as well as the possibility of comparing the results of different regions and countries.

In addition, future research that is equally relevant to the field of play could approach the present issue more specifically by focusing on specific methods that through play will aim to help educate and develop children with autism. Each group of children requires its own different handling, which in such cases must be taken into account.

By doing the above, some improvements could be made to the potential shortcomings of the training. By exploring the views of special education teachers alongside the views of parents of children with autism through open-ended questions or interviews, it would be possible to express views from the perspective of two different social groups, which may have led to innovative ideas.

In addition, the additional opinion of special education teachers as well as parents of other countries could lead to the introduction of innovative, educational systems aimed at improving education deficiencies. Methods that may still remain unknown in our country may bring the desired results. This issue is of particular importance as the spectrum of autism varies in many dimensions, a fact to which the necessary attention must be paid.

Also, through the formulation of views of properly trained teachers on autism, another issue that could be considered is the type of school in which a child with autism should be. In this regard, the parent's cooperation with the teacher could play an important role as the parent would provide information about their child which the teacher might not have had remarks on. A child who has several problems with behavior and communication would be more helpful in attending special school. Thus, the child will be able to help and develop the group game or any of his weaknesses.

Finally, a future similar study could look at other variables, such as the interaction of children with autism who have been educated through play with children on the autism spectrum who have not been educated through play. Furthermore, it would be possible to consider generalizing the results of the research in a different environment from the one in which the research was conducted. The performance of children with autism in the imitation game provided by the educators could be compared to that of other children their age who attended the same games. Teaching rules of the game, rules of communication related to the game, such as greeting, addressing a teammate, eye contact, when and how to address others, how to invite to the game, and how to respond when someone invites us. Also, in a future study, it could measure quality characteristics, such as spontaneity, joy and creativity, that children with autism acquire.

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LAW/ PRESIDENTIAL DECREES

Law: 4547/18 on Education Structures (Reorganization of the structures support of primary and secondary education and other provisions).

Google Forms

<https://docs.google.com/forms/d/1FTLWzE0gbsaE7vvKBS1RbT95c5pFE17faiM1mbCIYeg/ed>

it?usp=sharing_eip_m&ts=63a32ddb&urp=gmail_link

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ANNEX A:

THE VIEWS OF PARENTS ABOUT ITS IMPORTANCE GAME IN THE EDUCATION OF CHILDREN WITH AUTISM

This questionnaire refers to trying to identify the views and opinions of parents who have children with autism in special education and general education about the importance of play in the learning process of these children. The questionnaire is completed by parents whose children attend general and special school in primary and secondary education. The information collected will be used in a confidential manner for the preparation of the doctoral dissertation.

Thanks for your participation!

Marital status:

α) Number of children: β) Birth order of a child with autism.....

STUDIES:

Primary school..... Secondary school..... High school.....

University..... Postgraduate Doctorate

Training in special education (please specify):

The following statements relate to the views of parents on the importance of play in the education of children with autism. Show the degree of agreement or disagreement with each statement by putting in a circle a number on the scale that is right.

1 totally disagree; 2 I disagree; 3 neither disagree nor agree; 4 I agree; 5 totally agree

	1	2	3	4	5
1. Using the game in the educational process enhances the child's creativity with autism	1	2	3	4	5
2. I use the game as a means to educate my autistic children.	1	2	3	4	5
3. Implementation of an intervention program through the game offers the possibility assessment of the child's cognitive skills	1	2	3	4	5
4. The game helps the child with autism to improve its communication with other children	1	2	3	4	5
5. The game helps to reduce the repetitive stereotyped movements	1	2	3	4	5
6. Play therapy increases the child's interactive abilities with autism	1	2	3	4	5

7. Children maintain eye contact during the game	1	2	3	4	5
8. Children establish physical contact during the game.	1	2	3	4	5
9. Children obey the rules when they playing	1	2	3	4	5
10. The children take the initiative during the game	1	2	3	4	5
11. Children use toys properly	1	2	3	4	5
12. Children use a variety of toys	1	2	3	4	5
13. Children prefer particular toys	1	2	3	4	5
14. Autistic children show nterest in new games	1	2	3	4	5
15. The game provides information about the preferences and interests of autistic children	1	2	3	4	5
16. It is important for the game to manifest itself inother frames outside the home	1	2	3	4	5
17. The game improves the autistic child's reactions	1	2	3	4	5
18. The game provides information about the development and learning of autistic children	1	2	3	4	5
19. The game allows assessing deficiencies and changes in behavior in children	1	2	3	4	5
20. It is enough to play 1-2 hours a day	1	2	3	4	5
21. The environment affects the productivity of the game.	1	2	3	4	5
22. The constant training program of the child improves his ability to play.	1	2	3	4	5
23. The child use the game to expresses his feelings	1	2	3	4	5
24. The child must be guided during the game	1	2	3	4	5
25. I collaborate with other specialties, (psychologists, social workers, speech therapists), to enrich the treatment of the child.	1	2	3	4	5
26. The therapeutic programs used in the treatment of children with autism, parental involvement is mandatory	1	2	3	4	5
27. The game positively encourages relationships between siblings.	1	2	3	4	5
28. Relationships with siblings help develop social skills in general	1	2	3	4	5
29. The brothers of autistic children show interest in play with him	1	2	3	4	5
30. The education of autistic siblings influences the child' s social behavior.	1	2	3	4	5
31. Children with autism can be helped from their brothers in order to acquire functional abilities in their natural environment	1	2	3	4	5
32. The child becomes more social with his peers	1	2	3	4	5
33. The child becomes more social with his peers through the game.	1	2	3	4	5

**THE VIEWS OF THE TEACHERS ABOUT ITS IMPORTANCE OF GAME
IN THE EDUCATION OF CHILDREN WITH AUTISM**

This questionnaire refers to trying to identify the positions and views of teachers who serve special and general education and training on the importance of play in the learning process of children with autism. The questionnaire is completed by teachers who serve in a special and general school in primary and secondary education. The information collected will be used in a confidential manner for the preparation of the doctoral dissertation.

Thanks for your participation!

POSITION - BRANCH (underline).....

SEX:

Man..... Woman

Years of service:

Overall: General School: Special School:

STUDIES:

University..... Postgraduate

Doctorate

Training in special education (please specify)

.....

.....

The following statements relate to the views of teachers on the importance of play in the education of children with autism. Show the degree of agreement or disagreement with each statement by putting in a circle a number on the scale that is right.

1= Totally disagree; 2= I disagree; 3= Indifferent; 4= I agree; 5= Totally agree

	1	2	3	4	5
1. The game help the child with autism to improve its communication with other children	1	2	3	4	5

2. The use of play in education improves the creativity of the child with autism	1	2	3	4	5
3. I use the game in education of children with autism	1	2	3	4	5
4. The game helps reduce repetitive stereotyped movements.	1	2	3	4	5
5. The game provides useful information about preferences and interests of children	1	2	3	4	5
6. Play therapy increases the child's interactive abilities with autism	1	2	3	4	5
7. Children express emotions them through the game	1	2	3	4	5
8. Children maintain eye contact during the game	1	2	3	4	5
9. Children develop physical contact with you during the game	1	2	3	4	5
10. Children obey the rules when they playing	1	2	3	4	5
11. Children take the initiative during the game	1	2	3	4	5
12. Children use toys properly	1	2	3	4	5
13. Children use a variety of toys	1	2	3	4	5
14. Children prefer particular toys	1	2	3	4	5
15. Implementation of an intervention program through the game offers the possibility assessment of cognitive skills of the child	1	2	3	4	5
16. The child with autism show interest in new games	1	2	3	4	5
17. Evaluation through play provides data for children's cognitive development and learning	1	2	3	4	5
18. Information from the children's game in different contexts are important in order to get a more complete picture of children's skills	1	2	3	4	5
19. Evaluation through play illustrates the shortcomings of children and changes in their behavior	1	2	3	4	5

20. The game is important for the development of children	1	2	3	4	5
21. Reorganizing the curriculum to provide more flexibility and freedom is considered important in educating children with autism	1	2	3	4	5
22. The type of school (general or special) within it inclusive education affects the social interaction of children with autism with their peers	1	2	3	4	5
23. More time should be devoted in the school 's schedule playing with children with autism	1	2	3	4	5
24. The requirements of the program, available materials and school space facilitate the game	1	2	3	4	5
25. Provides the Ministry with materials and equipment teacher training	1	2	3	4	5
26. Class conditions are appropriate for use of the game as an educational tool	1	2	3	4	5
27. You use imitation as a treatment	1	2	3	4	5
28. The training on the education of children with autism through play is sufficient	1	2	3	4	5
29. The game helps make the lessons better	1	2	3	4	5
30. It is more interesting the game take place elsewhere (in the school yard, in the gym, in the library)	1	2	3	4	5
31. Organize the game at break time of children with autism	1	2	3	4	5
32. I let the boys and girls free at recess to do what he wants	1	2	3	4	5
33. I collaborate with other specialties, (psychologists, social workers, speech therapists), to enrich the treatment of the child	1	2	3	4	5
34. You believe that the role of parents is important to enhance children's play	1	2	3	4	5

ANNEX B:

Theoretical part tables

Table 1: Levels of severity of ASD symptoms

Severity level	Social interaction	Limited interests and attitudes
Level 3 "Very strong support required"	Serious deficits in verbal and non-verbal social communication, which cause serious dysfunctions, very limited onset of social interactions and minimal response to communicative stimuli.	Repetitive behaviors at the level of rituals, which significantly affect all of their behaviors. Great stress / difficulty if they need to be stopped.
Level 2 "Requires significant support"	Significant deficits in verbal and non-verbal communication skills, obvious deficits even when there is support. Limited initiatives to initiate interactions and reduced or unusual response to communication stimuli.	Limited and monotonous interests and stereotypical movements are often and obvious to the ordinary observer, and affect functionality in various areas. Manifest anxiety arises from when they stop.
Level 1 "Requires support"	Without support, communication deficits cause significant difficulties. Difficulty in initiating social interaction and presence of atypical or failed responses to communication stimuli. Frequent presence of no interest in social interaction.	Ritual and repetitive movements cause difficulties in functionality in one or more contexts. Resistance to attempts by third parties to interrupt or redirect their recurring events.

(Pliasa, 2020, pp. 13-14)

Table 2: Diagnostic criteria of the ASD, according to DSM-5 (APA, 2013) (all 5 criteria A, B, C, D, E are required) - Diagnostic criteria of the ASD, according to DSM-5

TABLE 2. Diagnostic criteria of the ASD, according to DSM-5 (APA, 2013) (all 5 criteria A, B, C, D, E are required)
<p>A. Persistent disturbances of social contact and interaction, as manifested by ALL of the following:</p> <ol style="list-style-type: none"> 1. Disturbances in social-emotional reaction, as lack of spontaneous pursuit to share interests or feelings with others, difficulty To start or maintain a discussion etc. 2. Disturbances in non-verbal communication behaviors that serve 16 in social interaction, as reduced eye contact, decreased use or understanding of gestures and postures or even complete absence of verbal/exverbal Communication etc. 3. Disturbances in the development, preservation and understanding of relationships, e.g. difficulty in adapting behaviour in the social context, reduced participation in fantasy games, lack of interest in peers, difficulty in participation in social Activities similar to age etc.
<p>B. Limited, repetitive patterns of behavior, interests or activities, as manifested by a ASD by the following:</p> <ol style="list-style-type: none"> 1. Routine or repetitive movements, use of objects or logos, e.g. simple kinetic mannerisms, placement of toys In series, rotating objects, soundalia, use of idiosyncratic expressions etc. 2. Excessive adhesion to routines or ceremonial patterns of verbal/exverbal behavior or excessive resistance to change, as significant discomfort in small changes, use of rituals greeting, need for use of the same route Daily etc. 3. Very Limited, stereotypical interests with pathological intensity or focus, as intense adhesion or dealing with unusual objects etc. 4. Hyper-or undersensitivity to sensory stimuli or unusual interest for sensory elements of the environment, as apparent indifference to pain/temperature, unexpected reaction to specific sounds or textures, excessive smell or touch of objects, visual attachment to lights or motion.
<p>C. Symptoms have been present since the early developmental period, but may not be fully evident until societal demands surpass reduced abilities. In Addition, the symptoms may be covered by learned strategies in later life.</p>
<p>D. The symptoms cause a clinically significant reduction in the social, professional or other basic scope of functionality.</p>
<p>E. Disorders Are not more adequately explained as mental retardation (cognitive developmental disorder) or as a generalized developmental disorder. Mental retardation and ASD often coexis. In order to diagnose co-morbidity, social communication should be lower than expected for the general developmental level of the individual.</p>

(Grzadzinski et al., 2013)

Table 3: CDC data on the prevalence of ASD

Surveillance Year	Birth Year	Number of ADDM Sites Reporting	Combined Prevalence per 1,000 Children (Range Across ADDM Sites)	This is about 1 in x Children
2000	1992	6	6.7 (4.5-9.9)	1 in 150
2002	1994	14	6.6 (3.3-10.6)	1 in 150
2004	1996	8	8.0 (4.6-9.8)	1 in 125
2006	1998	11	9.0 (4.2-12.1)	1 in 110
2008	2000	14	11.3 (4.8-21.2)	1 in 88
2010	2002	11	14.7 (5.7-21.9)	1 in 68
2012	2004	11	14.5 (8.2-24.6)	1 in 69
2014	2006	11	16.8 (13.1-29.3)	1 in 59

(Pliasa, 2020, p. 8)

Table 4: Odds of appearance of ASD

TABLE 4: Perinatal and neonatal factors related to the occurrence of ASD	
Factor	Odds Ratio
Sciatic projection	1.81
Complications related to umbilical cord (e.g. prolapse/circumnavigation of the cord etc.)	1.50
Fetal Distress	1.52
Trauma during childbirth	4.90
Multidynon Pregnancy	1.77
Maternal hemorrhage (perigenital)	2.39
A Kite in the summer months	1.14
Very Low birth weight (<1500 γρ)	3.00
Low Birth Weight (<2500 γρ)	1.63
Small for the duration of a gestational newborn	1.35
Congenital abnormalities	1.8
Low Apgar Score (< 6) (5th minute)	1.67
Aspiration of the Milonium	7.34
Feeding Disorders	3.35
Neonatal anemia	7.87
ABO or Rh Incompatibility	3.7
Hyperbilirubinemia	1.87

(Gardener et al., 2011)

Table 5: Operational principles of the MAKATON programme

Operational principles of the MAKATON programme
1. Focus on teaching a small, basic vocabulary from very functional words.
2. Organization of vocabulary in succession of communication priorities in stages.
3. Personalize your vocabulary to suit your individual needs
4. The combined use of all kinds of speech, meanings with hands and graphic symbols.

(Vogindroukas et al., 2005)

Table 6: Features of SAR and DAF

Characteristics of children with ASD	Characteristics of social assistance robots - SAR
They respond impulsively to sensory stimuli, interact with objects in strange ways and cling to them (Feinstein, 2010).	They are predictable and simple in their interactions (Francois et al., 2009)
They show high sensitivity of a sound (Bogdashina, 2016)	They can produce music or sounds but not sharp ones (Robins et al., 2006)
They often show sensitivity to very bright colors, lights (Bogdashina, 2016)	They can have different colors, shapes and lighting to arouse children's interest, without them being too bright and bright (Cabibihan et al., 2013)
They have difficulty decoding and responding to non-verbal communication and gestures (Lee et al., 2012).	They can make one move to greet and have a face to make expressions (Pennisi et., 2012)
Difficulties in understanding instructions and new social interactions (Baron et al., 2006).	They are programmed to adapt one's behavior, so that on the one hand they are close to the interests of each child and at the same time can avoid stimuli that trigger behavioral reactions and outbursts (Huijnen et al., 2016).
They penetrate uninvited into the space of others (Lawton et al., 2007).	They must be stable and made of soft materials to prevent possible injury (Cabibihan et al., 2013)
Difficulties in making eye contact (Ingersoll et al., 2006)	It should be about the size of a child so that it can promote enjoyable interaction, easier eye contact and not be intimidating (Huijnen et al., 2016).

(Pliasa, 2020, pp. 48-49)

Table 7: SAR response to demands of children with ASD

Robot	A variety of designs	A variety of colors	Not too bright colors and lights	At most up to the size of the child	No very anthropomorphic	Look like a cartoon or an animal	To he's got a degree of autonomy of one	To Do not completely Autonomous	Robust
NAO			*	*			*	*	
Robota	*			*				*	
Probo			*	*	*	*	*	*	*
Keepon			*	*	*	*	*	*	
Pleo	*		*	*	*	*	*		
Necoro			*	*	*	*	*		*
L Sobot			*	*			*	*	*
Tito				*	*	*	*	*	*
lfbot		*		*	*		*		*
Kaspar			*	*			*	*	
Labo 1				*	*		*	*	*

(Pliasa, 2020, pp. 57-58)

Table 8: SAR response to demands of children with ASD

Robot	No from Hard material	Soft	No Sharp tips	No very engineer in appearance	Adjust to Environment	To Allowed say choices	Without Compl Ex Pressions Facial	With And witho ut eyes	Attractive Interactions And toys
NAO				*	*	*	*		*
Robota	*	*		*		*	*		*
Probo	*	*	*	*		*	*		*
Keepon	*	*	*	*		*	*		*
Pleo		*	*	*		*			*
Necoro	*	*	*	*					*
LSobot						*	*		*
Tito	*	*	*	*		*	*		*
lfbot			*	*	*	*			*
Kaspar	*	*	*	*		*			*
Labo 1						*	*		*

(Pliasa, 2020, pp. 57-58)

Table 9: Summary table of AR research in children with ASD

ARTICLE REFERENCE	OBJECT RESEARCH	SAMPLE	RESULT RESEARCH
Casas, Herrera, Coma & Fernández, (2012). A Kinect-based augmented reality system for individuals with autism spectrum disorders. Sciterpress Science and Technology Publications, 440-446.	Developmental skills	22 typical children development age 3-4 and 5 children with Autism	Positive
Bai, Blackwell & Coulouris, (2013). Through the Looking Glass: Pretend Play for Children with Autism. International Symposium on Mixed and Augmented Reality 2013, 49-58.	Spontaneous play	10 boys and 2 girls aged 4-7 years	Positive
Bhatt, De Leon & AlJumaily (2014). Augmented Reality game therapy for children with Autism spectrum disorder. International journal on smart sensing and intelligent systems, 7, 519-536.	Social interaction, hand coordination, encouragement, concentration, imagination	4 typical children growth age 10-15	Positive
Escobedo, Tentori, Quintana, Favela & Garcia-Rosas,			

(2014). Using Augmented Reality to Help Children with Autism Stay Focused. IEEE Pervasive Computing, 13(1), 38-46.	focus of attention, selective and lasting caution	12 children of low age functionality 3-8, 7 teachers	Positive
Qin, Nagai, Kumagaya, Ayaya & Asada, (2014). Autism Simulator Employing Augmented Reality: A Prototype. 4th International Conference on Development and Learning and on Epigenetic Robotics, 123-124	Experiential system	-	-
Almeida da Silva, Fernandes & Grohmann, (2015). STAR: Speech Therapy with Augmented Reality for Children with Autism Spectrum Disorders. a, Universidade Presbiteriana Mackenzie.	social sector, speech, language, Contact	3 children	Positive
Cihak, Moore, Wright, McMahon, Gibbons & Smith, (2016). Evaluating Augmented Reality to Complete a	Hygiene rules	3 average boys age functionality 6 and 7 years old	Positive

Chain Task for Elementary Students With Autism. Journal of Special Education Technology, 1-10.			
Chen, Lee & Lin, (2016). Augmented reality-based video-modeling storybook of nonverbal facial cues for children with autism spectrum disorder to improve their perceptions and judgments of facial expressions and emotions. Elsevier, 55, 477-485.	Social skills, non verbal behaviors, Contact, interaction, maintaining attention	-	Positive
Liu, Salisbury, Vahabzadeh & Sahin, (2017). Feasibility of an Autism-Focused Augmented Reality Smartglasses System for Social Communication and Behavioral Coaching. Frontiers in Pediatrics.	social communication, stereotypes, peculiar behaviors	2 boys with clinics diagnosed with ASD, aged 8 and 9 years	Positive
Sahin, Keshav, Salisbury, & Vahabzadeh (2018). Safety and Lack of Negative Effects of Wearable Augmented-Reality Social	Social communication	18 children and adults, aged 4.4 to 21.5 years with clinics	Neutral

Communication Aid for Children and Adults with Autism. Journal of Clinical Medicine, 7, 188-205.		diagnosed with ASD of varying severity	
Syahputra, Arisandi, Lumbanbatu, Kemit, Nababan & Sheta, (2018). Augmented reality social story for autism spectrum disorder. Journal of Physics, 978, 1-6.	social history, motivation, emotional change, empathy, social interaction	3 Children with autism	Positive
Nazaruddin & Efendi, (2018). The Book of Pop Up Augmented Reality to Increase Focus and Object Recognition Capabilities for Children with Autism. Journal of ICSAR, 2(1), 9-14.	ability to focus, object recognition	Students of SDLB Laboratory of Autism UM	Positive
Dragomir, Manches, FletcherWatson & Pain, (2018). Facilitating Pretend Play in Autistic Children: Results from an Augmented Reality App Evaluation. Proceedings of the 20th International ACM SIGACCESS	Play, interaction	7 children aged 8-14 years	Positive

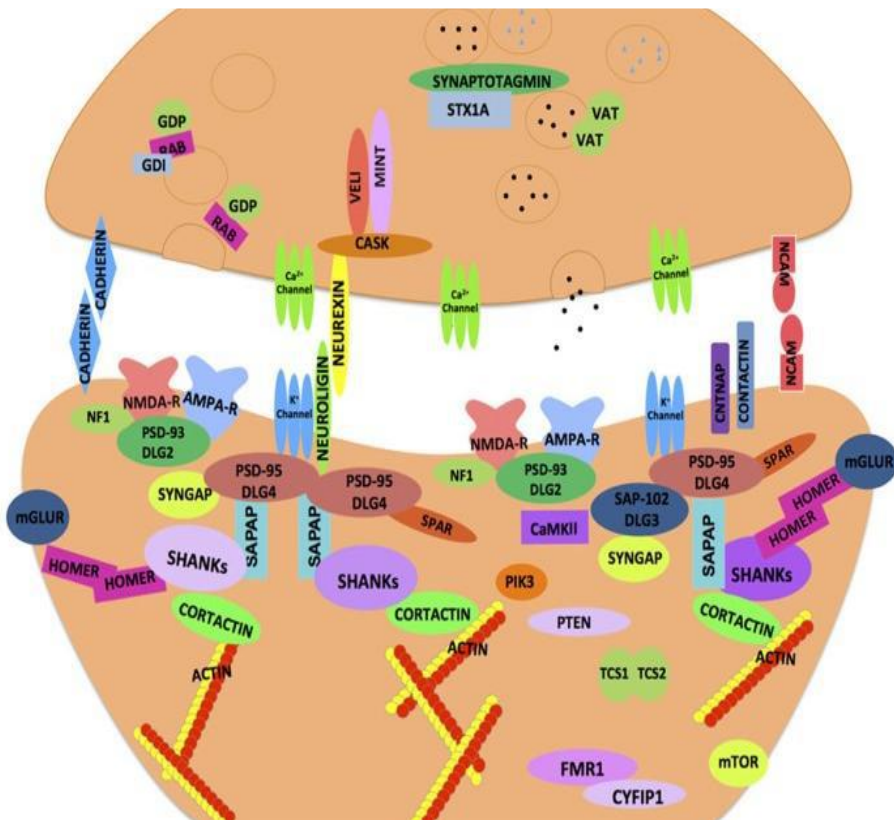
Conference on Computers and Accessibility, 407-409.			
Kolomoiets, & Kassim, (2018). Using the Augmented Reality to Teach of Global Reading of Preschoolers with Autism Spectrum Disorders. National Metallurgical Academy of Ukraine.	Reading, editing information, assimilation	Preschool children age duration 2 years	Positive
Rega, Mennitto, Vita, & Iovino, (2018). New technologies and autism: can augmented reality (AR) increase the motivation in children with autism. Proceedings of INTED2018, 4904-4910.	Social and cognitive skills, language, relationship development, interaction with environment	-	Positive
Lorenzo, Gómez-Puerta, Arráez-Vera, & Lorenzo- Llendo, (2019). Preliminary study of augmented reality as an instrument for improvement of social skills in children with autism spectrum disorder. Springer Link, 24, 181-204	Social and communication skills	11 Children	Positive
El Seoud, Halabi, &			

<p>Geroimenko, (2019). Assisting Individuals with Autism and Cognitive Disorders: An Augmented Reality based Framework. International Journal of Online and Biomedical Engineering, 15(4), 28-39.</p>	<p>Cognitive skills</p>	<p>-</p>	<p>-</p>
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(Spiliopoulou, 2020)

ANNEX C:
FIGURES

FIGURE 1: Synaptic proteins affecting the ASD



(Banerjee et al., 2014).

Figure 2: The Mobile Social Compass app - Social interaction (Left) and danger warning (Right).



(Tentori et al. 2010).

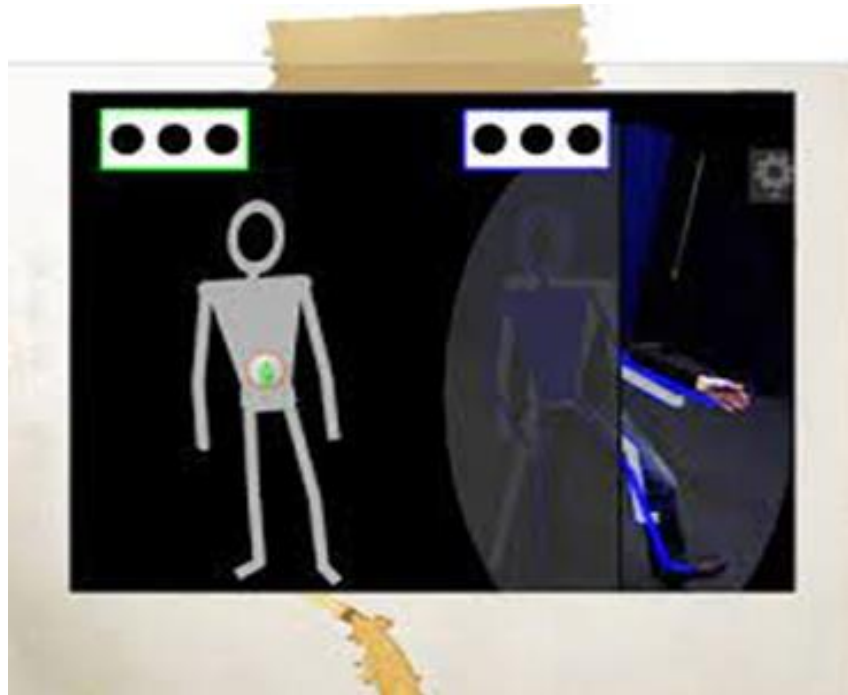
Figure 3: The AR application, MOSOCO, (Mobile Social Compass)



Figure 2. The MOSOCO system

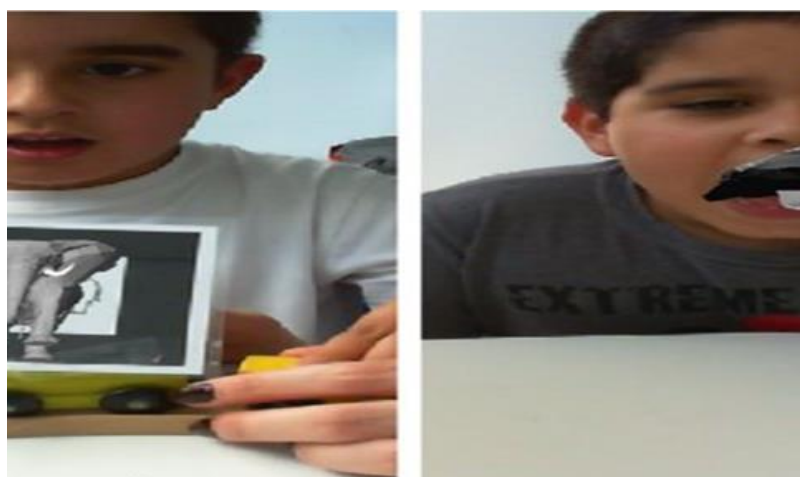
available assistive technologies. One of the main challenges is ensuring that the technology is usable by all students. Figure 3: Students using MOSOCO during recess (left) two students making eye contact (right) Learning and (Escobedo, et al. 2012)

Figure 4: The application “Pictogram room”



(Casas, et al. 2012).

Figure 5: S.T.A.R. (Speech Therapy with Augmented Reality)



(Da Silva, et al. 2015)

ANNEX D:
Data analysis tables

Table 10 Distribution of education and training in special education

		N	%
	primary school	31	38,8%
Education level	Secondary school	42	52,5%
	University	1	1,3%
	technological sciences - TEI	2	2,5%
	Postgraduate	4	5,0%
	Total	80	100,0%
Training in special education	Yes	80	100,0%
	No	0	0,0%
	Total	80	100,0%
	OTHER	72	90,0%
Identify	400 HOURS SEMINAR	8	10,0%
	Total	80	100,0%

Table 11 Distribution of specialty and gender of teachers

		N	%
Position / branch	ΠΕ01-theologian	3	2%
	ΠΕ02-Philologists	18	12%
	ΠΕ03-Mathematics	8	5,3%
	ΠΕ04-physicists	5	3,3%
	ΠΕ08-Artistic	10	6,7%
	ΠΕ11-Gymnasts	8	5,3%
	ΠΕ60-Kindergarten teachers	19	12,7%
	ΠΕ70-Teachers	12	8,0%
	ΠΕ78-Sociologists	19	12,7%
	ΠΕ79-Musicians	12	8,0%
	ΠΕ80-Home economics	8	5,3%
	ΠΕ86-computer science	12	8,0%
	ΠΕ8801-Agriculture	8	5,3%

	ΠΕ8804-Nutritionist	8	5,3%
	Total	150	100%
Gender	Man	62	41,3%
	Woman	88	58,7%
	Total	150	100,0%

Table 12 Mean value and standard deviation of years of experience

	Min	Mean	SD	Max
Total years experience Years	3	8	3	15
Experience in general school Years	0	3	3	15
experience in the special school	0	5	3	12

Table 13 Distribution of teacher education

		N	%
Education level	University	9	6,0%
	Technological sciences - TEI	2	1,3%
	Postgraduate	124	82,7%
	Doctorate	15	10,0%
	Total	150	100,0%
Training in special education	Yes	119	79,3%
	No	31	20,7%
	Total	150	100,0%

Table 14 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,912	,918	33

Table 15 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,683	,693	14

Table 16 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,836	,836	20

Table 17 Mean value and standard deviation of children and their order of birth

	Min	Mean	SD	Max
Number of children	1	2	1	5
Birth order of a child with autism	1	2	1	4

Table 18 Distribution of parents' views

		N	%
1. Using the game in the educational process enhances the child's creativity with autism	I agree	34	42,5%
	totally agree	46	57,5%
	Total	80	100,0%
2.I use the game as a means to educate my autistic children.	neither disagree nor agree	2	2,5%
	I agree	38	47,5%
	totally agree	40	50,0%
	Total	80	100,0%
3.Implementation of an intervention program through the game offers the possibility assessment of the child's cognitive skills	I agree	23	28,8%
	totally agree	57	71,3%
	Total	80	100,0%
4.The game helps the child with autism to improve its communication with other children	neither disagree nor agree	1	1,3%
	I agree	43	53,8%
	totally agree	36	45,0%
	Total	80	100,0%
5.The game helps to reduce the repetitive stereotyped movements	I agree	13	16,3%
	totally agree	67	83,8%
	Total	80	100,0%
6.Play therapy increases the child's interactive abilities with autism	neither disagree nor agree	2	2,5%
	I agree	46	57,5%
	totally agree	32	40,0%
	Total	80	100,0%
7.Children maintain eye contact during the game	neither disagree nor agree	25	31,3%
	I agree	53	66,3%
	totally agree	2	2,5%
	Total	80	100,0%
8.Children establish physical contact during the game.	neither disagree nor agree	24	30,0%
	I agree	56	70,0%
	Total	80	100,0%
9.Children obey the rules when they playing	neither disagree nor agree	31	38,8%
	I agree	49	61,3%
	Total	80	100,0%

10.The children take the initiative during the game	neither disagree nor agree	27	33,8%
	I agree	52	65,0%
	totally agree	1	1,3%
	Total	80	100,0%
11.Children use toys properly	neither disagree nor agree	20	25,0%
	I agree	58	72,5%
	totally agree	2	2,5%
	Total	80	100,0%
12.Children use a variety of toys	neither disagree nor agree	21	26,3%
	I agree	59	73,8%
	Total	80	100,0%
13.Children prefer particular toys	neither disagree nor agree	1	1,3%
	I agree	12	15,0%
	totally agree	67	83,8%
	Total	80	100,0%
14.Autistic children show nterest in new games	neither disagree nor agree	5	6,3%
	I agree	38	47,5%
	totally agree	37	46,3%
	Total	80	100,0%
15.The game provides information about the preferences and interests of autistic children	I agree	14	17,5%
	totally agree	66	82,5%
	Total	80	100,0%
16.It is important for the game to manifest itself inother frames outside the home	I agree	40	50,0%
	totally agree	40	50,0%
	Total	80	100,0%
17. The game improves the autistic child's reactions	neither disagree nor agree	5	6,3%
	I agree	55	68,8%
	totally agree	20	25,0%
	Total	80	100,0%
18.The game provides information about the development and learning of autistic children	I agree	27	33,8%
	totally agree	53	66,3%
	Total	80	100,0%
19.The game allows assessing deficiencies and changes in behavior in children	I agree	27	33,8%
	totally agree	53	66,3%
	Total	80	100,0%

20.It is enough to play 1-2 hours a day	I agree	13	16,3%
	totally agree	67	83,8%
	Total	80	100,0%
21.The environment affects the productivity of the game.	I agree	44	55,0%
	totally agree	36	45,0%
	Total	80	100,0%
22.The constant training program of the child improves his ability to play.	neither disagree nor agree	3	3,8%
	I agree	30	37,5%
	totally agree	47	58,8%
	Total	80	100,0%
23.The child use the game to expresses his feelings	neither disagree nor agree	1	1,3%
	I agree	33	41,3%
	totally agree	46	57,5%
	Total	80	100,0%
24.The child must be guided during the game	neither disagree nor agree	11	13,8%
	I agree	65	81,3%
	totally agree	4	5,0%
	Total	80	100,0%
25.I collaborate with other specialties, (psychologists, social workers, speech therapists), to enrich the treatment of the child.	neither disagree nor agree	23	28,8%
	I agree	54	67,5%
	totally agree	3	3,8%
	Total	80	100,0%
26.The therapeutic programs used in the treatment of children with autism, parental involvement is mandatory	neither disagree nor agree	1	1,3%
	I agree	13	16,3%
	totally agree	66	82,5%
	Total	80	100,0%
27.The game positively encourages relationships between siblings.	neither disagree nor agree	1	1,3%
	I agree	12	15,0%
	totally agree	67	83,8%
	Total	80	100,0%
28.Relationships with siblings help develop social skills in general	I disagree	2	2,5%
	neither disagree nor agree	16	20,0%
	I agree	62	77,5%
	Total	80	100,0%

29.The brothers of autistic children show interest in play with him	I disagree	1	1,3%
	neither disagree nor agree	13	16,3%
	I agree	53	66,3%
	totally agree	13	16,3%
	Total	80	100,0%
30.The education of autistic siblings influences the child's social behavior.	totally disagree	1	1,3%
	I disagree	1	1,3%
	neither disagree nor agree	19	23,8%
	I agree	59	73,8%
	Total	80	100,0%
31.Children with autism can be helped from their brothers in order to acquire functional abilities in their natural environment	I disagree	2	2,5%
	neither disagree nor agree	12	15,0%
	I agree	43	53,8%
	totally agree	23	28,8%
	Total	80	100,0%
32.The child becomes more social with his peers	I disagree	1	1,3%
	neither disagree nor agree	12	15,0%
	I agree	39	48,8%
	totally agree	28	35,0%
	Total	80	100,0%
33.The child becomes more social with his peers through the game.	neither disagree nor agree	20	25,0%
	I agree	57	71,3%
	totally agree	3	3,8%
	Total	80	100,0%

Table 19 Interpretation of ANOVA results

SIGNIFICANCE_THE_GAME_IN_EDUCATION_THE_CHILDREN_WITH_AUTISM					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	790,342	4	197,585	2,923	,026
Within Groups	5069,146	75	67,589		
Total	5859,487	79			

Table 20 Distribution of teachers' views

		N	%
1.The game help the child with autism to improve its communication with other children	I agree	50	33,3%
	Totally agree	100	66,7%
	Total	150	100,0%
2.The use of play in education improves the creativity of the child with autism	I agree	35	23,3%
	totally agree	115	76,7%
	Total	150	100,0%
3.I use the game in education of children with autism	neither disagree nor agree	8	5,3%
	I agree	102	68,0%
	totally agree	40	26,7%
	Total	150	100,0%
4.The game helps reduce repetitive stereotyped movements.	I agree	21	14,0%
	totally agree	129	86,0%
	Total	150	100,0%
5.The game provides useful information about preferences and interests of children	I agree	25	16,7%
	totally agree	125	83,3%
	Total	150	100,0%
6.Play therapy increases the child's interactive abilities with autism	I agree	56	37,3%
	totally agree	94	62,7%
	Total	150	100,0%
7.Children express emotions them through the game	neither disagree nor agree	3	2,0%
	I agree	60	40,0%
	totally agree	87	58,0%
	Total	150	100,0%
8.Children maintain eye contact during the game	neither disagree nor agree	19	12,7%
	I agree	108	72,0%
	totally agree	23	15,3%
	Total	150	100,0%
9.Children develop physical contact with you during the game	neither disagree nor agree	21	14,0%
	I agree	107	71,3%
	totally agree	22	14,7%
	Total	150	100,0%

10.Children obey the rules when they playing	neither disagree		
	nor agree	16	10,7%
	I agree	99	66,0%
	totally agree	35	23,3%
	Total	150	100,0%
11.Children take the initiative during the game	neither disagree		
	nor agree	16	10,7%
	I agree	81	54,0%
	totally agree	53	35,3%
	Total	150	100,0%
12.Children use toys properly	neither disagree		
	nor agree	16	10,7%
	I agree	91	60,7%
	totally agree	43	28,7%
	Total	150	100,0%
13.Children use a variety of toys	neither disagree		
	nor agree	15	10,0%
	I agree	80	53,3%
	totally agree	55	36,7%
	Total	150	100,0%
14.Children prefer particular toys	neither disagree		
	nor agree	1	0,7%
	I agree	44	29,3%
	totally agree	105	70,0%
	Total	150	100,0%
15.Implementation of an intervention program through the game offers the possibility assessment of cognitive skills of the child	neither disagree		
	nor agree	1	0,7%
	I agree	33	22,0%
	totally agree	116	77,3%
	Total	150	100,0%
16.The child with autism show interest in new games	neither disagree		
	nor agree	10	6,7%
	I agree	98	65,3%
	totally agree	42	28,0%
	Total	150	100,0%
17.Evaluation through play provides data for children's cognitive development and learning	I agree	36	24,0%
	totally agree	114	76,0%
	Total	150	100,0%

18.Information from the children's game in different contexts are important in order to get a more complete picture of children's skills	I agree	43	28,7%
	totally agree	107	71,3%
	Total	150	100,0%
19.Evaluation through play illustrates the shortcomings of children and changes in their behavior	I agree	54	36,0%
	totally agree	96	64,0%
	Total	150	100,0%
20.The game is important for the development of children	neither disagree nor agree	5	3,3%
	I agree	80	53,3%
	totally agree	65	43,3%
	Total	150	100,0%
21.Reorganizing the curriculum to provide more flexibility and freedom is considered important in educating children with autism	I agree	51	34,0%
	totally agree	99	66,0%
	total	150	100,0%
22.The type of school (general or special) within it inclusive education affects the social interaction of children with autism with their peers	I agree	61	40,7%
	totally agree	89	59,3%
	Total	150	100,0%
23.More time should be devoted in the school 's schedule playing with children with autism	I agree	107	71,3%
	totally agree	43	28,7%
	Total	150	100,0%
24.The requirements of the program, available materials and school space facilitate the game	totally disagree	12	8,0%
	I disagree	87	58,0%
	neither disagree nor agree	45	30,0%
	I agree	4	2,7%
	totally agree	2	1,3%
	Total	150	100,0%
25.Provides the Ministry with materials and equipment teacher training	totally disagree	17	11,3%
	I disagree	104	69,3%
	neither disagree nor agree	29	19,3%

	Total	150	100,0%
26. Class conditions are appropriate for use of the game as an educational tool	totally disagree	18	12,1%
	I disagree	102	68,5%
	neither disagree nor agree	29	19,5%
	Total	150	100,0%
27. You use imitation as a treatment	I disagree	1	0,7%
	neither disagree nor agree	8	5,3%
	I agree	105	70,0%
	totally agree	36	24,0%
	Total	150	100,0%
28. The training on the education of children with autism through play is sufficient	totally disagree	82	54,7%
	I disagree	63	42,0%
	neither disagree nor agree	4	2,7%
	I agree	1	0,7%
	Total	150	100,0%
29. The game helps make the lessons better	I agree	88	58,7%
	totally agree	62	41,3%
	total	150	100,0%
30. It is more interesting the game take place elsewhere (in the school yard, in the gym, in the library)	neither disagree nor agree	2	1,3%
	I agree	112	74,7%
	totally agree	36	24,0%
	Total	150	100,0%
	31. Organize the game at break time of children with autism	neither disagree nor agree	34
I agree		106	70,7%
totally agree		10	6,7%
Total		150	100,0%
32. I let the boys and girls free at recess to do what he wants		neither disagree nor agree	47
	I agree	97	64,7%
	totally agree	6	4,0%
	Total	150	100,0%
	33. I collaborate with other specialties, (psychologists, social workers, speech therapists), to enrich the treatment of the child	I agree	72
totally agree		78	52,0%
Total		150	100,0%

34. You believe that the role of parents is important to enhance children's play	neither disagree		
	nor agree	3	2,0%
	I agree	78	52,0%
	totally agree	69	46,0%
	Total	150	100,0%

Table 21 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
	Equal variances assumed	2,371	,126	-,125	148	,901	-,06855	,54879	-1,15303	1,01594
	Equal variances not assumed			-,122	119,563	,903	-,06855	,56221	-1,18173	1,04464

Table 22 Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Man	62	50,8065	3,57514	,45404
	Woman	88	50,8750	3,11028	,33156

Table 23 ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Between Groups	56,891	3	18,964	1,770	,156
	Within Groups	1564,582	146	10,716		
	Total	1621,473	149			
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Between Groups	196,487	3	65,496	2,695	,048
	Within Groups	3548,346	146	24,304		
	Total	3744,833	149			

Table 24 Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Man	6 2	50,806 5	3,57514	,4540 4
	Woman	8 8	50,875 0	3,11028	,3315 6

Table 25 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
SIGNIFICANCE THE GAME IN EDUCATION THE CHILDREN WITH AUTISM	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
	Equal variances assumed	2,371	,126	-,125	148	,901	-,06855	,54879	-,115303	1,01594
	Equal variances not assumed			-,122	119,563	,903	-,06855	,56221	-,118173	1,04464

ANNEX E:

Analysis Tables with the statistical package SPSS

Table 26 Multiple Comparisons

Dependent Variable	(I) Education level	(J) Education level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SIGNIFICANCE_TH E_GAME_ IN_EDUCATION_ THE_CHILDREN_WITH_AUTISM	Technological sciences - TEI	University	1,72222	2,55907	,907	-4,9285	8,3729
		Postgraduate	2,58065	2,33336	,686	-3,4835	8,6447
		Doctorate	4,16667	2,46426	,332	-2,2376	10,5710
		Technological sciences - TEI	-1,72222	2,55907	,907	-8,3729	4,9285
	University	Postgraduate	,85842	1,13010	,872	-2,0786	3,7954
		Doctorate	2,44444	1,38026	,291	-1,1427	6,0316
		Technological sciences	-2,58065	2,33336	,686	-8,6447	3,4835

LSD	Post graduate	es - TEI					-3,7954	2,0786	
		Unive rsity	-,85 842	1,13 010	,872				
	Doct orate	Docto rate	1,5860 2	,894 90	,291		-,7397	3,9117	
		Techn ologic al scienc es - TEI	-4,16 667	2,46 426	,332		-10,5 710	2,2376	
		Unive rsity	-2,44 444	1,38 026	,291		-6,0316	1,1427	
		Postgr atuare	-1,58 602	,894 90	,291		-3,9117	,7397	
	Tech nolo gical scien ces - TEI	Unive rsity	1,7222 2	2,55 907	,502		-3,3354	6,7798	
		Postgr atuare	2,5806 5	2,33 336	,271		-2,0309	7,1922	
		Docto rate	4,1666 7	2,46 426	,093		-,7036	9,0369	
		Techn ologic al scienc es - TEI	-1,72 222	2,55 907	,502		-6,7798	3,3354	
		Univ ersit y	Postgr atuare	,85842	1,13 010	,449		-1,3750	3,0919
			Docto rate	2,4444 4	1,38 026	,079		-,2834	5,1723
							-7,1922		

Bonferroni	Postgraduate	Technological sciences - TEI	-2,58065	2,33336	,271		2,0309
		University	-,85842	1,13010	,449	-3,0919	1,3750
		Doctorate	1,58602	,89490	,078	-,1826	3,3547
		Technological sciences - TEI	-4,16667	2,46426	,093	-9,0369	,7036
	Doctorate	University	-2,44444	1,38026	,079	-5,1723	,2834
		Doctorate	-1,58602	,89490	,078	-3,3547	,1826
		University	1,72222	2,55907	1,000	-5,1225	8,5669
	Technological sciences - TEI	Postgraduate	2,58065	2,33336	1,000	-3,6604	8,8217
		Doctorate	4,16667	2,46426	,558	-2,4244	10,7578
		University	-1,72222	2,55907	1,000	-8,5669	5,1225
		Technological sciences - TEI				-2,1642	

SIGNIFICANCE_TH E_GAME_ IN_EDUC	Univ ersit y	Postgr atu ate	,85842	1,13 010	1,00 0	-1,2473	3,88 11
		Docto rate	2,4444 4	1,38 026	,472	-8,8217	6,13 62
		Techn ologic al scienc es - TEI	-2,58 065	2,33 336	1,00 0		3,66 04
	Post gratu ate	Unive rsity	-,858 42	1,13 010	1,00 0	-3,8811	2,16 42
		Docto rate	1,5860 2	,894 90	,471	-8,8075	3,97 96
		Techn ologic al scienc es - TEI	-4,16 667	2,46 426	,558	-10,75 78	2,42 44
	Doct orate	Unive rsity	-2,44 444	1,38 026	,472	-6,1362	1,24 73
		Postgr atu ate	-1,58 602	,894 90	,471	-3,9796	,807 5
		Unive rsity	-4,38 889	3,85 387	,666	-14,4 046	5,62 68
	Tech nolo gical scien ces - TEI	Postgr atu ate	,08871	3,51 395	1,00 0	-9,0436	9,22 10
		Docto rate	1,2333 3	3,71 108	,987	-8,4113	10,8 779
						-5,6268	

ATION_T HE_CHIL DREN_WI TH_AUTI SM	Univ ersit y	Techn ologic al scienc es - TEI	4,3888 9	3,85 387	,666		14,4 046
		Postgr atu ate	4,4776 0*	1,70 189	,046	,0546	8,90 06
		Docto rate	5,6222 2*	2,07 862	,038	,2202	11,0 243
		Techn ologic al scienc es - TEI	-0,88 71	3,51 395	1,00 0	-9,2210	9,04 36
	Post gratu ate	Unive rsity	-4,47 760*	1,70 189	,046	-8,9006	-0,05 46
		Docto rate	1,1446 2	1,34 768	,831	-2,3578	4,64 71
		Techn ologic al scienc es - TEI	-1,23 333	3,71 108	,987	-10,8 779	8,41 13
	Doct orate	Unive rsity	-5,62 222*	2,07 862	,038	-11,0 243	-0,22 02
		Postgr atu ate	-1,14 462	1,34 768	,831	-4,6471	2,35 78
		Unive rsity	-4,38 889	3,85 387	,257	-12,0 055	3,22 77
			,08871		,980		

LSD	Technological sciences - TEI	Postgraduate		3,51395		-6,1010	7,0335	
			1,2333		,740			
		Doctorate	3	3,71108		-3,2277	8,5677	
	Technological sciences - TEI		4,3888		,257			
			9	3,85387			12,0055	
						1,1141		
	University	Postgraduate	4,47760*	1,70189		,009	1,5141	7,8411
			5,6222		,008			
		Doctorate	2*	2,07862		,980	-7,0335	9,7303
	Postgraduate		-0,088					
		Technological sciences - TEI	71	3,51395				6,8561
							-7,8411	
	University		-4,47760*	1,70189		,009		-1,1141
			1,1446		,397		-1,5189	
Doctorate		2	1,34768			-8,5677	3,8081	
Technological sciences - TEI		-1,2333		,740				
			3,71108				6,1010	
						-9,7303		
Doctorate		-5,6222*	2,07862		,008		-1,5141	
						-3,8081		
		-1,14462		,397				

Bonferroni	Technological sciences - TEI	Postgraduate	-4,38889	1,34768	1,000	-14,6968	1,5189
		University	,08871	3,85387	1,000	-9,3100	5,9190
		Postgraduate	1,23333	3,51395	1,000	-8,6926	9,4874
		Doctorate	4,38889	3,71108	1,000	-5,9190	11,1593
	University	Technological sciences - TEI	4,47760	3,85387	,057	-,0744	14,6968
		Postgraduate	5,62222 ^{2*}	1,70189	,046	,0626	9,0296
		Doctorate	-,08871	2,07862	1,000	-9,4874	11,1819
		Technological sciences - TEI	-4,47760	3,51395	,057	-9,0296	9,3100
	Postgraduate	University	1,14462	1,70189	1,000	-2,4600	,0744
		Doctorate	-1,23333	1,34768	1,000	-11,1593	4,7492
		Technological sciences		3,71108			8,6926

	Doct orate	es - TEI	-5,62 222*		,046	-11,1 819	
		Unive rsity	-1,14 462	2,07 862	1,00 0	-4,7492	-,0 626
		Postgr atuante		1,34 768			2,46 00

*. The mean difference is significant at the 0.05 level.

ANNEX F:

Charts

Chart 1: Birth series of a child with autism

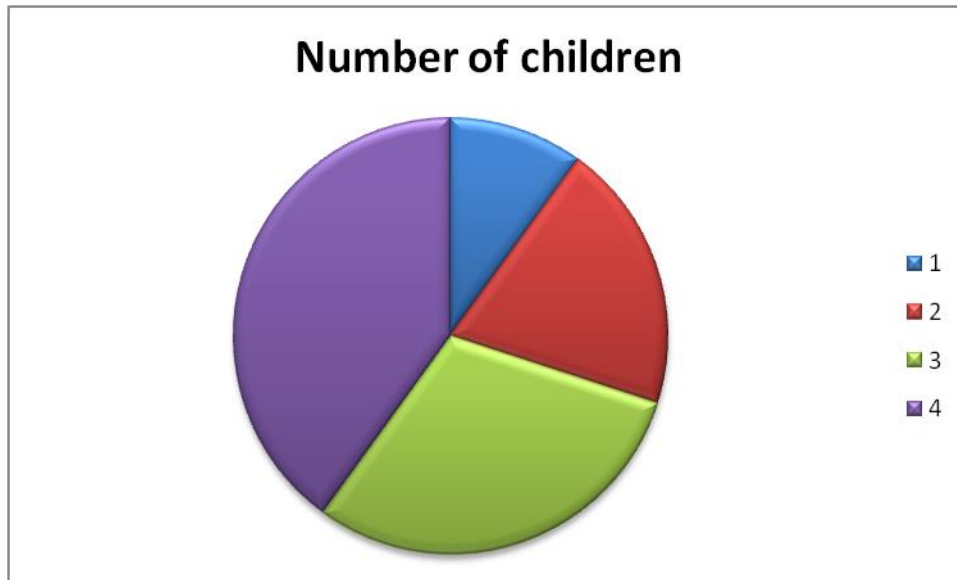


Chart 2 Distribution of education of the parents

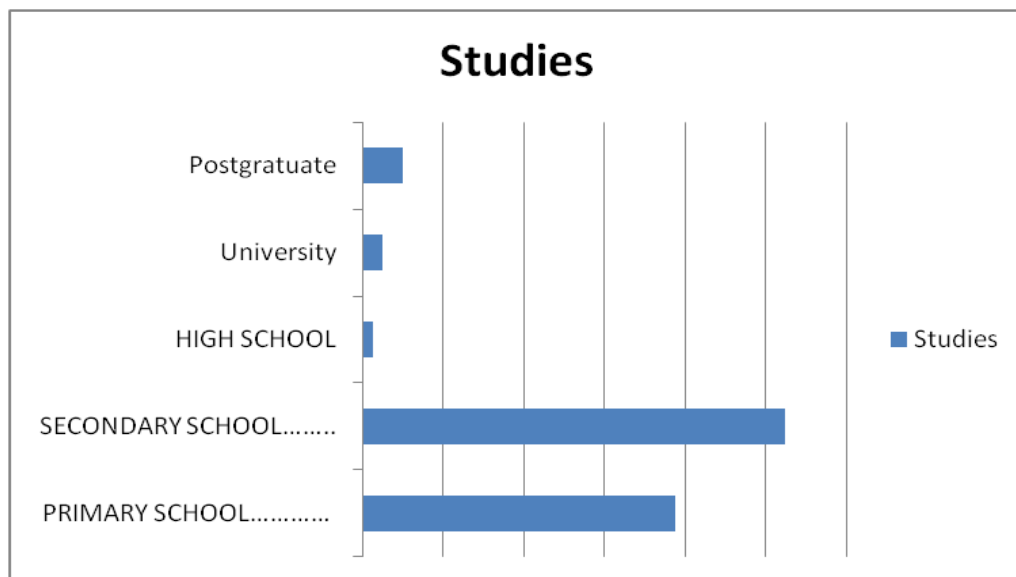


Chart 3 Distribution of position/branch of teachers

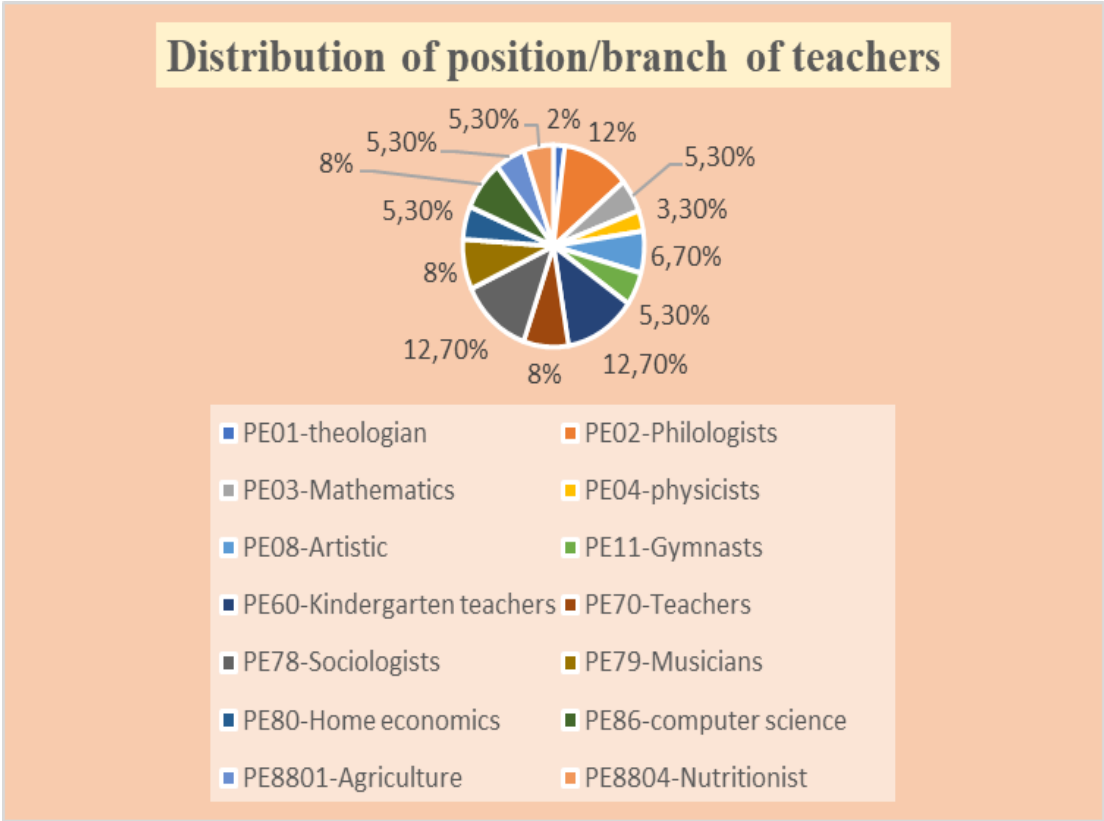


Chart 4 Special education training of the teachers

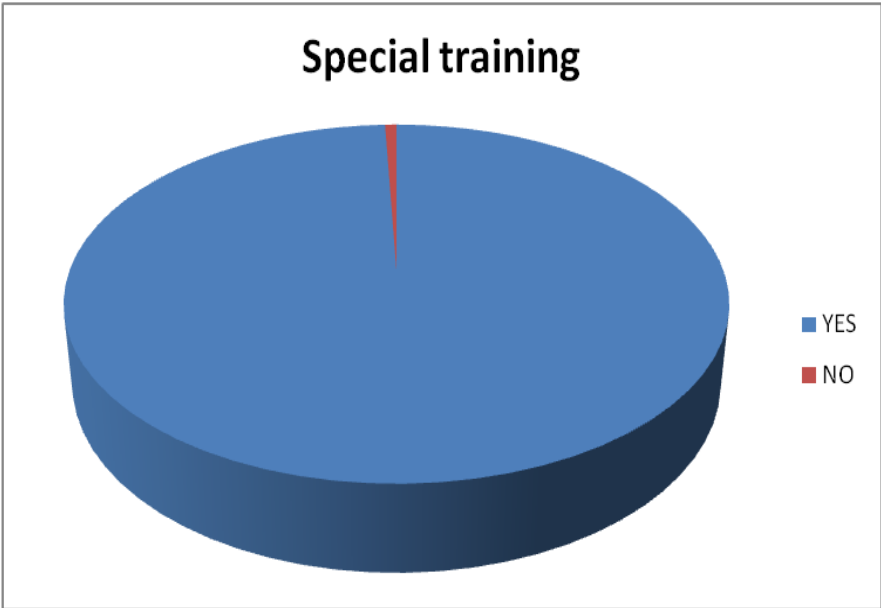


Chart 5 Distribution of education of the teachers

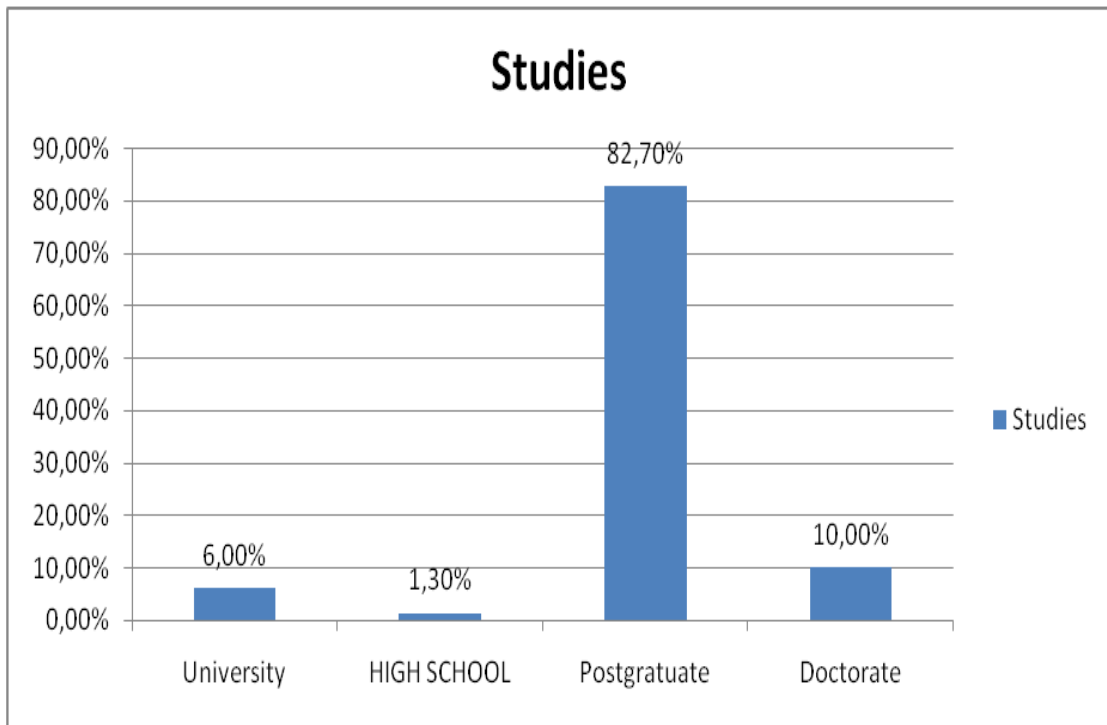


Chart 6 Gender of teachers

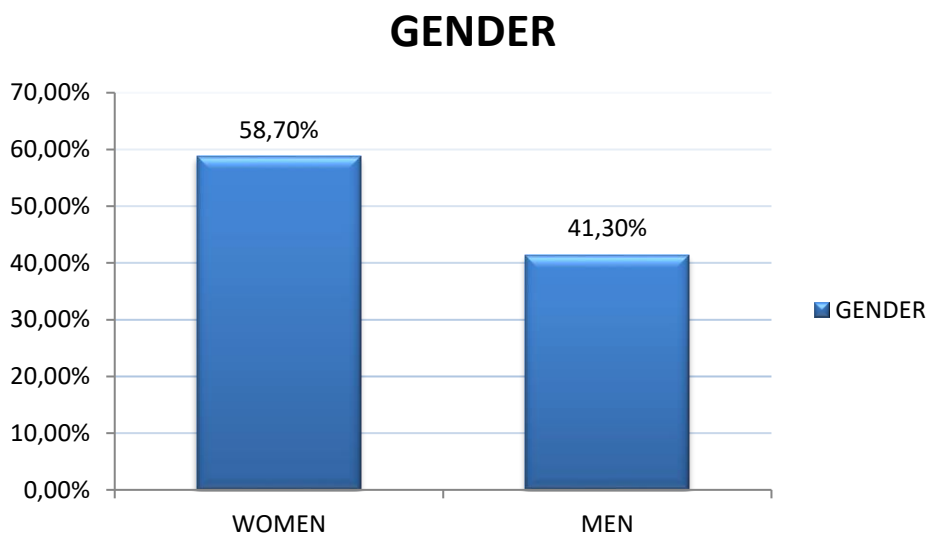


Chart 7: Specialist Training Level

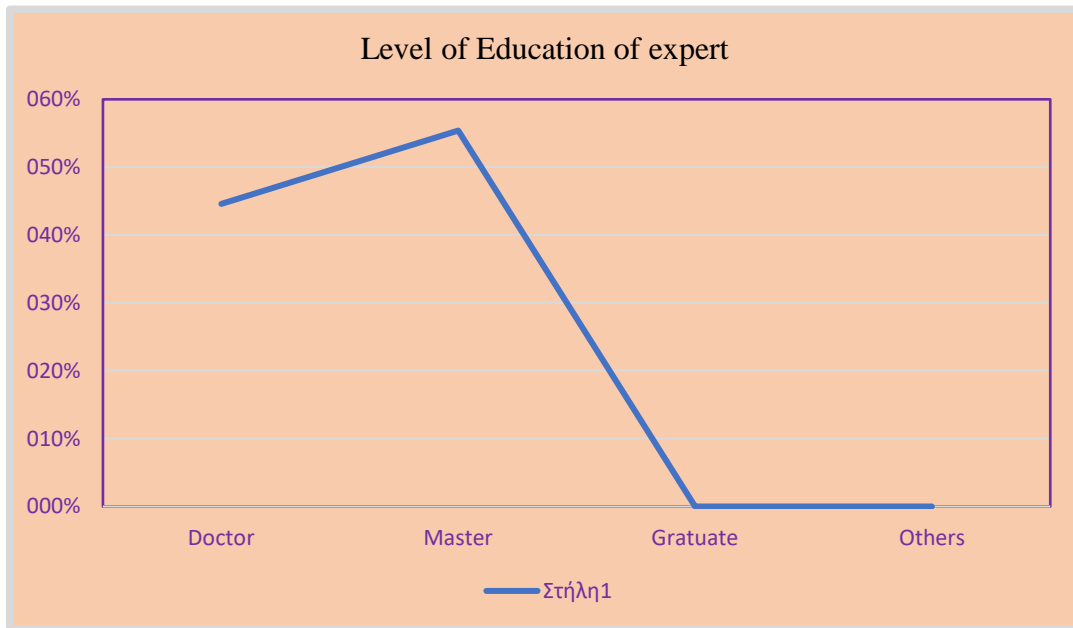


Chart 8: Academic position of experts

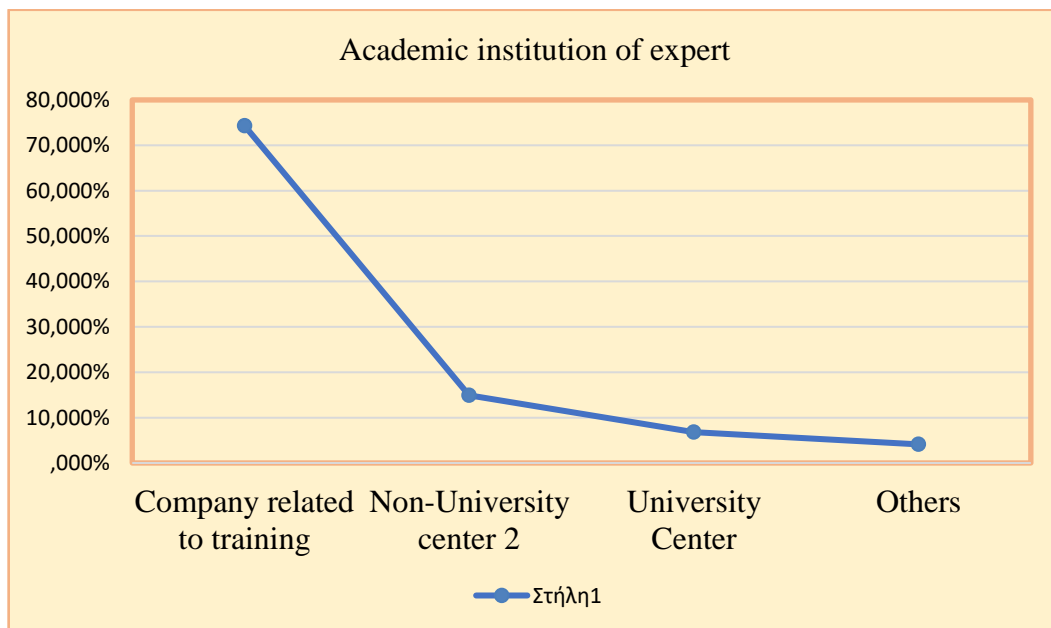


Chart 9: Professional status of experts

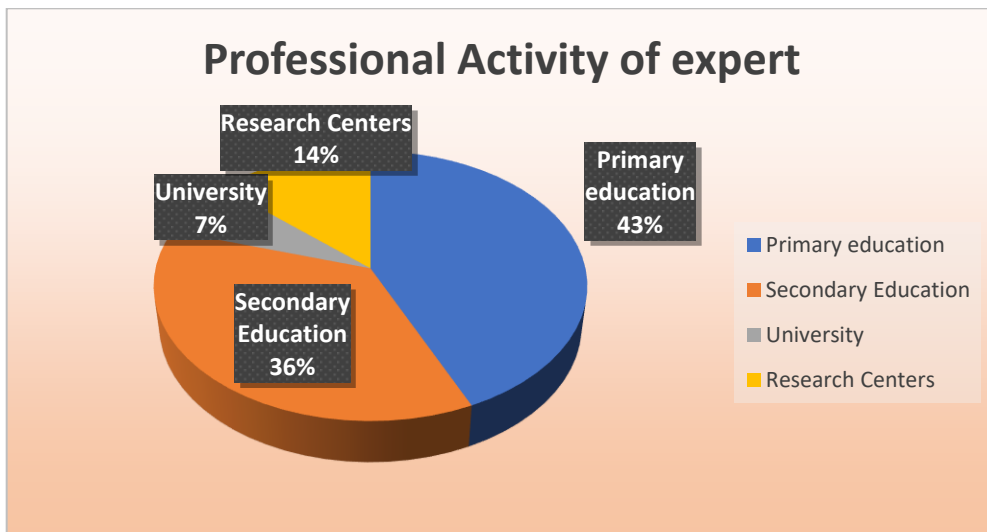


Chart 10: Publishing in special education in autism

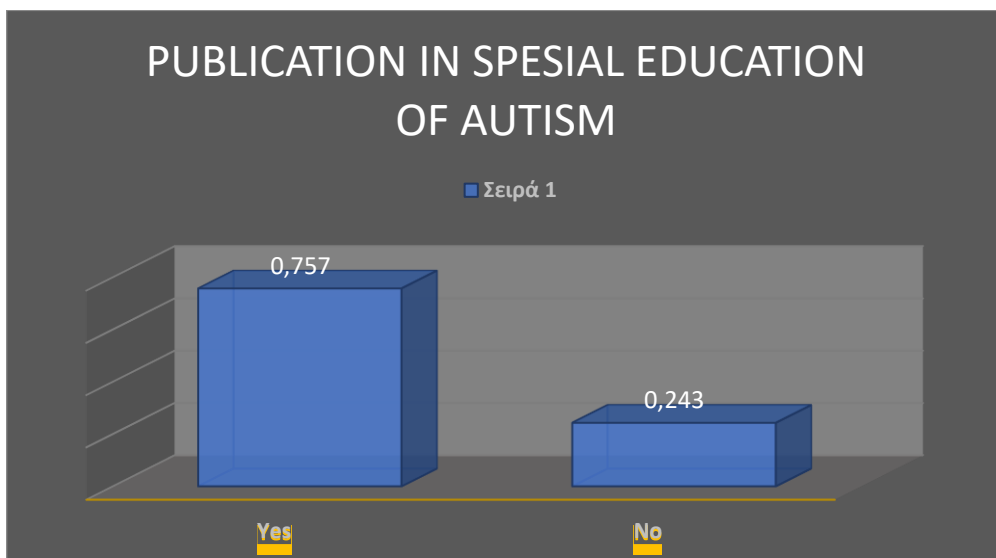


Chart 11: Work of specialists in special education and autism

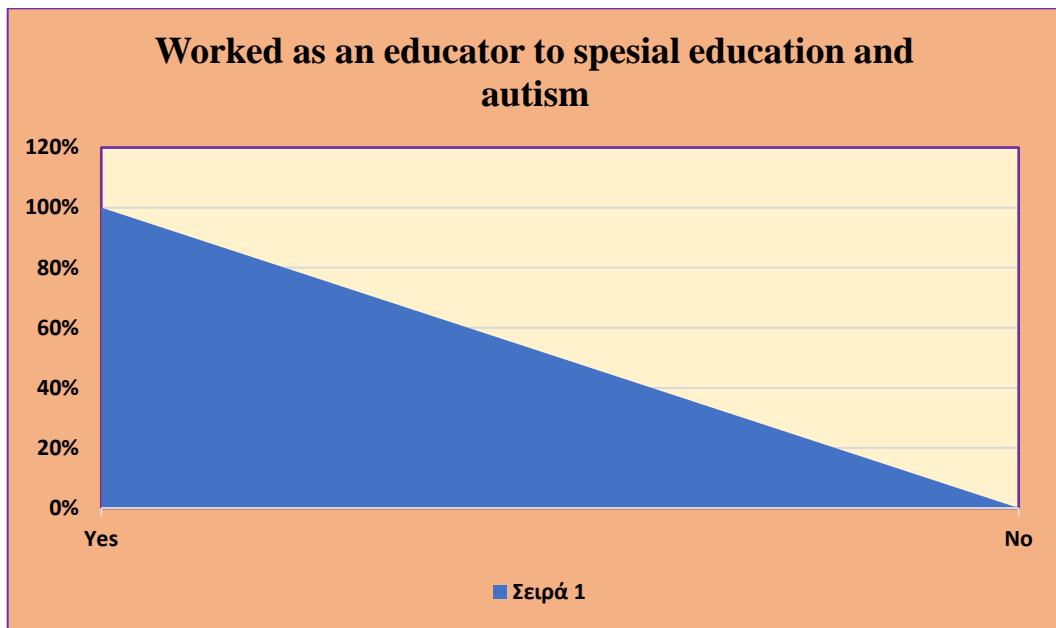


Chart 12: Degree of knowledge of autism experts

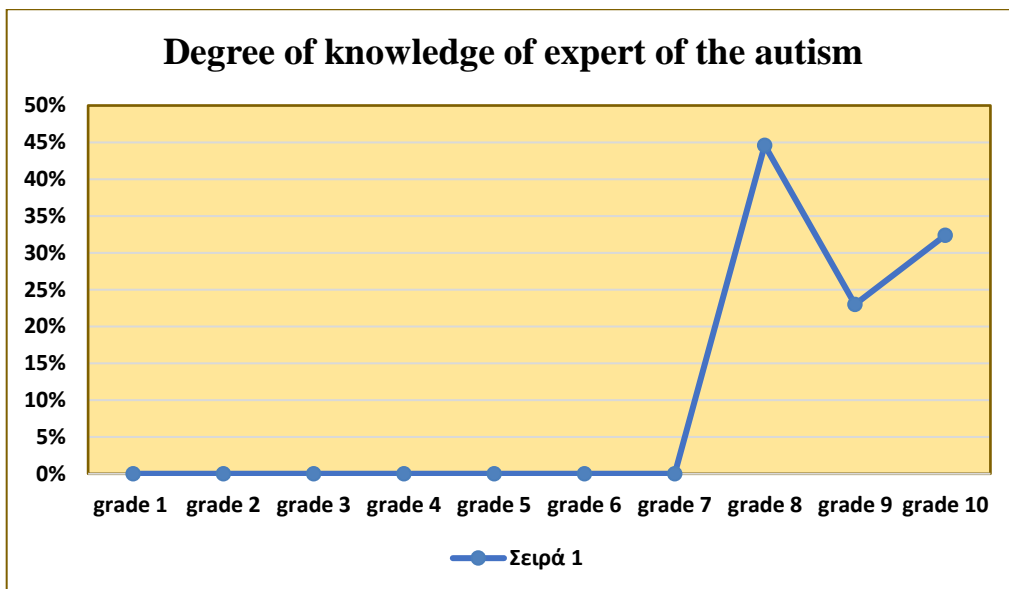


Chart 13: The degree of clarity and relevance of the value of the questionnaire input

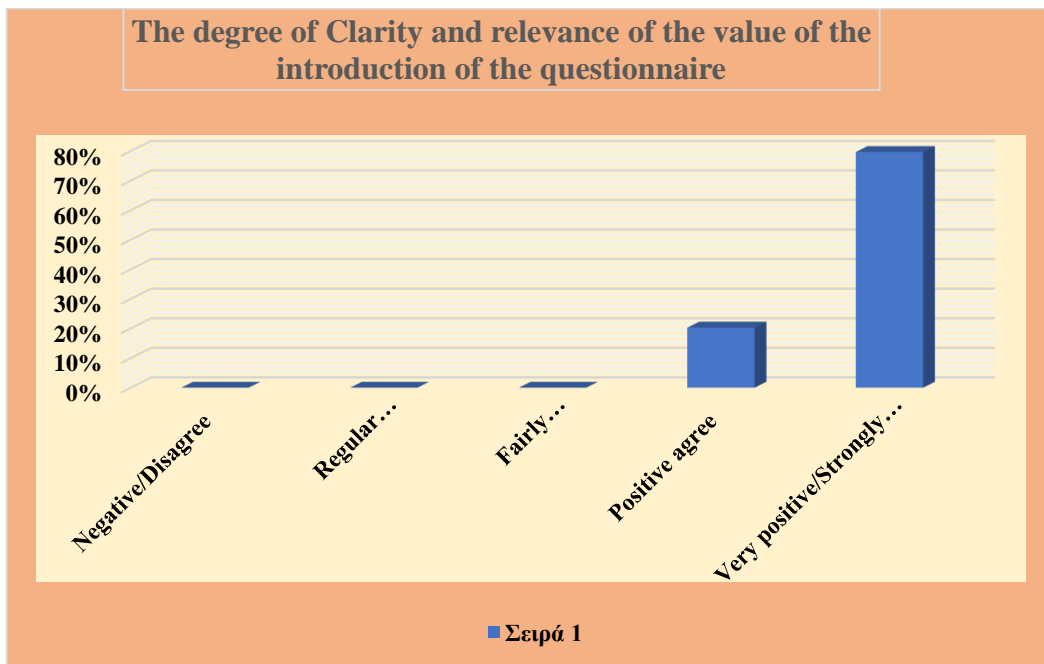


Chart 14: The degree of clarity and relevance of the questionnaire title value

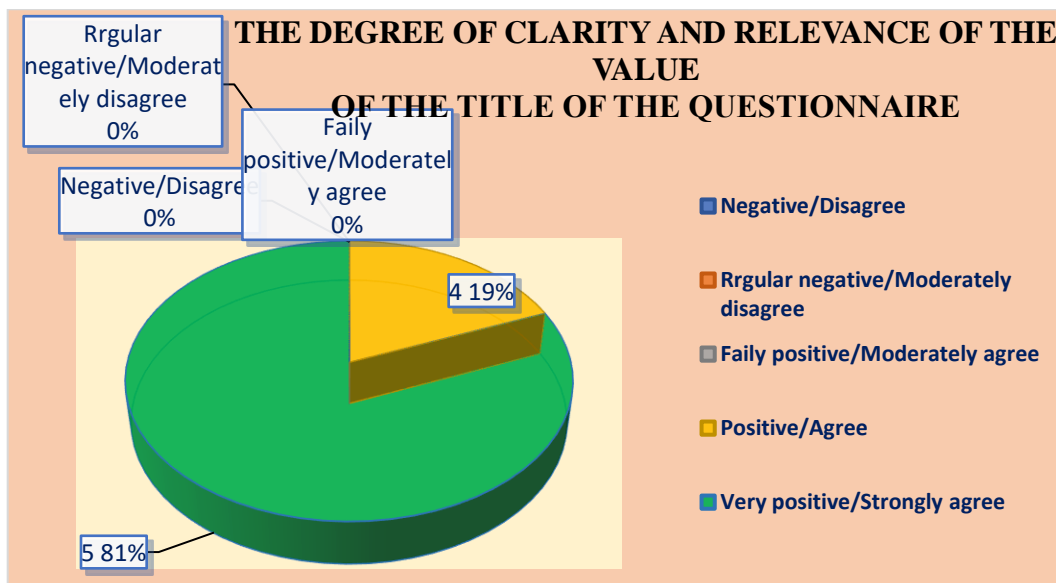


Chart 15: The degree of clarity and relevance of the value of questionnaire demographic data

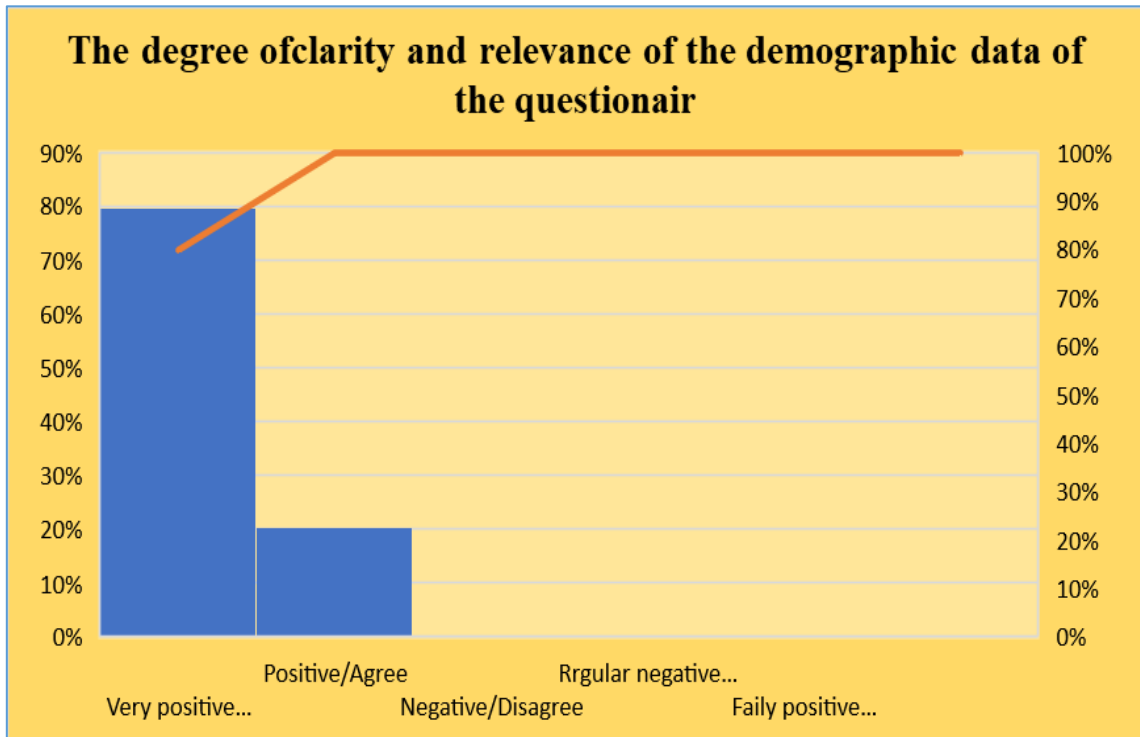


Chart 16: The degree of clarity and relevance of the question on the question about teacher education in special education of the questionnaire

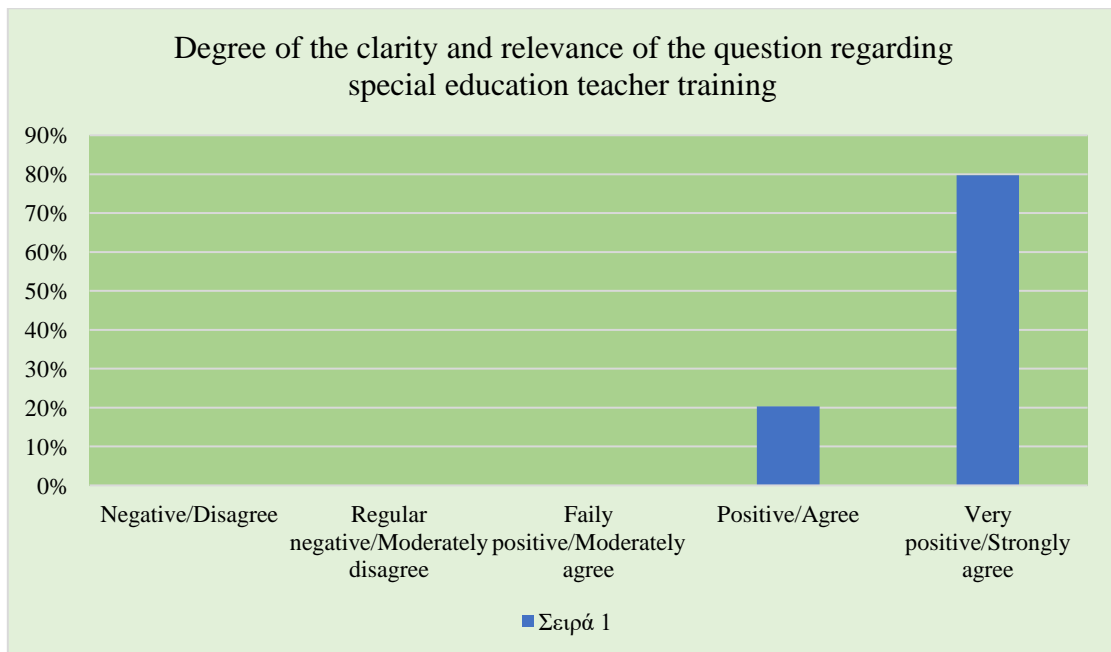


Chart 17: The degree of clarity of the teachers' questionnaire

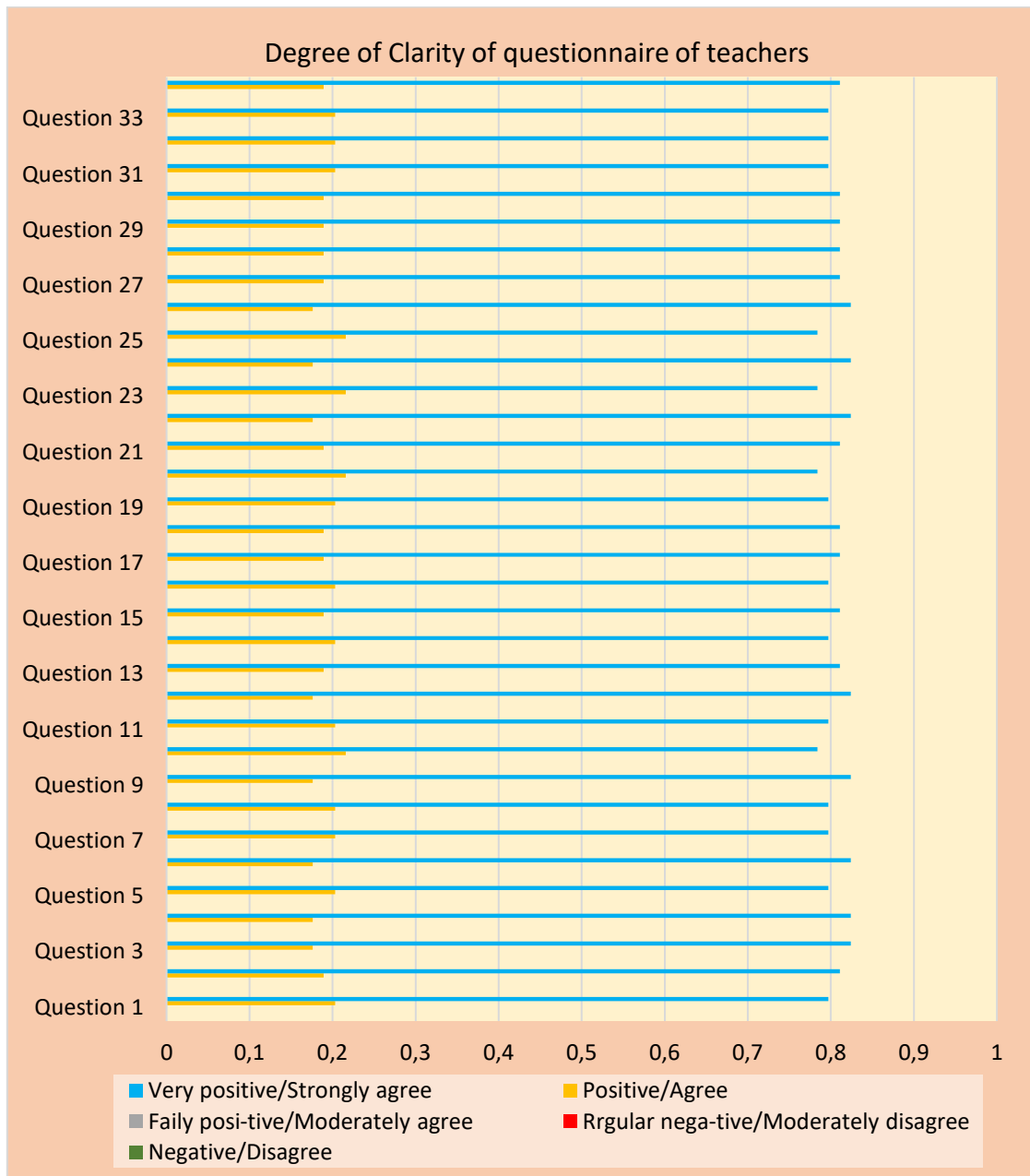


Chart 18: The degree of relevance of the teachers' questionnaire

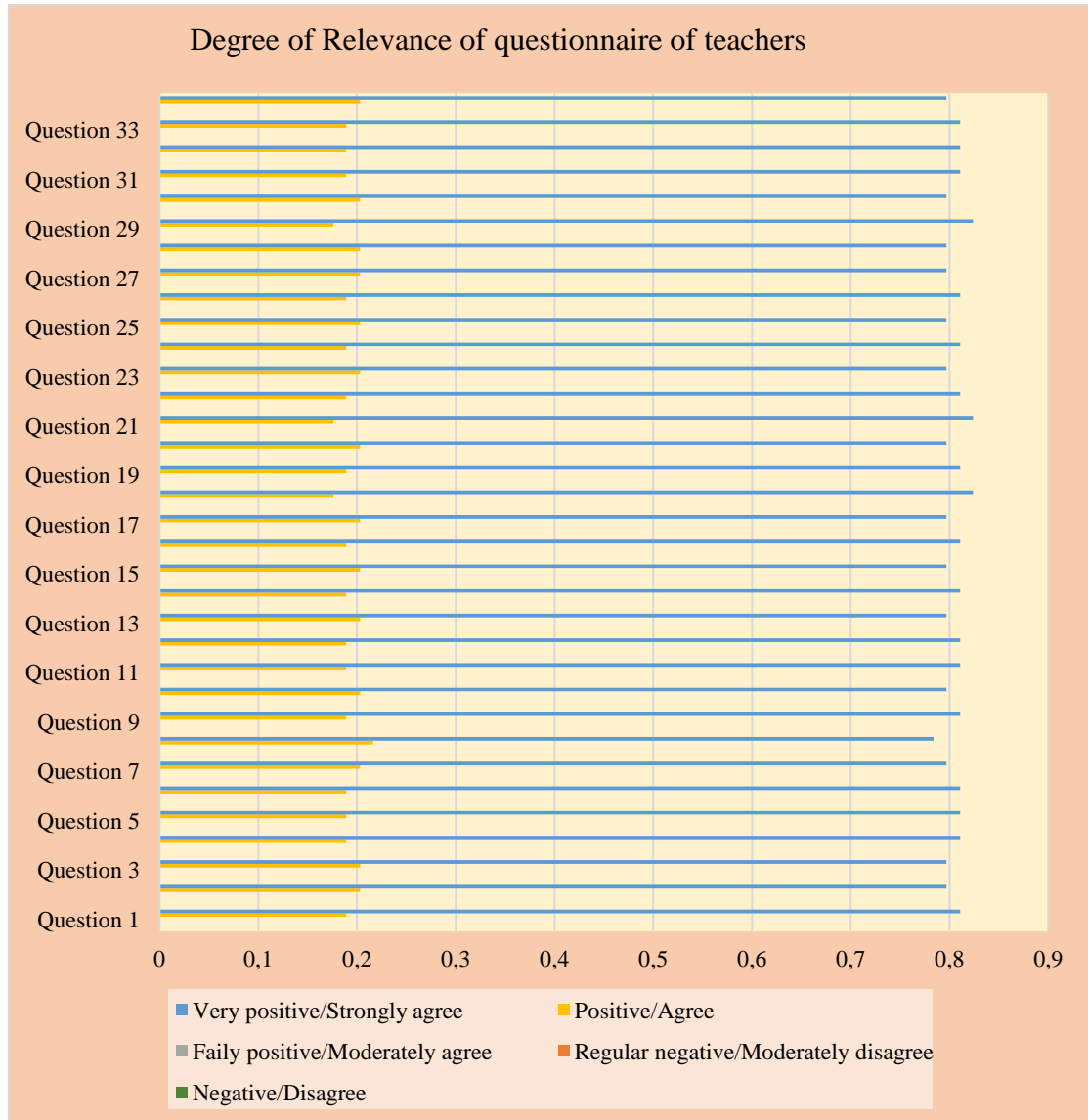


Chart 19: Level of Education of Specialists

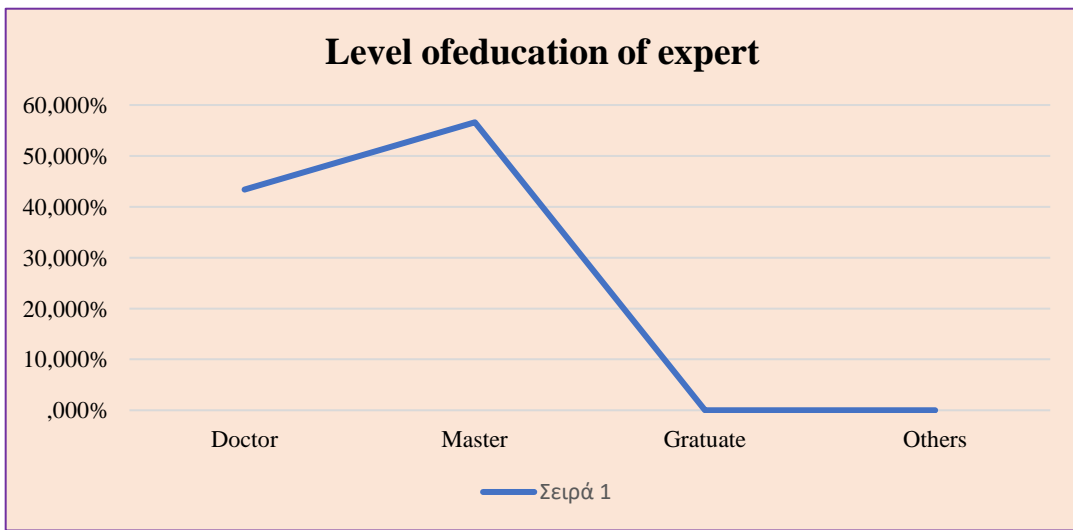


Chart 20: Academic position of experts

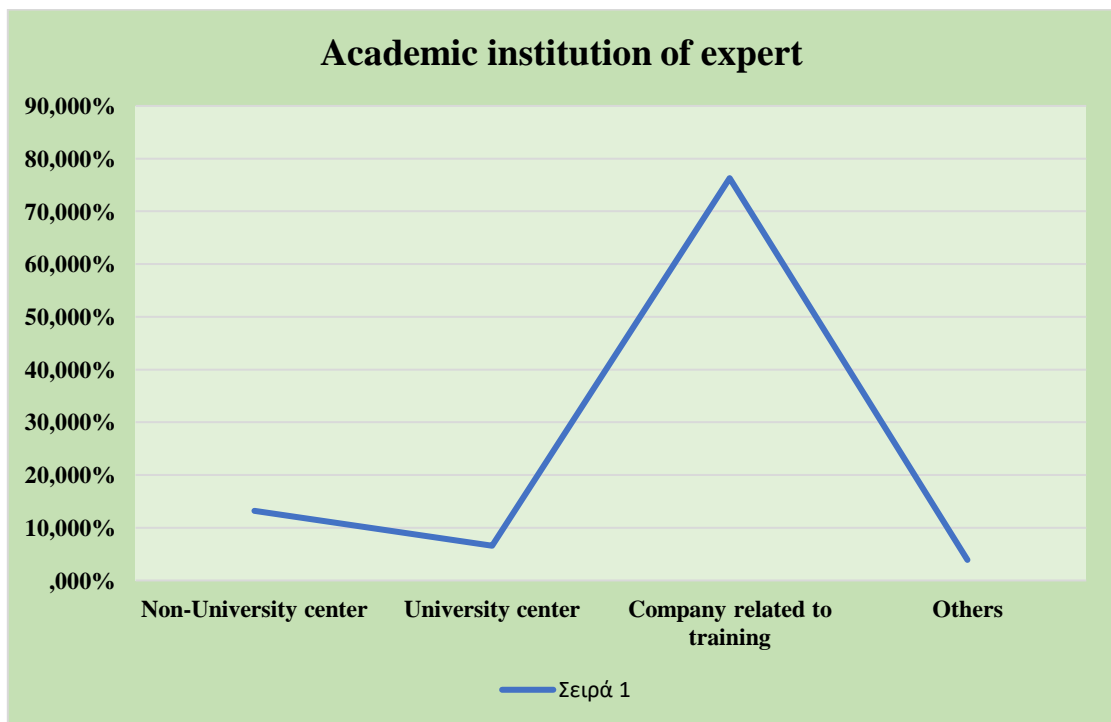


Chart 21: Professional status of experts

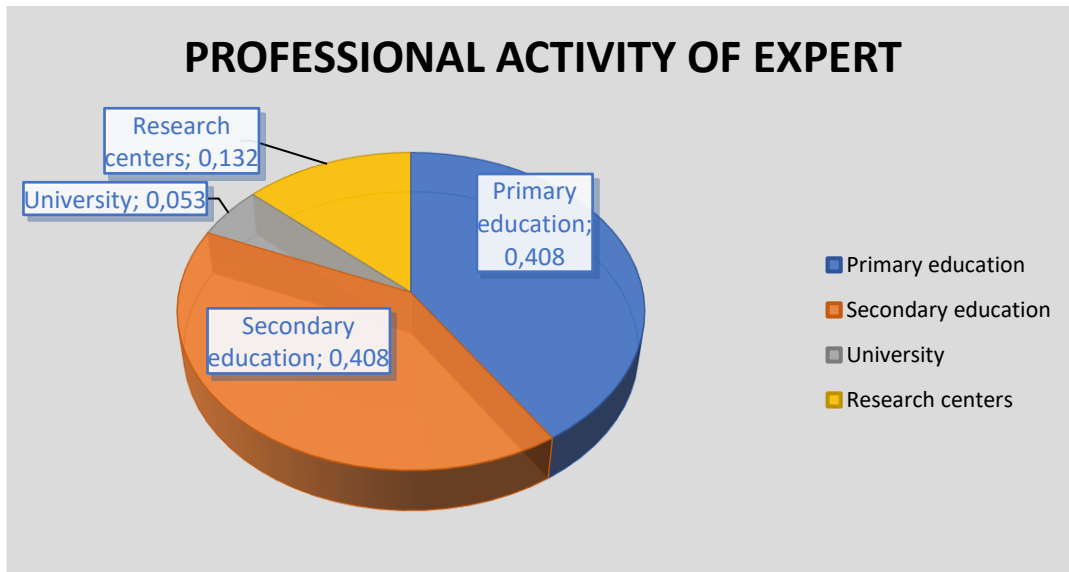


Chart 22: Publishing in special education in autism

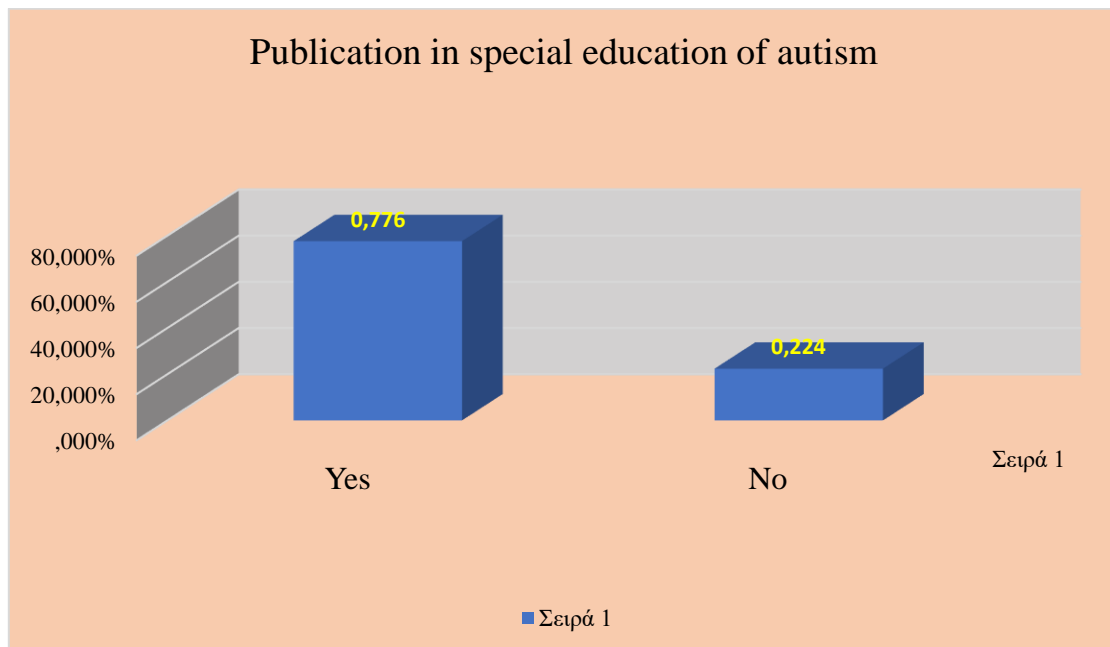


Chart 23: Work of specialists in special education and autism

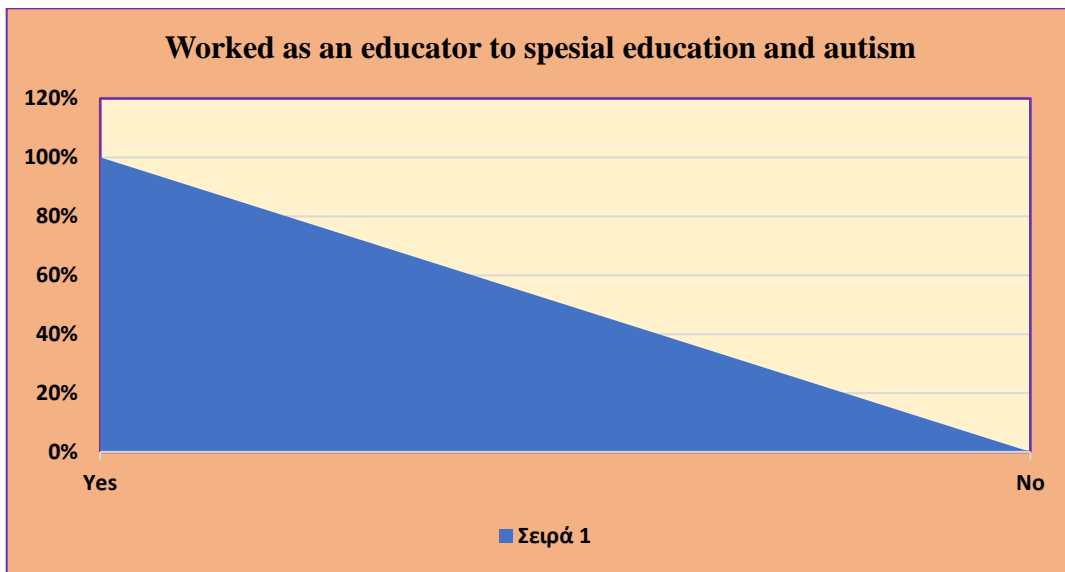


Chart 24: Degree of knowledge of autism experts

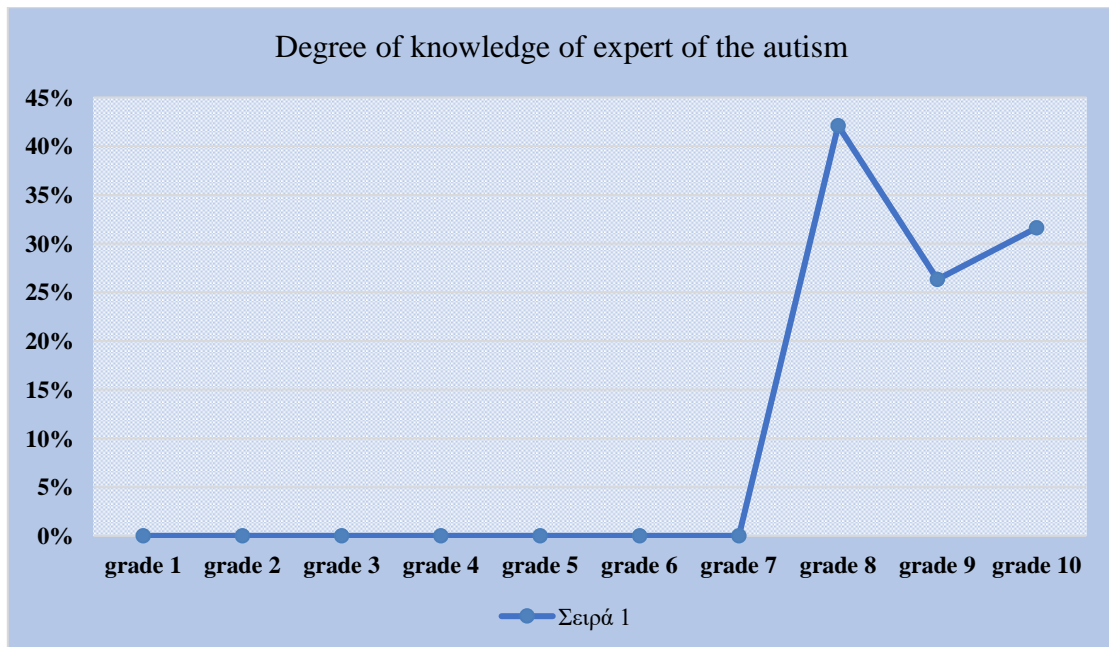


Chart 25: The degree of clarity and relevance of the value of the questionnaire

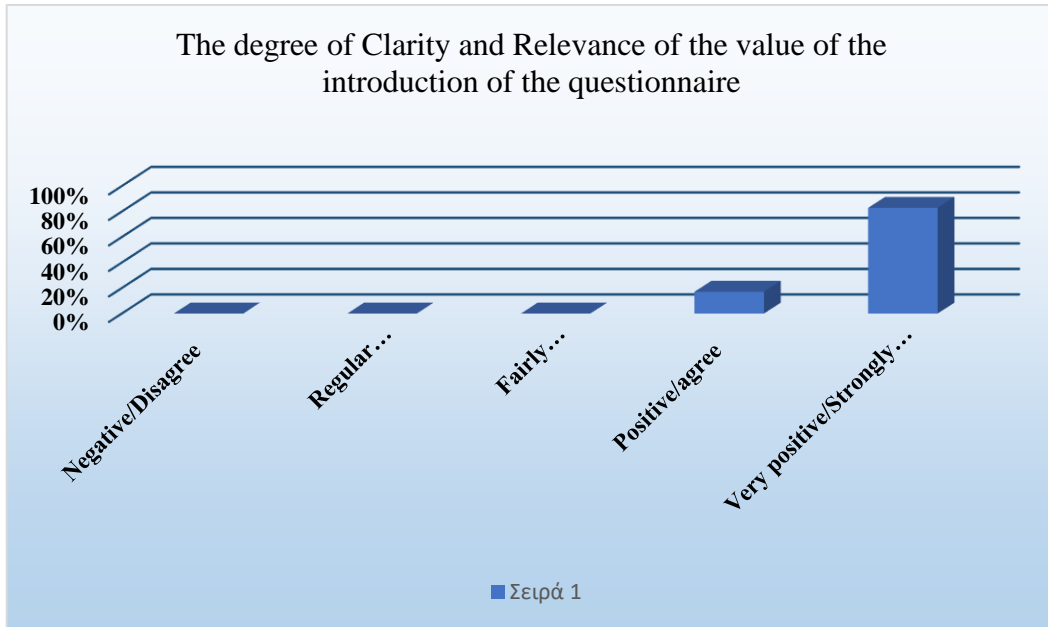


Chart 26: The degree of clarity and relevance of the questionnaire title value

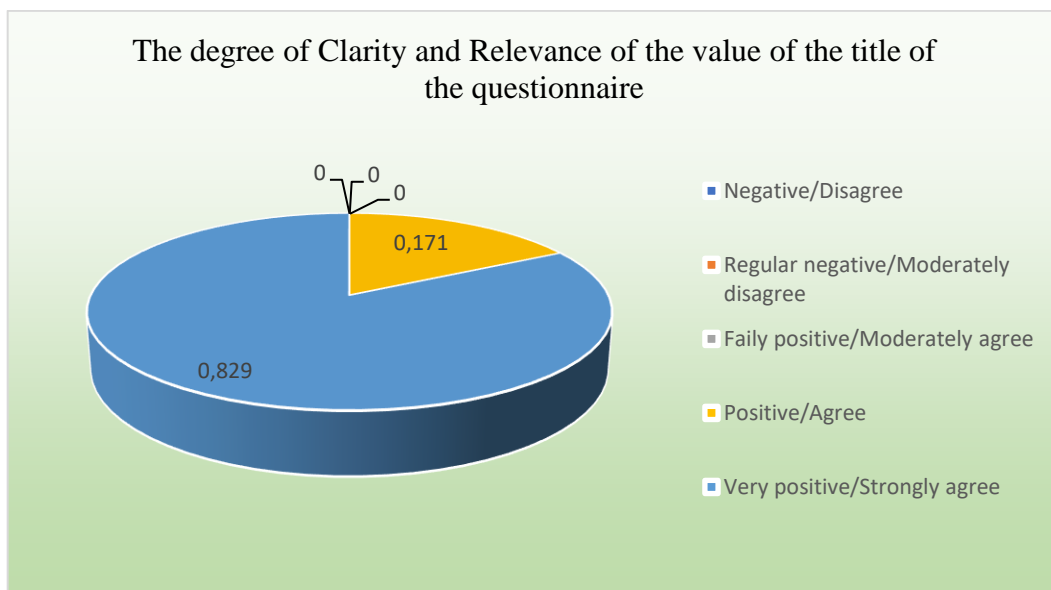


Chart 27: The degree of clarity and relevance of the value of questionnaire demographic data

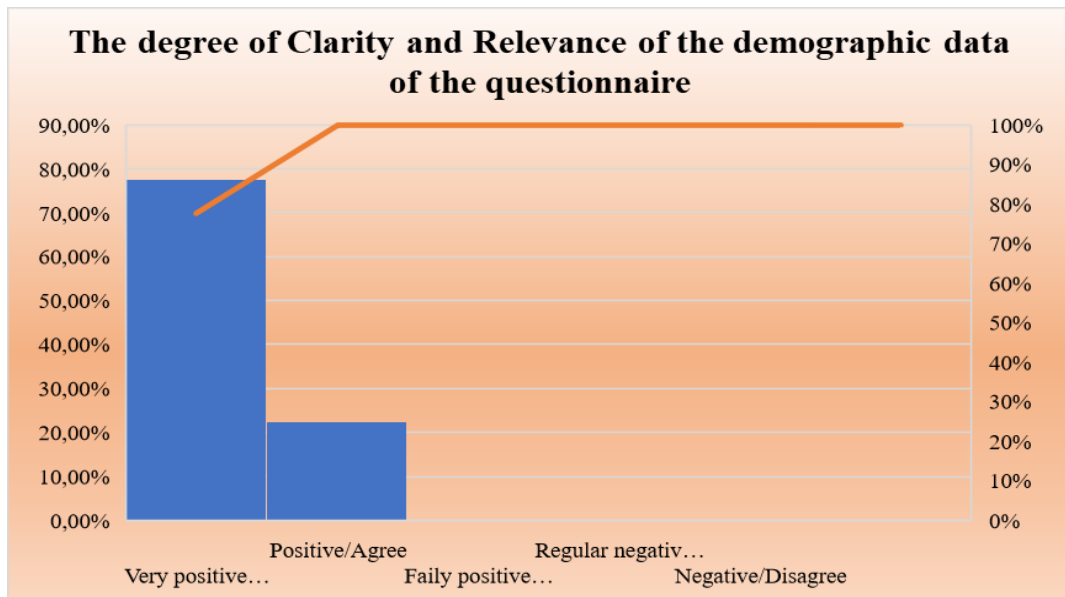


Chart 28: The degree of clarity and relevance of the question on the question about teacher education in special education of the questionnaire

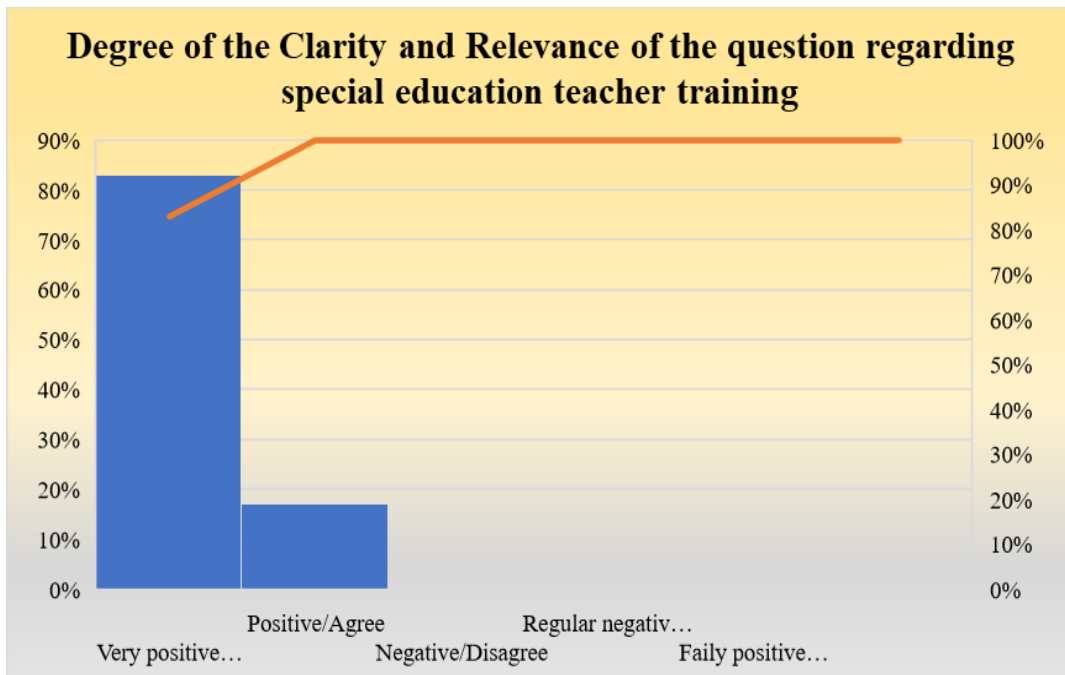


Chart 29: The degree of clarity of the teachers' questionnaire

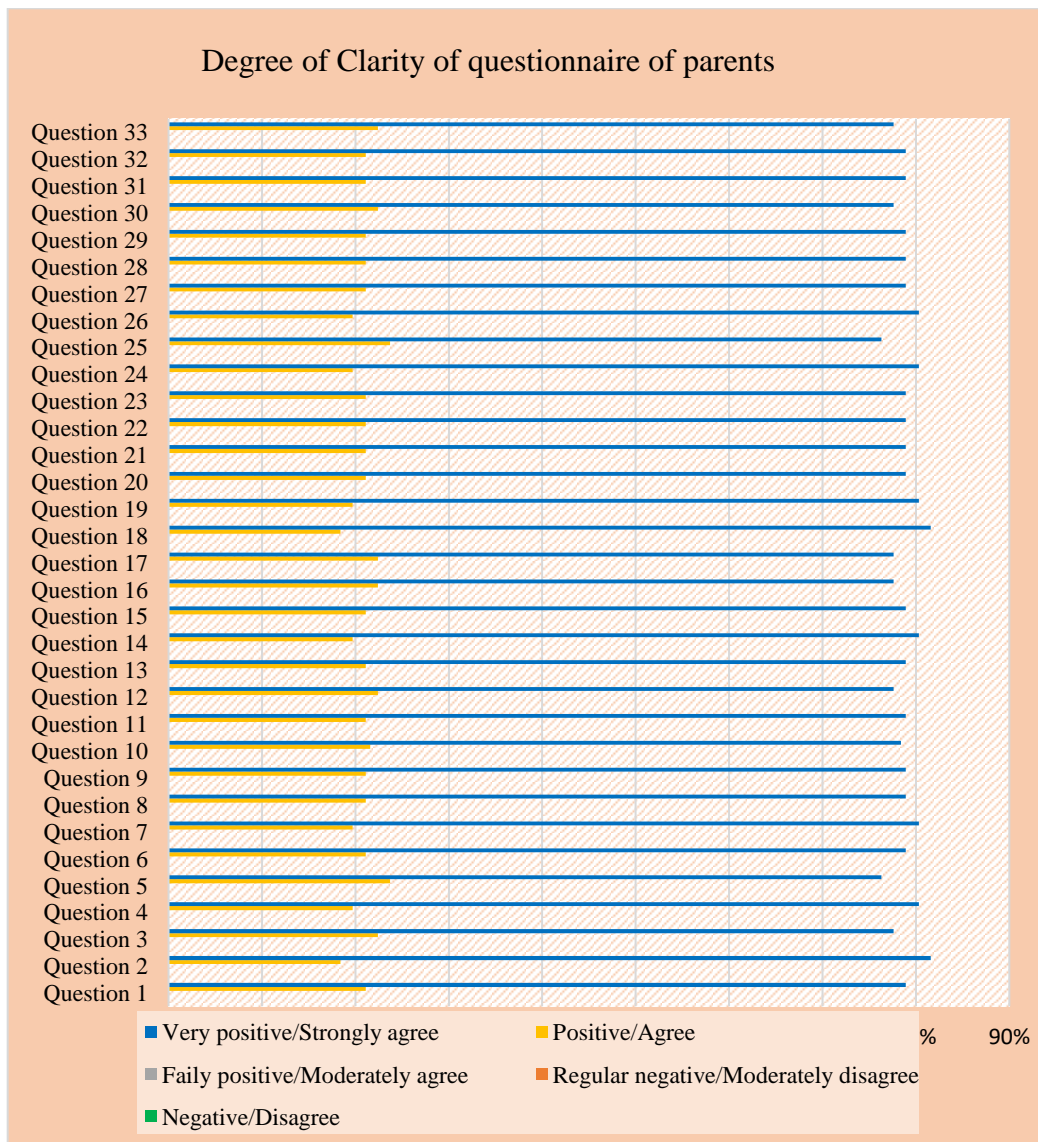


Chart 30: The degree of relevance of the teachers' questionnaire

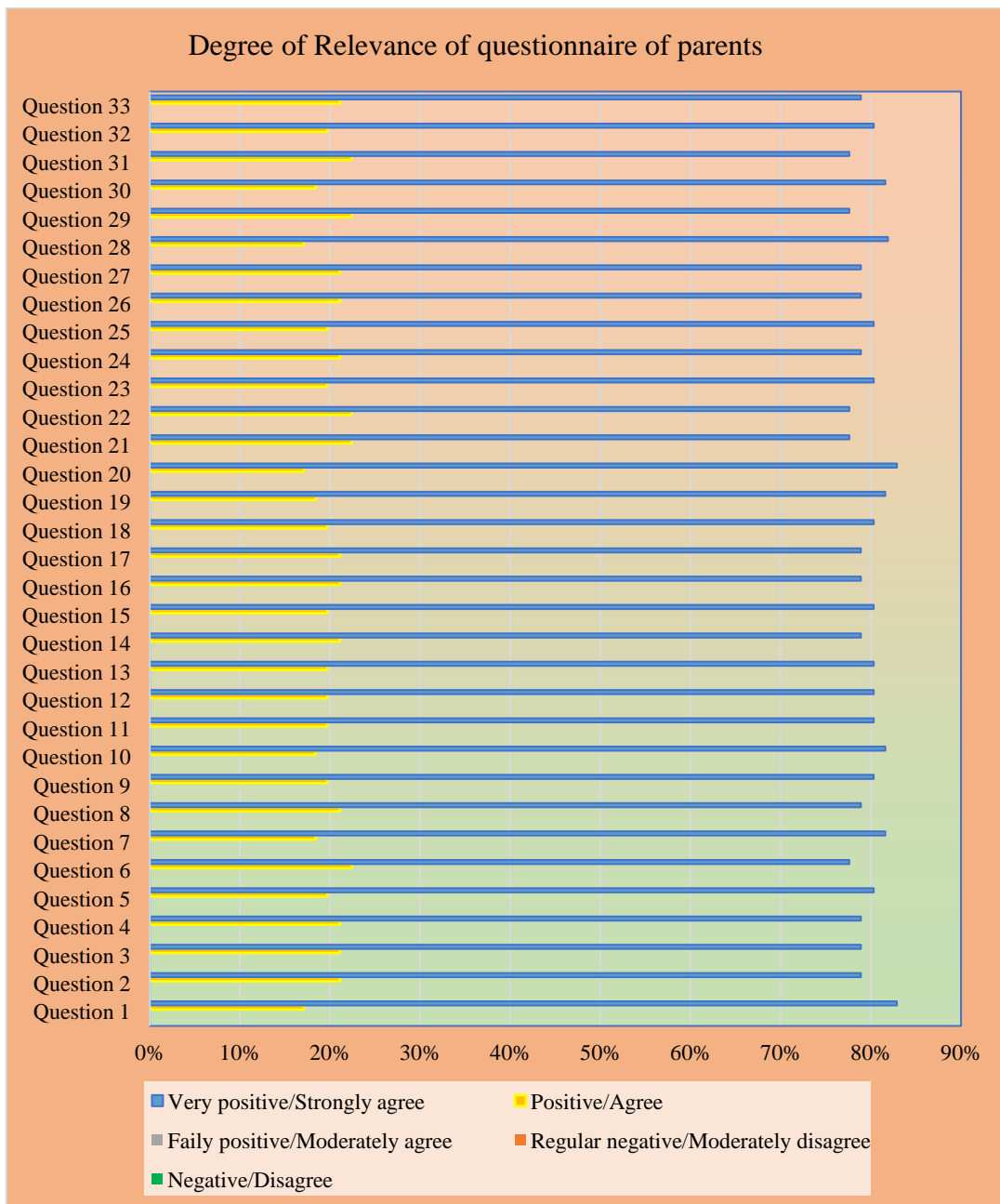


Chart 31 Parents Questionnaire - Responses

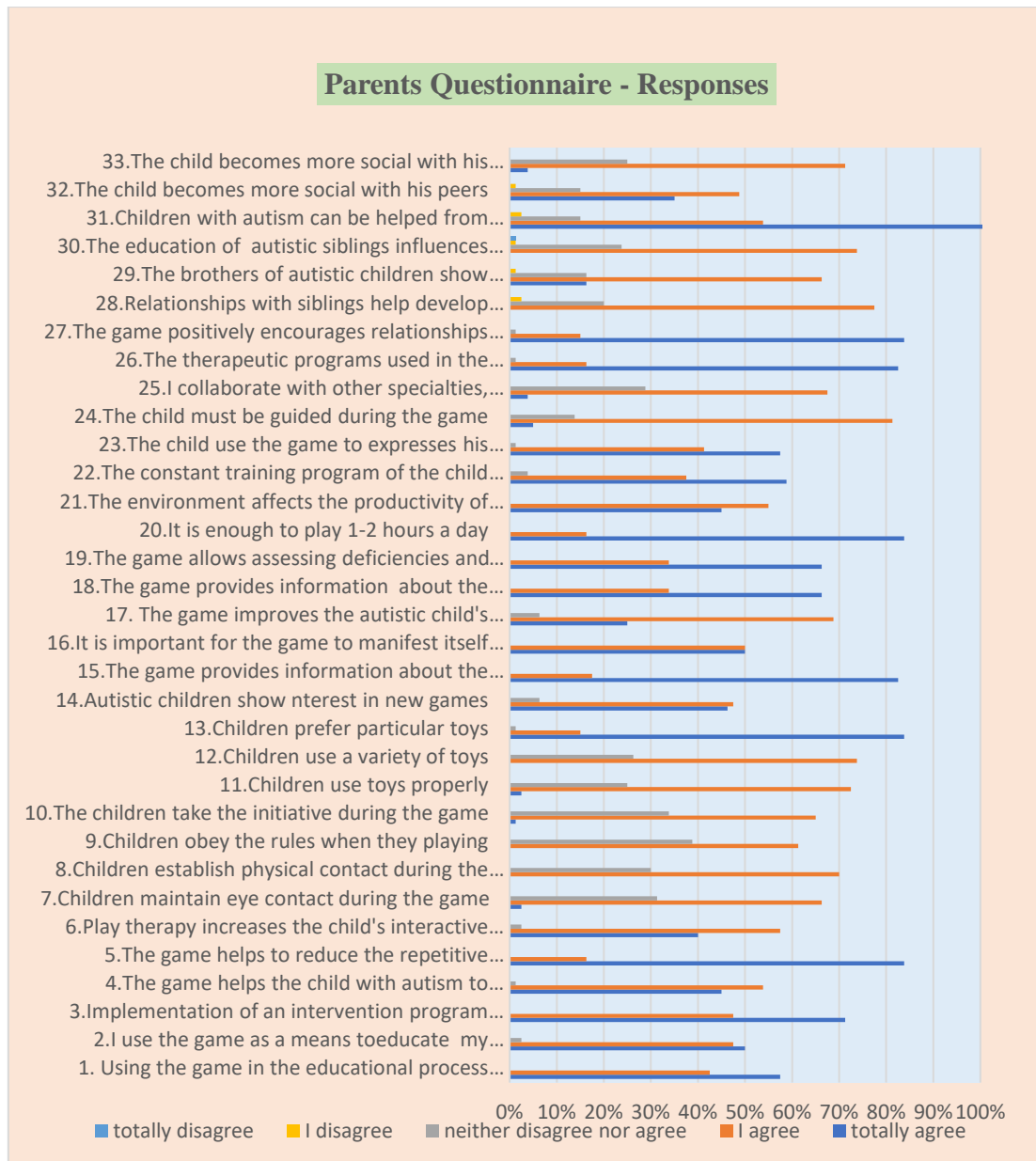
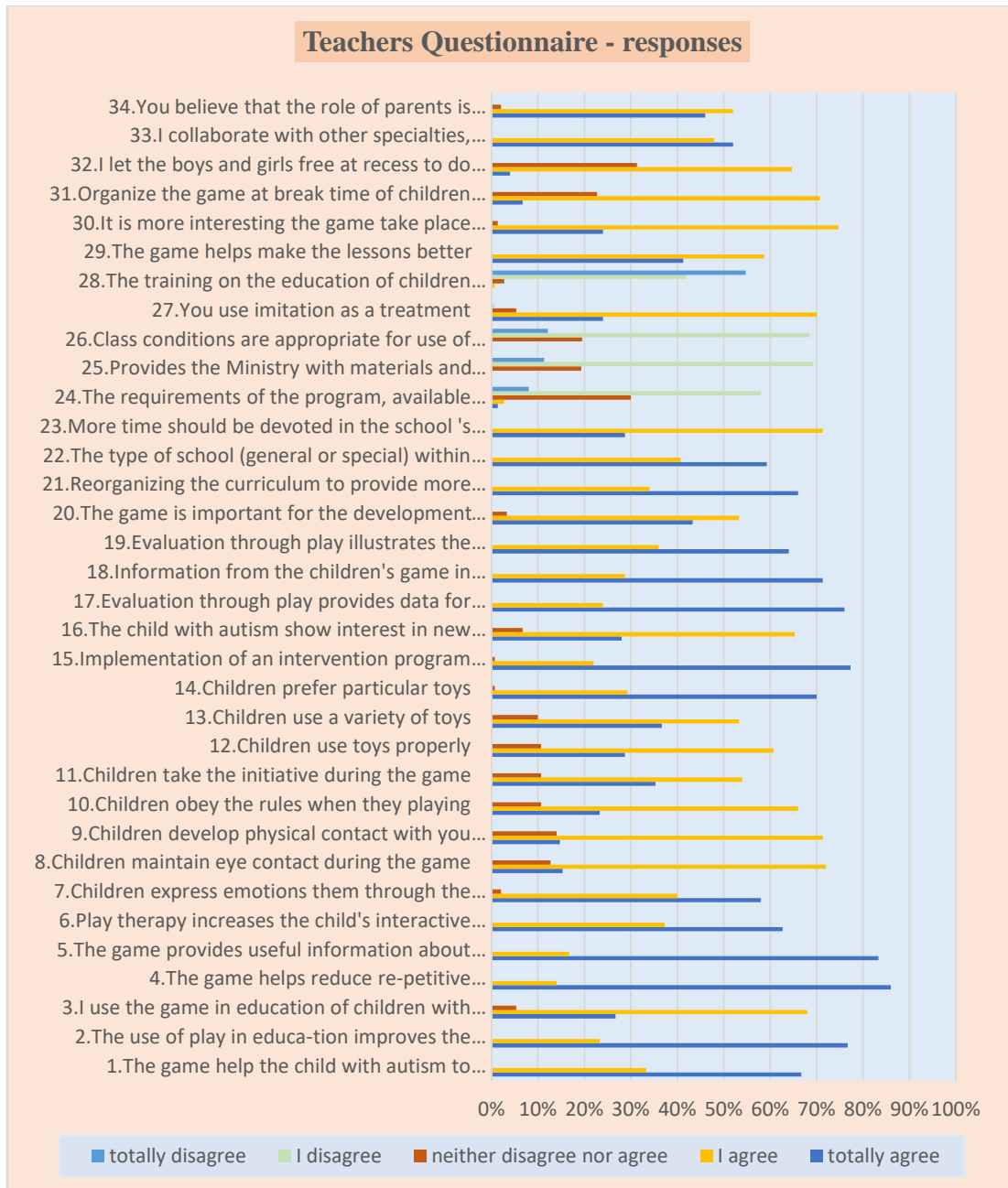


Chart 32 Teachers Questionnaire – Responses



UNIVERSIDAD DE CÓRDOBA
ESCUELA DE CIENCIAS DE LA EDUCACIÓN
DEPARTAMENTO DE ESTUDIOS PEDAGÓGICOS
DIRECCIÓN EDUCACIÓN Y EDUCACIÓN ESPECIAL

**El uso del juego en la educación y desarrollo de habilidades
de niños con autismo - posiciones y puntos de vista de
padres y maestros de educación y formación especial**

Resumen en español

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RESUMEN

El autismo es un trastorno del desarrollo que afecta a muchos niños durante los primeros años de su desarrollo. Para hacer frente a los problemas que surgen debido al trastorno del desarrollo, los expertos sugieren el uso del juego para mejorar las habilidades cognitivas, estéticas y sociales.

El objetivo de este trabajo es explorar los puntos de vista de padres y maestros de educación especial sobre el efecto del juego en el desarrollo de niños autistas. La muestra de la investigación estuvo conformada por 80 padres de familia y 150 docentes de educación especial a quienes se les informó sobre el propósito del estudio. A estos individuos se les entregaron cuestionarios consistentes en preguntas sobre las características demográficas de la muestra y la evaluación del uso del juego para el desarrollo de la educación de niños autistas.

En conclusión, los resultados del estudio mostraron que la educación, la experiencia laboral, el género y la especialidad de los docentes inciden en la evaluación de la contribución del juego. Mientras que el tratamiento del juego por parte de los padres de niños con autismo varía según el número de niños en la familia y la educación de los padres.

Palabras clave: Autismo, Educación Especial, Juego, Socialización.

INTRODUCCIÓN

Uno de los factores más importantes en el desarrollo de un niño es el juego, que juega un papel fundamental en él y en el proceso de aprendizaje. El juego constructivo contribuye al buen desarrollo del niño a través del desarrollo de sus habilidades estéticas, motrices, mentales y sociales, ofreciendo condiciones ideales para su entretenimiento. Otra área que se ve afectada por el juego es el gusto del niño, lo que contribuirá a una mejor comprensión de su entorno social, físico y espiritual.

Se aprecia la importancia del juego para que el niño se desarrolle adecuadamente mental y físicamente. De hecho, el juego tiene una variedad de formas y tipos y diferentes beneficios que un niño puede obtener, lo que lo hace accesible a cualquier categoría de niños. No discrimina según la condición económica, social, mental y física de los niños.

El juego es especialmente importante para los niños con discapacidad, y en especial para los niños con autismo, cuyo principal problema es la comunicación. Las dificultades más comunes se refieren a los juegos simbólicos y sociales. El juego debe ser utilizado para la educación de estos niños por los maestros y para sus tratamientos por los respectivos terapeutas.

A través de la investigación, el presente trabajo tiene como objetivo explorar mediante la recopilación de opiniones de profesores y padres de niños con autismo, la importancia del juego para la educación de estos niños.

La parte teórica del trabajo consta de dos amplios capítulos. En el primer capítulo se analiza el juego y se constata su importancia en el desarrollo de los niños. El

segundo capítulo define el autismo y analiza el desarrollo y las relaciones interpersonales de los niños con autismo.

CAPÍTULO 1 JUEGO

Definición y características del juego

La definición exacta del juego es bastante difícil de determinar. Esta dificultad se debe a la variedad de formas en que puede ocurrir. Un juego puede consistir en muchas personas o solo una, ya sea físico, organizado o espontáneo. Los cambios en el juego pueden deberse al trasfondo teórico creado por el investigador de cada juego. Generalmente la definición del juego viene desde el punto de vista de que todo el mundo lo ve.

En cuanto al trasfondo teórico de los juegos, existen dos categorías de teorías, las clásicas y las modernas. Las teorías clásicas se crearon en el siglo XIX en un intento de registrar la existencia y el propósito de los juegos. Las teorías más básicas pertenecientes a los clásicos son la teoría del exceso de energía (Spencer, 1978) y la teoría de la relajación y el descanso a través del juego (Lazarus, 1883). Las teorías modernas se crearon con el objetivo del papel que juega el juego en el desarrollo del niño. La teoría psicodinámica del juego (Freud 1961, Erikson 1985) y las teorías del desarrollo cognitivo (Piaget 1962, Vygotsky 1981) pertenecen a esta categoría.

Aunque no existe una definición específica para el juego, existen algunas características comunes que son componentes clave del juego (Chance, 1979; Christie & Yawken 1987; Lieberman 1977; Rogers 1988). Estas características incluyen el placer y la diversión que ofrece el juego y su espontaneidad, es decir, el juego no es obligatorio. Los jugadores son aquellos que participan activamente y no

como meros observadores del juego. También un juego tiene motivaciones internas que no sirven para otros fines, es "absorbente", es decir, cuando los niños juegan es difícil que un tercero atraiga su atención y ayuda a los niños a escapar de las restricciones.

En la década de 1990, jóvenes investigadores introdujeron características adicionales del juego (Stagnitti, 2004; Garvey, 1990; Weininger & Daniel, 1992; Wolfberg, 1995). Estas nuevas características son la seguridad que brinda a los niños, su control por parte del jugador y la importancia que le da al proceso del juego, no al resultado que trae.

La definición dada por Bundy (2001) se refiere a la transacción que existe entre los jugadores y el entorno en el que se lleva a cabo, transacción que no está controlada internamente y no está limitada por la realidad.

Juego y enfoques teóricos

Durante el estudio del juego, se desarrollaron y formularon algunas teorías. Concretamente la teoría de la energía redundante, relajación, recapitulación o herencia ancestral, ejercicio de preparación, psicoanálisis o purificación, la mente, Montessori y Froebel. El objetivo de estas teorías es mostrar la gran importancia que tiene el juego superior en el niño y cómo afecta a su desarrollo.

En detalle, el filósofo y psicólogo Herbert Spencer formuló en el siglo XIX la teoría del exceso de energía, en la que interpreta la exaltación del niño cuando juega como una energía acumulada que debe exteriorizar. Según Spencer, esta acumulación se debe a la necesidad del hombre en años anteriores de cazar a sus presas (Kotskosta et al., 2000). Sin embargo, según esta teoría, basada en muestras

de fisiología, no se justifica la necesidad de exteriorizar la energía acumulada así como la obsesión del niño por jugar cuando está agotado (Michalakis, 2014).

La teoría de la relajación fue formulada por Lazarus y Patrick. Esta teoría sostiene que el niño necesita ganar energía cuando la desperdicia en otras actividades. Por tanto, es comprensible que contradiga la teoría de la energía excedente (Dockett & Fler, 1999; Verenikina, 2003).

La teoría de la reanudación o herencia ancestral fue formulada por el psicólogo Stanley Hall. Según ella, el hombre combina en su vida moderna sus recuerdos de años anteriores, por lo que el juego es de gran importancia para su evolución. De hecho, Hall enfatiza la influencia de la edad del niño en su comportamiento durante los juegos y correlaciona el desarrollo del niño con la evolución de los animales a humanos (Verenikina, 2003).

El filósofo Groos empezó a estudiar el juego con los animales y acabó estudiándolo con el hombre, formulando así la teoría de hacer un ejercicio. Durante su estudio observó elementos comunes entre las reacciones del niño al jugar y los instintos de las primeras personas, concluyendo así que el niño se está preparando para su desarrollo (Kappas, 2005). Aunque esta teoría puede explicar el propósito del juego a nivel pedagógico y de desarrollo, no se puede aplicar a todos los casos de juego e incluso a los juegos que involucran a adultos.

El primero en hablar sobre la teoría del psicoanálisis o de la purificación fue J. Freud y luego fue apoyado por otros, como Erickson. Esta teoría presenta primero al niño "tomado" por alguna experiencia difícil, y luego recurre al juego para afrontar esta experiencia. Esta teoría muestra la importancia del juego en la vida del niño que lo ayuda a lidiar con situaciones que le provocan ansiedad y miedo (Hoxter, 1996; Garella, 2013).

Según la teoría de la mente, el individuo trata de interpretar ciertos comportamientos de sí mismo y de las personas que lo rodean a través de estados mentales, que pueden ser independientes de la realidad, que mentalmente les atribuye. Con esta habilidad, el individuo facilita la inclusión e interacción social (Terwogt & Stockmann, 2003).

Montessori a través de su teoría muestra la importancia del diseño de juguetes, afirmando que el juguete es la herramienta de aprendizaje más ideal para los niños. De igual forma, Froebel a través de su teoría muestra la importancia del juego, ya que a través de este el niño se conoce mejor a sí mismo, sus límites y necesidades (Karakatsani, 2008).

Otras dos teorías que pertenecen a las nuevas teorías del aprendizaje son las de Piaget y Vygotsky. Más concretamente, la teoría de Piaget se refiere al desarrollo sociocognitivo y considera el juego como una herramienta de inteligencia. Según Piaget, el juego evoluciona en algunos niveles graduales y ayuda al individuo a desarrollarse mentalmente. Las formas de juego que considera que contribuyen a este desarrollo mental son los juegos de reglas, los juegos de símbolos y los juegos de ejercicios (Lin & Yen-Chun, 2010).

De hecho, según esta teoría, el desarrollo mental se divide en cuatro etapas. La primera etapa está dirigida principalmente a niños menores de cuatro años y trata sobre las reglas del juego, es decir, se refiere al intento del individuo por comprender la forma en que funciona el juego. La segunda etapa está dirigida principalmente a niños de cuatro a siete años y se denomina etapa del egocentrismo. En otras palabras, el niño no quiere obedecer sus reglas de juego y crea reglas orientadas a sus propios intereses. La tercera etapa, la etapa de cooperación inicial, está dirigida a niños de siete a diez años, quienes a través del juego comienzan a socializar y cooperar con

otros niños. La cuarta y última etapa está dirigida a niños de al menos once años. En esta etapa los niños ahora cooperan e incluso los mayores intentan imponerse a los más pequeños en cuanto a las reglas del juego (Piaget, 1962 como se menciona en Diamantopoulos, 2009).

Vygotsky siempre ha creído que el juego es muy importante en el desarrollo de un niño, especialmente durante los primeros años de escuela (Vygotsky, 1997). Creía que el juego constaba de elementos fantásticos combinados con reglas. Este patrón, ligeramente enriquecido, se repetirá en los próximos años del niño. De hecho, cree que el objetivo principal del juego no es el placer, sino la satisfacción de determinadas necesidades, por lo que cuando interviene la imaginación, ésta deja de estar activa (Vygotsky, 2012).

La contribución del juego

El juego tiene muchos beneficios para los niños. A través del juego desarrollan su pensamiento, memoria y capacidad para resolver problemas que les preocupan, principalmente a través de acertijos. A través del juego, los niños pueden desarrollar muchos tipos de aprendizaje y habilidades lingüísticas (Arizandi, 2018). Al jugar internamente con creaciones de juegos de rol de otros miembros de la familia donde imitan situaciones y experiencias familiares, entienden la diferencia entre los miembros, especialmente en términos de las obligaciones y requisitos que tienen de otros miembros. Especialmente los juguetes que se refieren a niños en edad preescolar, les ayudan a comprender mejor el tamaño, la forma y la textura. Además, a través de la participación de los niños con los libros, llegan a contacto con

imágenes y palabras, potenciando así su vocabulario y comprensión del mundo (Ginsburg, 2007).

A través de los juegos, los niños desarrollan su imaginación y se vuelven más creativos, lo cual es fundamental para el sano desarrollo de su cerebro. Con juguetes, el niño hace el primer descubrimiento del mundo. También le ofrece el desarrollo de la confianza en sí mismo y habilidades capaces de ayudarlo a recuperarse de situaciones difíciles. Cuando se trata de más de un niño, pueden compartir experiencias y situaciones, agradables y desagradables, tomar decisiones, moverse a su propio ritmo, descubrir sus intereses y expresar sus puntos de vista. Por lo tanto, aprenden a participar y actuar dentro de un grupo (Bailey, 2006).

El juego desorganizado ofrece al niño actividad física y por lo tanto una mejor salud. Ayuda al niño a adaptarse sin problemas al entorno escolar, mejora su preparación para el aprendizaje y el desarrollo cognitivo (Ayotte-Beaudet et al., 2017).

La cantidad de tiempo dedicado a jugar en la escuela promueve el desarrollo de habilidades y destrezas sociales. Más específicamente, a través del juego, los niños tienen la oportunidad de conocerse mejor a sí mismos y desarrollar relaciones de confianza con sus compañeros de clase, dándose cuenta de que cada niño tiene la oportunidad de tener su propio papel en el grupo. La exploración que ofrece el juego permite a los estudiantes familiarizarse con su entorno. Es importante que el juego comience en la niñez y continúe a lo largo de la forma cambiante de la vida. El proceso del juego educa a los niños además del campo de la socialización y en cuanto a la resolución de problemas, sin perder la infancia. Asimismo, a través del juego, los niños potencian significativamente su imaginación y pensamiento crítico,

a la vez que pueden mejorar las relaciones de los niños con los padres, su familia y el mundo (Peppler, 2017).

Un juego se puede definir como cualquier actividad que elige un niño y que no está relacionada con las actividades relacionadas con la escuela y el aprendizaje, pero que requieren toda la atención del niño. Acercándose al significado exacto del juego, el psiquiatra Brown (2009) describió el juego como "la base de todas las obras de arte, juegos, libros, deportes, películas, moda, entretenimiento y asombro, en resumen, la base de lo que consideramos cultura".

Tanto el tipo de juego dinámico como el imaginativo contribuyen al desarrollo intelectual y cognitivo de los niños. Esto se debe principalmente a que el juego funciona para los niños como una "lente" con la ayuda de la cual los niños perciben el mundo, tanto en relación con ellos mismos como con otras personas. La privación del juego conduce a resultados negativos como la creación de personas poco saludables y productivas (Seja et al., 1999).

Los beneficios del juego para muchos investigadores no se resumen únicamente en mejorar la actividad motora y la forma física de los niños, sino que se relacionan con todo lo mencionado anteriormente respecto a las habilidades cognitivas del niño. El juego es beneficioso para los niños que se distinguen en beneficios inmediatos y están relacionados con la función motora y el ejercicio aeróbico de los niños. Los beneficios a largo plazo del juego están relacionados con la capacidad de los niños para funcionar como miembros de un equipo mientras mantienen sus principios y respeto por los demás. De esta manera los niños aprenden a vivir como "parte del todo", desarrollan su inteligencia emocional y su capacidad para comprender y aceptar los sentimientos de los demás. A través del juego se potencia

el sentido de justicia de los niños y se promueve el desarrollo de una sana competencia (Azar, 2002).

Según Brown (2009), el juego libre sin límite de tiempo está asociado con un mejor desarrollo cerebral, ya que el juego no estructurado contribuye a la resolución de problemas, al pensamiento creativo y al desarrollo de las habilidades motoras de los niños. Especialmente durante el preescolar, el juego tiene múltiples beneficios para los niños que afectan la mayoría de las áreas de sus vidas. Más específicamente, el juego parece tener beneficios emocionales y conductuales en la vida del niño, ya que reduce el miedo, la ansiedad y la irritabilidad del niño. Además, el juego cultiva la alegría y el sentido de intimidad en los niños, potenciando su sociabilidad y mejorando su flexibilidad emocional. El niño a través del proceso del juego es entrenado para mantener la calma y adquirir la habilidad adaptación y resiliencia al cambio y situaciones difíciles (Manichander, 2016).

Por otro lado, a través del juego el niño obtiene importantes beneficios sociales, ya que aumenta la compasión y la comprensión por los demás, mejora la comunicación no verbal entre los niños, mientras que las relaciones que se crean entre los niños se basan en el modelo de inclusión y no en el modelo de exclusión. Finalmente, analizando los beneficios naturales del juego en la vida de un niño, parece que están relacionados con el mejor funcionamiento del sistema inmunológico y cardiovascular de los niños. Al mismo tiempo, a través del juego los niños son capaces de reducir el estrés, los pensamientos negativos, el cansancio y las conductas depresivas. El movimiento de los niños a través de las actividades deportivas cambia significativamente, ya que aumenta su flexibilidad, capacidad de coordinación, equilibrio y fuerza física de los niños (Manichander, 2016).

Los tipos y formas del juego hoy

En un apartado anterior se mencionó la variedad de formas en que se puede realizar un juego (Zigler, Singer & Bishop, 2004; Terpstra et al., 2002; Coplan, Rubin 1998), dependiendo de cómo se realice se puede caracterizar como:

- solo, cuando se compone de un solo jugador,
- paralelo, cuando los jugadores juegan uno al lado del otro y se miran de vez en cuando,
- compañero, cuando juegan con los mismos juguetes más de un niño,
- cooperativo, cuando juegan un juego y tienen objetivos comunes y roles definidos,
- exploratorio, cuando los niños participan en la recolección de objetos,
- estético-cinético, que se refiere a niños de 6 meses a dos años que intentan descubrir las propiedades físicas de un objeto,
- constructivo o constructivo, cuando el niño utiliza algunos materiales para construir algo,
- juego de actividad motora o física, al realizar alguna actividad como correr y trepar,
- funcional, cuando los niños entienden los propósitos del juego y los usan apropiadamente,
- simbólico, cuando los niños sustituyen algunos objetos,
- Juego con reglas, cuando el juego se rige por ciertas reglas, y
- duro o torpe, cuando los niños se involucran en "peleas" sin ningún tipo de agresión.

Todas las categorías de juguetes anteriores son esenciales para los niños y su desarrollo. Es decir, sus habilidades físicas, motrices y de lenguaje se desarrollan a través de juegos que incluyen movimiento, interacción con otros niños, sonidos e imágenes y aprenden a través de juegos con reglas el concepto de responsabilidad y competencia.

Vygotsky (1981) incluso identifica el juego ficticio como una actividad social y una forma de comunicación, donde considera la imaginación de los niños como su característica principal. Cuando los niños eligen tales juguetes, entran en contacto y se comunican con otros niños y asumen roles definidos, aprendiendo así a comunicarse mediante el uso del lenguaje, los gestos y los objetos simbólicos. A través de estos juegos, los niños facilitan las amistades, aprenden a comunicarse, apoyan su posición y punto de vista, se comprometen y resuelven cualquier problema. De hecho, sostiene que con los juegos de simulación los niños desarrollan su pensamiento, ya que para jugar tienen que simular, por lo que ahora son capaces de distinguir lo real de lo falso (Vygotsky, 2012).

El juego de simulación consta de diferentes formas. Tales son la imitación de roles y objetos, su exploración, juegos de rol y juegos temáticos. En los juegos de rol los niños juegan roles específicos, ya sea de su realidad cotidiana o imaginaria. Durante el juego temático, eligen un tema específico, real o imaginario, como cumpleaños, vacaciones y excursiones, y tratan de encarnar estas situaciones (Zigler, Singer & Bishop, 2004).

Se ha informado anteriormente que el juego lúdico a la edad de 2 a 6 años es bastante efectivo para preparar al niño para el entorno escolar (Russ, 2004). Cuando el apoyo que brinda el docente sobre este tipo de juegos está adecuadamente diseñado, se desarrolla la capacidad de los niños para poder controlar sus emociones, comportamientos y forma de pensar y percepción, desarrollan habilidades sociales, aprenden a utilizar su lenguaje adecuadamente. dependiendo de la ocasión y desarrollar habilidades competitivas y prescriptivas, ya que a través de este tipo de juegos negocian situaciones y pasan de las situaciones reales a las imaginarias. Su familiaridad con la papelería y su lectura y uso también se desarrolla cuando simulan

leer y escribir. La combinación de estos beneficios para el niño hace que los juguetes de simulación sean muy importantes para la preparación escolar de los niños en edad preescolar (Mameli, 2008).

CAPÍTULO 2 AUTISMO

El concepto de autism

El trastorno del espectro autista es un trastorno del desarrollo que se asocia con una variedad de habilidades sociales elementales desafiantes, comportamientos repetitivos y expresiones verbales o no verbales. Los tipos de autismo que existen son significativamente diferentes entre sí y son el resultado de una combinación de varios factores genéticos y ambientales (Guldberg, 2016). El uso del término "espectro" se usa precisamente para denotar la existencia de diferentes tipos de autismo, indicando los diferentes síntomas y desafíos que enfrentan los científicos que trabajan para tratar el autismo. Los primeros síntomas de autismo aparecen en los 2 o 3 años de vida de un niño, mientras que existen algunos casos, menos comunes, en los que se ha diagnosticado autismo en niños de 18 meses. Además, existen algunos trastornos del desarrollo asociados con la aparición del autismo que pueden detectarse antes de los 2 años (Hutchison et al., 2016).

La historia del autism

El término "autismo" fue utilizado por primera vez en 1908 por Eugen Bleuler, quien estudió el comportamiento de los pacientes esquizofrénicos. Décadas más tarde, en 1943, el psicólogo infantil estadounidense Leo Kanner encuestó a una muestra de 11 niños que tenían problemas con la interacción social, tenían dificultad para adaptarse a los cambios en su rutina diaria, pero también respondían a actividades espontáneas mientras que estos niños tenían buena memoria, función mental. y sensibilidad a diversos estímulos. A este primer estudio le siguió el estudio

de Hans Asperger (1944), quien estudió un grupo de niños cuyas características eran significativamente similares a las de los niños del estudio anterior (Felder, 2014). Sin embargo, los niños en este estudio no mostraron sonido, pero su habla era habla de adultos. Además, los niños tenían algunas dificultades motoras severas y sus movimientos eran torpes. Posteriormente, el investigador Bruno Bettelheim analizó el efecto del tratamiento en 3 casos diferentes de niños con autismo. Los investigadores concluyeron que las características del trastorno que habían manifestado los niños se debían a la frialdad con la que los trataban sus madres. De esta forma, durante su abordaje terapéutico, el investigador separó a los niños de sus padres para observar las características de su comportamiento. Kanner y Bettelheim trabajaron para demostrar que los niños con autismo en realidad provenían de madres frías. En contraste, sin embargo, está la opinión de Rimland, quien publicó su estudio de 1964, *Syndrome and its Impact on a Neuronal Behavior Theory* (Richards, 2016).

El autismo es un trastorno que está afectando a más y más personas durante la década de 1970. De hecho, unos años más tarde, a principios de la década de 1980, la Fundación Erica comenzó a capacitar y tratar a niños psicóticos. Incluso hoy en día hay muchos padres que han relacionado el autismo con el retraso mental y la psicosis. En la década de 1980 más y más investigadores de todo el mundo. A través de la investigación y la recopilación de más y más información, quedó claro que la fertilización no era un factor causal para la aparición de autismo y otras enfermedades neurológicas. Los investigadores Lorna Wing y Christopher Gillberg de la Clínica Neuropsiquiátrica Infantil de Suecia (BNK) han demostrado que los niños con autismo tienen problemas de comunicación, la comunicación y la imaginación eran muy limitadas. Luego, en la década de 1990, los científicos

descubrieron otro factor asociado con el autismo, la capacidad de diseño de los niños (Kisamore et al., 2016).

Datos epidemiológicos

Según los Centros para el Control y la Prevención de Enfermedades (CDC), los niños con autismo en los Estados Unidos representan alrededor del 1,5 % de los niños, siendo los niños casi cuatro veces más propensos que las niñas. Cada año, casi 50,000 adolescentes con autismo dejan de tenerlo muestras de autismo en la edad adulta, mientras que alrededor del 33% de las personas con autismo son no verbales.

El porcentaje de personas con autismo que además tienen alguna discapacidad mental también ronda el 33%. Estas discapacidades mentales incluyen trastornos gastrointestinales (GI), convulsiones, trastornos del sueño, trastorno por déficit de atención con hiperactividad (TDAH), ansiedad y fobias.

Sin embargo, la investigación sobre el trastorno del espectro autista ha provocado un cambio en los datos epidemiológicos. Los subcasos cubiertos por el espectro del autismo han resultado en un aumento en la prevalencia del trastorno y un aumento en su ocurrencia. En años anteriores se estimaba que 4-5 de cada 10.000 niños tenían autismo, mientras que hoy en día esta proporción se estima en 16,8 por 10.000 (Aggelopoulou, 2018).

El registro oficial de niños con autismo es un proceso que presenta importantes deficiencias, por lo que los datos sobre el porcentaje de niños autistas en Grecia se basan en registros no oficiales (health.in.gr, 2018). Sin embargo, se estima que a 1 de cada 150 niños en Grecia se le diagnostica un trastorno del espectro autista

(Hareli, 2018). Los datos de la Organización Mundial de la Salud muestran que 1 de cada 160 niños es diagnosticado con un trastorno del espectro autista. Además, los datos muestran que el autismo es un trastorno que se presenta con mayor frecuencia en la población de niños en comparación con la población de niñas con una proporción de 4-5 a 1 (Hareli, 2018).

Desarrollo socioemocional y relaciones interpersonales de niños con autism

Los niños con autismo muestran diferencias con otros niños a nivel social y emocional, dando como resultado un curso diferente. Un niño que tiene un desarrollo normal crea vínculos con su madre desde el primer año. Este vínculo pasa por cinco etapas diferentes. En la primera etapa, el niño pregunta a su mamá y quiere estar cerca de ella. En la segunda etapa muestra comportamientos de intolerancia y resistencia cuando necesita despedirse de ella. En la tercera etapa comienza a percibir a su madre como una base de seguridad cuando se encuentra emocionalmente vulnerable. En la cuarta etapa, se aferra a su madre cada vez que tiene sentimientos de miedo. En la quinta y última etapa, trata de llamar la atención de su madre.

Los problemas más comunes en los niños con autismo están relacionados con su sector social, y especialmente con su comportamiento. Su primera aparición se da en la infancia, cuando el niño no busca las caricias, el cariño y el contacto de sus padres, no los abraza y es indiferente a los actos de amor y cariño. Estos niños no buscan la interacción con las personas de su entorno social y son definidos como "socialmente inadecuados" (Frith, 1999; Jordan & Powell, 2000).

Las barreras a las que se enfrentan los niños con autismo en su integración e integración en su entorno social y familiar son muchas. La mayoría de las veces son marginados por quienes los rodean y recurren a su mundo interior, solos. Ni siquiera quieren apegarse a las relaciones con las personas de su entorno social y las relaciones que crean son superficiales (Jordan & Powell, 2000).

El desarrollo del desarrollo social y emocional de los niños con autismo es bastante diferente al de otros niños. El desarrollo emocional de los niños que tienen un desarrollo típico, tiene un curso definido. Pueden reconocer desde temprana edad cuáles son aquellas situaciones que les ofrecen sentimientos de alegría, placer y satisfacción, pero también sentimientos de ansiedad, miedo, terror y tristeza. De hecho, son capaces de desarrollar emociones positivas, como la alegría, el amor, la simpatía, así como negativas, como la hostilidad y los celos, según las etapas de desarrollo por las que atraviesan. Las emociones que sienten estos niños están influenciadas en gran medida por el entorno en el que viven y por las personas con las que se relacionan y se exteriorizan a través de sus expresiones faciales, gestos, movimientos y a través de su habla (Georgiadou, 2004).

El desarrollo de las relaciones con las personas en el entorno social y amable de los niños se ve afectado negativamente por la indiferencia que muestran y la falta de contacto visual de los niños. niños con otras personas. Lo anterior lleva a que los niños no sean capaces de percibir y procesar los sentimientos que sienten otras personas, lo que crea obstáculos para que respondan a ellos de manera socialmente aceptable (Gena, Krantz, McClannahan & Poulson, 1996; Hess, 2006) . Por ejemplo, no puede entender por qué llora un niño al que se le quitó el juguete y, finalmente, no sabe cómo lidiar con eso y ayudarlo a no llorar.

Estas barreras para comprender las emociones, combinadas con la falta de expresión en los niños con autismo, conducen a su exclusión social y aislamiento. Estos niños, por supuesto, expresan los sentimientos que sienten, pero de una manera diferente y especial. La manifestación más común de las emociones es la manifestación de dos emociones completamente opuestas al mismo tiempo, algo que no se observa en niños con desarrollo normal. En otras palabras, pueden expresar sentimientos de amor e ira al mismo tiempo (Kakouros et al., 2005). De hecho, las emociones expresadas por niños con autismo, así como por niños con otros trastornos, duran menos tiempo y la frecuencia de su aparición es menor, en comparación con la duración y frecuencia de las emociones de otros niños (Volioti et al., 2016).

Este análisis de los sentimientos de los niños con autismo muestra que los niños con autismo se van a enfrentar a muchos obstáculos para poder desarrollar relaciones sociales. Sin embargo, los comportamientos mencionados anteriormente no se observan en todos los niños con autismo. Las conductas de apego de los niños con autismo también son muy comunes, y algunos niños buscan la atención de quienes les rodean y la interacción social, mostrando su interés a su manera (Happé, 2003).

Sin embargo, las dificultades observadas en las relaciones sociales de los niños con autismo son inevitables, por lo que tanto su preservación como su creación constituyen un desafío para estos niños y, en última instancia, experimentan la soledad. La soledad es el resultado de la no participación de estos niños en actividades grupales y sociales ya sea por su marginación por parte de otros niños o porque ellos mismos lo eligen (Garani, 2008).

Según la investigación de Wing y Gould (1979) centrada en la interacción social de los niños con autismo, existen 4 categorías diferentes en cuanto a su comportamiento. Estas categorías son:

- Precaución social. En esta categoría el niño se muestra distante e indiferente hacia los otros niños o hace algunos movimientos para conseguir lo que quiere y luego vuelve a su cautela.
- Interacción social. En esta categoría el niño participa pasivamente en una actividad porque otros niños se le acercan, y luego regresa a su soledad, a menos que se le pida participar nuevamente.
- Interacción activa pero idiosincrásica. Aquí el niño busca la atención de los adultos y no de sus compañeros. Sin embargo, no respeta sus deseos y necesidades, por lo que se vuelve molesto para los adultos y rechazado por los demás niños.
- Interacción adecuada. Esta es la última categoría de conducta en la que el niño con autismo interactúa con adultos y compañeros a través de conductas apropiadas y socialmente aceptables (Wing & Gould, 1979).

Con base en lo anterior, parece que aunque los niños con autismo enfrentan muchos obstáculos y dificultades en su interacción social, es posible mejorar y desarrollar ciertos aspectos de sí mismos para que puedan participar activamente en actividades sociales (Honey et al., 2007).

CAPÍTULO 3 LA CONTRIBUCIÓN DEL JUEGO AL AUTISMO

El juego en la educación especial

La importancia del juego en el proceso educativo es sumamente importante, ya que

a través del juego el niño podrá adquirir habilidades adicionales y habilidades cognitivas sin importar la edad en la que se encuentre. Los profesionales que trabajan en la industria de la educación especial ponen gran énfasis en la contribución del juego para comprender cómo funciona y se desarrolla (Larson, 2004). Los niños con discapacidades pueden participar en actividades de juego, siempre que se hagan algunos ajustes primero. El problema más común que enfrentan los niños con discapacidad es el hecho de que estos niños suelen ser marginados y no participan en actividades grupales que les ofrezcan conocimiento y entretenimiento debido a las características que diferencian a los niños con autismo de los niños de desarrollo normal. Para mejorar la participación de los niños autistas en el proceso de juego, se han realizado esfuerzos para crear programas educativos que satisfagan las necesidades de los niños y que sean el resultado de la cooperación de maestros y padres. Los problemas y obstáculos que surgen al crear estos programas varían. En aquellos casos en los que los niños no quieren participar en el proceso de juego o no están interesados en el juego, se deben identificar los factores que hacen que los niños no cooperen y se deben definir los objetivos del juego desde el principio (Wall, 2006). La comunicación y cooperación de los niños con autismo con sus pares a través del proceso de juego, es parte de la intervención terapéutica aplicada para tratar el autismo (Woolf, 2015).

La contribución del juego a la educación especial

El juego tiene un efecto particularmente beneficioso en los niños con autismo tanto en términos del desarrollo de los niños como de su desarrollo educativo, aunque a menudo muestran debilidades y no responden al juego como los niños en general.

población. Más concretamente, la forma clásica de abordar el proceso del juego no funciona de manera efectiva para los niños con autismo, esto sucede porque estos juegos carecen de imaginación, creatividad y espontaneidad, por lo que no despiertan el interés de los niños, quienes consideran este juego inmaduro y menos diversión (Kalpakoula et al, 2017). A través de la participación de los niños autistas en el proceso de juego se logra el puente de la brecha de las deficiencias que estos niños presentan en comparación con la población de sus pares que no presentan trastornos del desarrollo, potenciando las capacidades de estos niños (Garani, 2008).

El juego sensorial permite a los niños descubrir su cuerpo, entrar en contacto con los objetos de su entorno, mientras que el juego exploratorio les permite percibir las propiedades de cada objeto. Por otro lado, el juego físico beneficioso desarrolla las habilidades motoras de los niños y la forma en que el cuerpo del niño interactúa con los objetos de su entorno (Kalpakoula et al, 2017). El juego social ayuda a los niños a deshacerse de su soledad, adquirir habilidades sociales, crear lazos sociales y autoidentificarse a través del contacto con otros niños de su edad. De esta forma, la participación de los niños con autismo en el juego se considera necesaria para desarrollar sus habilidades, cognitivas, educativas, estéticas y sociales para que sea posible incluirlos en las clases de la escuela general (Morrison, Sainato, Sayaka,

2002). Es importante que los docentes adapten las actividades lúdicas para facilitar la participación de los niños autistas y diseñar programas de intervención educativa dirigidos a su desarrollo (Garani, 2008).

Obstáculos y dificultades en el juego de los niños con autismo

El valor del juego en el proceso de desarrollo infantil es grande ya que a través de este proceso los niños aprenden de sí mismos y de los demás y resaltan los problemas que puedan existir. Sin embargo, el juego como proceso causa problemas especialmente en niños con necesidades especiales en comparación con niños de desarrollo normal. Más específicamente, los niños con autismo tienen problemas debido a las peculiaridades del trastorno autista (Jordan & Powel, 2001). La mayor dificultad de los niños con el autismo está relacionado con la exteriorización de las emociones de los niños y la forma en que los niños perciben los estímulos que reciben de su entorno familiar. De esta forma se observa que el niño autista no puede desarrollarse a través de la forma típica de juego ya que tiene una dificultad considerable en la reacción espontánea y participación en actividades de imitación o construcción (Hess, 2006). La característica de los niños con autismo es su incapacidad para socializar e integrarse al juego social con sus compañeros de clase, pero prefieren jugar solos. Esto se debe principalmente a la dificultad de los niños autistas para seguir el ritmo de sus compañeros y adaptarse al entorno en el que se desarrolla el juego (Kroustalakis, 1998). Especialmente aquellos juguetes que requieren una combinación de acciones, impiden que los niños participen en los juegos debido a la incapacidad de adaptación de los niños (Peeters, 2000).

El uso del juego en familias de niños con autismo

El papel de los padres y otros miembros de la familia de los niños con autismo es importante para mejorar el juego de estos niños. Las interacciones de juego entre los miembros de la familia y los niños con autismo pueden brindarles oportunidades para practicar y aprender nuevas habilidades sociales (Papanikolaou et al., 2018). Según los artículos referentes a estas interacciones, los padres y en especial la madre es quien juega con el niño. Los hermanos de niños con autismo no interactúan y no juegan lo suficiente con ellos. Los niños con autismo, por otro lado, tienen más probabilidades de tener interacciones lúdicas con sus hermanos que con sus padres. La investigación también ha demostrado que los padres de niños con autismo son más guiados en sus interacciones con el niño durante el juego. Ejercen más control que los padres de niños de desarrollo normal (Zisi et al., 2019; Zisi et al., 2016). Es necesario que a los padres y hermanos se les enseñe a estructurar, a dar ritmo a las interacciones lúdicas para crear un marco que favorezca la iniciación de interacciones sociales por parte del niño. También es importante que las familias trabajen con los profesores y les asesoren sobre el juego de los niños con autismo (Papanikolaou et al., 2018).

El papel de los docentes

El rol del docente en la escuela es cubrir la mayor parte de su tiempo tratando con niños individualmente o en pequeños grupos, circular entre ellos ofreciendo su ayuda siempre que la necesite, y evaluar sus acciones e interacciones (Papanikolaou et al., 2018) . El profesor se ocupa de que el entorno sea interesante para los niños,

añadiendo o quitando materiales o rincones, sugiere ideas, convirtiéndose en “parte” de su juego y siguiendo sus ideas, etc. Al planificar el maestro, es bueno tener en cuenta las opiniones de los padres. Durante la implementación del programa, el docente puede informar a los padres a través de reuniones, cartas informativas, comunicación telefónica sobre lo que sucede en el salón de clases e invitarlos a participar en actividades o eventos separados del salón de clases. Además, los padres pueden ayudar a evaluar la efectividad del programa (Schertz et al., 2017).

Los maestros deben prestar especial atención a cómo enseñan y cómo organizan adecuadamente el juego de los niños con autismo. Las habilidades de juego que se enseñarán a los niños con autismo deben ser consistentes, bien estructuradas y acompañadas del uso de un lenguaje apropiado (Benítez et al., 2016). En otras palabras, el lenguaje debe ser sencillo para que el niño lo entienda.

La organización adecuada del entorno también es importante. El ambiente debe propiciar experiencias de juego y ser adecuado para la enseñanza. Los maestros necesitan diseñar muchas secciones de juegos estructurados cada día. Tenga cuidado de limitar las cosas que distraen a los niños durante el juego. Deben elegir los juegos con cuidado para cumplir sus objetivos específicos (Morfidi et al., 2015). En este sentido, un aspecto claro que los docentes deben tener en cuenta es que los juguetes que suelen preferir los niños con autismo son aquellos que tienen un interés visual (juguetes con forma, color, Lego), también libros con objetos donde el niño puede tocarlos, pazzle, juegos de actividad física como trampolín, columpio, escalada, juegos que combinan música y danza, ajedrez, serpiente (juegos grupales) y juegos de computadora (Zogopoulos, 2013) . Por último, es importante planificar un inicio y un final adecuados de las temporadas de juego. Sin embargo, no se debe asumir que todos los niños con autismo se divierten con las mismas actividades y por ello

se debe tener en cuenta la edad, habilidad y habilidades lingüísticas de los niños (Sociedad Helénica para la Protección de las Personas Autistas, 1993) (Zogopoulos, 2013).

CAPÍTULO 4 METODOLOGÍA

Este trabajo es una revisión descriptiva de la intervención educativa en niños con espectro autista a través del juego. Exploraremos las posiciones de los maestros sobre el uso del juego y su importancia en la educación de niños con autismo (la forma en que elegimos responder nuestras preguntas de investigación será una investigación cuantitativa).

a) Objetivos

Como se mencionó anteriormente, el objetivo principal de este trabajo es identificar la intervención en la educación de niños con autismo a través del juego, así como investigar las posiciones de los docentes en relación con el uso del juego y su importancia en la educación de niños con autismo. jugar autism.

- implementar un programa educativo a través del juego.
- investigar si el uso del juego es un factor de aprendizaje atractivo en el aula.
- identificar cómo las diferentes características del juego pueden afectar a los estudiantes con autismo.
- crear condiciones de socialización para estudiantes con autismo.
- considerar el apoyo del aprendizaje en el proceso educativo, así como el desarrollo de la empatía, la práctica de la percepción, el desarrollo de la comunicación verbal, el fortalecimiento del juego cooperativo y simbólico.

En base a los objetivos anteriores, las hipótesis son las siguientes:

Hipótesis 1: Los docentes enfatizan la necesidad de implementar un currículo a través del juego.

Hipótesis 2: Apoyar el proceso educativo a través del uso del juego es un factor que contribuye al desarrollo de la empatía, a la práctica de la percepción, al desarrollo de la comunicación verbal, a la potenciación del juego cooperativo y simbólico.

Hipótesis 3: La contribución del juego crea condiciones de socialización para los estudiantes con autismo.

La escala de medida

La escala de medida que utilizaremos para encontrar los valores de las variables de investigación es la escala de Likert. Esta escala representa 5 puntos entre los cuales las distancias son iguales y hemos usado números para encontrar las graduaciones de las variables.

En concreto, para determinar si el encuestado está de acuerdo o en desacuerdo, hemos colocado 5 puntos seguidos, dando un número a cada punto. Para totalmente en desacuerdo es el número 1, para en desacuerdo es el número 2, para ni en desacuerdo ni de acuerdo el 3, para totalmente de acuerdo el 4 y para totalmente de acuerdo el número 5. Estos puntos se enumeran operativamente.

Medios de recogida de datos : Cuestionario

Para la recogida de datos hemos elegido para las dos preguntas de investigación el cuestionario con el que recogeremos la información que nos van a dar los encuestados. Las preguntas serán cerradas y se les pedirá a las personas que

respondan eligiendo un número de cinco. Completar, codificar y analizar los datos será más fácil. El cuestionario también permite que los sujetos respondan todo en el mismo marco de referencia exacto.

El tipo de preguntas será de tipo cerrado y la escala se calificará de negativo a positivo y se solicitará al sujeto de investigación que elija uno de los cinco puntos.

El método de emisión de los cuestionarios para la primera pregunta de investigación se realizará mediante la entrega de los cuestionarios en sobre cerrado y se enviará a los padres para su cumplimentación. Así, buscamos facilitar a los padres y enviar cuestionarios de forma más rápida y eficiente en un mínimo de tiempo y al mismo tiempo.

El método de administración de los cuestionarios se realizará mediante la visita del investigador a un grupo de personas, es decir, a la escuela. Así buscamos involucrar a muchas personas en la investigación en un mínimo de tiempo y al mismo tiempo. También tenemos la oportunidad de aclaraciones y más información para resolver dudas que puedan surgir durante la cumplimentación del cuestionario.

La muestra

La población de investigación para la primera pregunta de investigación serán 80 padres de niños con autismo y para la segunda pregunta serán 150 maestros de educación especial en estructuras de educación primaria y secundaria.

CAPÍTULO 5 RESULTADOS DEL ANÁLISIS

Análisis descriptivo

Análisis del cuestionario para la opinión de los padres

De los resultados de la investigación observamos que en promedio el número de hijos es 2 con una desviación estándar de 1, y el orden de nacimiento promedio del niño con autismo está en segundo lugar con una desviación estándar de 1.

Asimismo, del total de padres de familia, 42 (52,5%) se han graduado de Liceo y solo 1 (1,3%) se ha graduado de universidades, mientras que en total solo 8 (10,0%) han recibido educación en educación especial, y en particular han asistido a un seminario de 400 horas (10,0%).

Los resultados muestran que de un total de 80 encuestados 46 (57,5%) están muy de acuerdo con el uso del juego en el proceso educativo con el fin de potenciar la creatividad del niño con autismo mientras que los restantes 34 (42,5%) están de acuerdo y 40 (El 50,0%) está muy de acuerdo en el uso del juego para la educación de niños con autismo mientras que 2 (2,5%) ni de acuerdo ni en desacuerdo. También en la implementación de un programa de intervención a través del juego para tener una evaluación de las capacidades del niño están completamente de acuerdo 57 (71,3%) de los encuestados y los 23 (28,8%) restantes están de acuerdo, mientras que en la opinión de que el juego ayuda al niño con autismo para mejorar su comunicación con otros niños, 36 (45,0%) padres totalmente de acuerdo y 1 (1,3%) ni de acuerdo ni en desacuerdo.

Según los resultados, 67 (83,8%) padres de los participantes están completamente de acuerdo en que el juego ayuda a reducir los movimientos estereotipados repetitivos, mientras que 13 (16,3%) están de acuerdo, 46 (57,5%) padres están de

acuerdo con la terapia de juego para aumentar las habilidades interactivas del niño. en el juego, mientras que solo 2 (2,5%) ni están en desacuerdo ni de acuerdo, 53 (66,3%) están de acuerdo en que el niño mantiene contacto visual durante el juego, mientras que 2 (2,5%) están muy de acuerdo, y finalmente 56 (70,0%) padres están de acuerdo en que desarrollan contacto físico con el niño durante el juego, mientras que los 24 (30,0%) restantes no están ni en desacuerdo ni de acuerdo.

Los resultados muestran que 49 (61,3%) de los encuestados están completamente de acuerdo con que los niños obedezcan las reglas durante el juego y los 31 restantes (38,8%) ni en desacuerdo ni de acuerdo, mientras que 52 (65,0%) están de acuerdo en que los niños toman iniciativas durante el juego. play y solo 1 (1,3%) completamente de acuerdo. También en la opinión de que los niños utilizan correctamente los juguetes están de acuerdo 58 (72,5%) de los participantes y solo 2 (2,5%) totalmente de acuerdo, mientras que en la opinión de que los niños utilizan una variedad de juguetes están de acuerdo 59 (73,8%) de los participantes y los restantes 21 (26,3%) ni en desacuerdo ni de acuerdo.

Del total de 67 encuestados (83,8%) están completamente de acuerdo en que los niños prefieren juguetes específicos y solo 1 (1,3%) ni en desacuerdo ni de acuerdo, mientras que 58 (47,5%) están de acuerdo en que los niños con autismo están interesados en juguetes nuevos. ni 5 (6,3%) padres están en desacuerdo o de acuerdo. También en la opinión de que el juego da información útil sobre las preferencias e intereses de los niños, 66 (82,5%) padres están completamente de acuerdo y los 14 restantes (17,5%) están de acuerdo. Finalmente, 40 (50,0%) padres están completamente de acuerdo o de acuerdo en que es importante que el juego se desarrolle en otros contextos fuera del hogar.

Asimismo, lo que resulta es que 55 (68,8%) padres están de acuerdo en que se potencian las reacciones adecuadas del niño en el juego, mientras que 5 (6,3%) ni están en desacuerdo ni de acuerdo, 53 (66,3%) padres están de acuerdo en que la evaluación a través del juego proporciona datos sobre el desarrollo cognitivo y el aprendizaje de los niños, mientras que los 27 (33,8%) restantes están de acuerdo y 53 (66,3%) muy de acuerdo en que la evaluación basada en el juego refleja las carencias de los niños y los cambios en su comportamiento, mientras que los restantes 27 (33,8%) están de acuerdo y 67 (83,8%) padres de familia muy de acuerdo en que su papel es importante para potenciar el juego de los niños, mientras que 13 (16,3%) están de acuerdo.

Asimismo, del total de participantes, 44 (55,0%) están de acuerdo en que su trabajo con el niño 1-2 horas diarias es satisfactorio y 36 (45,0%) completamente de acuerdo. Asimismo, 47 (48,8 %) están muy de acuerdo en que el entorno afecta al juego, mientras que 3 (3,8 %) ni en desacuerdo ni de acuerdo, y 46 (57,5 %) muy de acuerdo en que seguir una rutina mejora la capacidad de juego del niño, mientras que solo 1 (1,3 %) ni en desacuerdo ni de acuerdo. Finalmente, 65 (81,3%) personas están de acuerdo con que el niño exprese sus emociones durante el juego y 4 (5,0%) personas totalmente de acuerdo.

Los resultados muestran que en la pregunta "Usted guía al niño durante el juego?" 54 (67,5%) padres están de acuerdo mientras que solo 3 (3,8%) están totalmente de acuerdo con la pregunta "Colaboran con las demás especialidades para el tratamiento del niño?" 66 (82,5%) padres están completamente de acuerdo y solo 1 (1,3%) está en desacuerdo o de acuerdo. De hecho, 67 (83,8%) padres están completamente de acuerdo con la opinión de que los regímenes terapéuticos utilizados buscan una participación sustancial de los padres en el esfuerzo

terapéutico y solo 1 (1,3%) está en desacuerdo o de acuerdo, mientras que 62 (si el niño juega con sus hermanos de acuerdo (62) 77.5%) padres y solo 2 (2.5%) en desacuerdo.

Del total de encuestados que ayudan a sus hermanos para desarrollar sus habilidades sociales en general, 53 están de acuerdo (66,3%) y solo 1 (1,3%) en desacuerdo, mientras que 59 (73,5%) están de acuerdo en que sus hermanos quieran jugar con ellos y está en desacuerdo o muy en desacuerdo con 1 (1,3%). También en la opinión de que "La educación de los hermanos de niños con autismo, mejora el comportamiento social de estos últimos" están de acuerdo 43 (53,8%) padres y en desacuerdo solo 2 (2,5%). y 39 (48,8%) padres están de acuerdo y 1 (1,3%) en desacuerdo con la opinión de que "los niños con autismo pueden ser ayudados por sus hermanos a adquirir habilidades funcionales en su entorno natural". Finalmente, si el niño juega con sus compañeros, 57 (71,3%) de los encuestados están de acuerdo y 3 (3,8%) completamente de acuerdo.

La fiabilidad de la escala del cuestionario sobre el grado de importancia del juego en la educación del niño con autismo se calculó mediante el coeficiente alfa de Cronbach. De la tabla de Estadísticas de Confiabilidad tenemos que la tasa de Cronbach es altamente satisfactoria (0.912). Entonces, las 33 preguntas en el cuestionario constituyen uno bastante satisfactorio.

Para comprobar si los valores medios de una variable cuantitativa difieren entre las categorías de una variable cualitativa cuando tiene más de dos categorías, utilice el ANOVA de una vía. La tabla ANOVA muestra si las dispersiones son iguales, en este caso para la relación de la importancia del juego en la educación de los niños con autismo pero en relación al nivel educativo de los padres, da el nivel de

importancia $p < 0,05$. Por lo tanto, es cierto que existe una diferencia significativa entre las dispersiones. ($p = 0,026 < 0,05$).

Igualmente analizando la tabla post hoc a través del HSD de Tukey, existe una diferencia entre el nivel de estudios universitarios con posgrado y doctorado. Todas las demás correlaciones no difieren.

Análisis del cuestionario sobre las opiniones de los profesores:

En cuanto a la especialidad de los docentes de la muestra de 19 (12,7%) son maestros de jardín de infancia o de ciencias sociales y 3 (2,0%) son teólogos, mientras que en cuanto al género 88 (58,7%) son mujeres y 62 (41,3%) son hombres.

De acuerdo a los resultados parece que el valor promedio del tiempo de experiencia total es de 8 años con una desviación estándar de 3, el valor promedio del tiempo de experiencia en la escuela general es de 3 años con una desviación estándar de 3 y el valor promedio de años de experiencia en una escuela especial es de 5 años con una desviación estándar de 3.

En cuanto al nivel educativo de la muestra, 124 (82,7%) docentes han realizado posgrado y 2 (1,3%) han egresado de Escuelas Tecnológicas - TEI, mientras que en cuanto a su formación en educación especial, 119 (79,3%) docentes respondieron positiva y negativamente. 31 restantes (20,7%).

De los resultados de la tabla anterior se desprende que 100 (66,7 %) docentes están completamente de acuerdo en que el juego ayuda al niño con autismo a mejorar su comunicación con otros niños, mientras que 50 (33,3 %) están de acuerdo, 115 (76,7 %) están muy de acuerdo en que el uso del juego en el proceso educativo potencia

la creatividad del niño con autismo y 35 (23,3%) están de acuerdo, 102 (68,0%) están de acuerdo en que utilizan el juego como medio para educar a los niños con autismo, mientras que 8 (5,3%) están en desacuerdo o en desacuerdo, y finalmente 129 (86,0%) están muy de acuerdo en que el juego ayuda a reducir los movimientos estereotipados repetitivos y 21 (14,0%) están de acuerdo.

Según la tabla anterior, del total de 150 docentes en la opinión de que “El juego da información útil para las preferencias e intereses de los niños” 125 125 docentes están totalmente de acuerdo y los 25 restantes (16,7%) de acuerdo, en la opinión de que “Con el tratamiento a través del juego aumentan las habilidades interactivas del niño en el juego” de acuerdo 94 (62,7%) y los 56 restantes (37,3%) de acuerdo, en la opinión que “Los niños expresan sus emociones a través del juego” muy de acuerdo 87 (58,0%) docentes y ni en desacuerdo ni de acuerdo 3 (2,0%), y finalmente en la opinión de que “Los niños mantienen contacto visual durante el juego” de acuerdo 108 (72,0%) de acuerdo mientras que 19 (12,7%) ni en desacuerdo ni de acuerdo.

Comparando la importancia del juego en la educación de los niños con autismo en relación al género de los docentes que participaron en el estudio, se observó que no existe una relación estadísticamente significativa entre las dos variables examinadas. La primera tabla contiene los promedios y las desviaciones estándar de los valores de la variable dependiente de los dos grupos (hombres-mujeres). En la segunda tabla, la primera línea se refiere a la prueba de Levene para la igualdad de variaciones. Dependiendo del valor de la significancia de esta prueba aceptamos la hipótesis de variaciones iguales o no (aquí la potencia de la ecuación de variaciones iguales es 0,126, mayor que 0,05 por lo que aceptamos que las variaciones son iguales. Por lo tanto comprobamos la significancia de la prueba t en el primero La

potencia de la hipótesis nula es π de 0.05 ($p = 0.901$) por lo que los promedios de los valores de parada no difieren entre los dos sexos.

Los resultados muestran que los niños desarrollan el contacto físico a través del juego 107 (71,3 %) personas de acuerdo y ni en desacuerdo ni de acuerdo 21 (14,0 %), al hecho de que durante el juego obedecen reglas de acuerdo 99 (66,0 %) personas ni en desacuerdo ni de acuerdo 16 (10,7%) y que toman iniciativas de acuerdo 81 (54,0%) y ni en desacuerdo ni de acuerdo 16 (10,7%), y por último si los niños utilizan correctamente los juguetes de acuerdo 91 (60,7%) personas y ni en desacuerdo ni de acuerdo 16 (10,7%)).

Los resultados de la tabla anterior sobre la opinión de los docentes muestran que si los niños usan variedad de juguetes, 80 (53,3%) personas están de acuerdo y 15 (10,0%) ni en desacuerdo ni de acuerdo, mientras que 105 (70,0%) están completamente de acuerdo con la preferencia por juguetes específicos profesores y ni en desacuerdo ni de acuerdo solo 1 (0,7%). Asimismo, 116 (77,3%) personas están de acuerdo con la posibilidad de evaluar las habilidades cognitivas del niño mediante la aplicación de un programa de intervención a través del juego y solo 1 (0,7%) está en desacuerdo o de acuerdo, mientras que el interés de los niños con autismo en 98 (65,3%).) las personas están de acuerdo con los juegos nuevos y 10 (6,7%) ni de acuerdo ni en desacuerdo.

Del total de 150 encuestados a la pregunta "Crees que la evaluación a través del juego aporta datos sobre el desarrollo cognitivo y el aprendizaje de los niños?" 114 (76,0%) docentes totalmente de acuerdo y 36 (24,0%) de acuerdo en que "La información del juego infantil es importante para tener una imagen completa de las habilidades de los niños" 107 (71,3%) totalmente de acuerdo) docentes y los restantes 43 (28,7%) están de acuerdo, en la opinión que "La evaluación a través del

juego refleja las carencias de los niños y los cambios en su comportamiento” totalmente de acuerdo 96 (36,0%) docentes mientras que los restantes 54 (36,0%) están de acuerdo, y finalmente, 80 (53,3%) docentes están de acuerdo en la importancia del juego para el desarrollo de los niños y solo 5 (3,3%) ni en desacuerdo ni de acuerdo.

Asimismo, parece que 99 (66,0%) docentes están totalmente de acuerdo en que la reorganización del currículo aporta más flexibilidad y se considera importante en la educación de los niños con autismo y los restantes 51 (34,0%) están de acuerdo. Asimismo, 89 (59,3%) docentes están totalmente de acuerdo en que el tipo de escuela afecta la interacción social de los niños con autismo con sus pares y los restantes 61 (40,7%) están de acuerdo, mientras que 107 (71,3%) docentes coincidieron en si se debe dedicar más tiempo al horario escolar en el juego con niños con autismo y los restantes 43 (28,7%) estuvieron completamente de acuerdo. Finalmente, sobre si el juego es facilitado por los requisitos del programa, los materiales disponibles y el espacio escolar discreparon 87 (58,0%) y solo 2 (1,3%) totalmente de acuerdo.

De acuerdo con los resultados, del total de 150 encuestados, 104 (69,3%) no están de acuerdo con que el ministerio proporcione materiales para que los docentes se capaciten adecuadamente, mientras que 17 (11,3%) no están completamente de acuerdo, 102 (68,5%) no están de acuerdo con las condiciones prevalecen en el aula para que el juego sea un medio de educación, mientras que 18 (12,1%) están totalmente en desacuerdo, 105 (70,0%) personas están de acuerdo en que utilizan la imitación como medio de terapia, mientras que solo 1 (0,7%) está totalmente en desacuerdo , y finalmente 82 (54,7%) personas están completamente en desacuerdo

sobre si la formación relacionada con la educación de los niños con autismo a través del juego es suficiente y solo 1 (0,7%) está de acuerdo.

88 (58,7%) docentes están de acuerdo con la opinión de que “A través del juego se puede mejorar la enseñanza de otras materias” y los 62 (41,3%) restantes están completamente de acuerdo, 112 (74,7%) están de acuerdo con la opinión de que “El juego tiene lugar en otro lugar” los docentes ni están en desacuerdo ni de acuerdo solo 2 (1.3%) y la opinión de que “En ese momento durante el recreo organizas el juego de los niños con autismo» 106 (70,7%) profesores están de acuerdo y 10 (6,7%) muy de acuerdo.

Del total de 150 encuestados, 97 (64,7%) están de acuerdo con la pregunta "Dejas al niño en libertad de hacer lo que quiera durante el recreo?", mientras que 6 (4,0%) están completamente de acuerdo, 78 (52,0%) completamente de acuerdo. están de acuerdo con la opinión de que “La cooperación con otras especialidades, psicólogos, trabajadores sociales, logopedas, es importante para el tratamiento del niño”, mientras que los restantes 72 (48,0%) están de acuerdo, y finalmente 78 (52,0%) están de acuerdo con la pregunta «Crees que es importante el papel de los padres a la hora de potenciar el juego de los niños?», mientras que solo 3 (2,0%) ni están en desacuerdo ni de acuerdo.

Para comprobar si los valores medios de una variable cuantitativa difieren entre las categorías de una variable cualitativa cuando tiene más de dos categorías, utilice el ANOVA de una vía. La tabla ANOVA muestra si las dispersiones son iguales, en este caso por la relación de la importancia del juego en la educación de los niños con autismo pero también la importancia en la enseñanza en relación al nivel de educación, da el nivel de importancia $p > 0.05$. Por lo tanto, es cierto que no hay una diferencia significativa entre las dispersiones. Mientras que a partir de la tabla

ANOVA existe un efecto estadísticamente significativo entre el efecto de la importancia del juego en la educación de los niños con autismo en relación al nivel educativo. ($p = 0,048 < 0,05$).

La fiabilidad de la escala del cuestionario sobre el grado de importancia del juego en la enseñanza del niño con autismo se calculó mediante el coeficiente alfa de Cronbach. De la tabla de Estadísticas de Confiabilidad tenemos que la tasa de Cronbach es medianamente satisfactoria (0.683). Por lo que las 14 preguntas del cuestionario componen una escala medianamente satisfactoria.

La fiabilidad de la escala del cuestionario sobre el grado de importancia del juego en la educación del niño con autismo se calculó mediante el coeficiente alfa de Cronbach. De la tabla de Estadísticas de Confiabilidad tenemos que la tasa de Cronbach es altamente satisfactoria (0.836). Así que las 20 preguntas del cuestionario conforman una escala bastante satisfactoria.

CAPÍTULO 6 DISCUSIÓN - CONCLUSIONES

Discusión

El valor y aporte del juego es incuestionable para la población infantil ya que incide en su curso evolutivo y potencia el desarrollo de sus habilidades comunicativas. Especialmente para los niños con autismo, el juego tiene un efecto catalizador en su educación y en la forma en que interactúan con las personas en su entorno familiar. El objetivo de este trabajo de investigación es explorar los puntos de vista de padres y maestros sobre la contribución del juego al desarrollo de habilidades de los niños autistas. Por ello, en la investigación participaron un total de 80 padres de niños con autismo y 150 profesores de educación especial.

La mayoría de los padres son bachilleres (52,5%), han recibido educación especial (90%) y tienen un promedio de 2 hijos. La mayoría de los padres cree que el juego puede mejorar la creatividad de los niños con autismo (57,5 %), potenciar las capacidades cognitivas de los niños (71,3 %) y la comunicación del niño con otros niños (98,8 %). De igual forma, al observar la muestra de docentes de educación especial, la mayoría se desempeña como docentes de jardín de infantes y docentes de ciencias sociales (12,7%). La mayoría de los docentes son mujeres (58.7%), tienen maestría (82.7%) y su experiencia escolar total es en promedio de 8 años con diferencia de 3 años, mientras que en educación especial tienen 5 años de experiencia laboral con diferencia de 3 años.

Los hallazgos de la investigación con respecto a la opinión de los padres sobre el juego y el autismo, mostraron que factores como el número de hijos y el orden de nacimiento del niño con autismo. De esta forma parece que cuantos más hijos tienen los padres del niño con autismo, más se dan cuenta de que el juego del niño con

autismo con sus hermanos mejora su comportamiento social y utilizan menos el juego como medio educativo. Además, parece que la educación de los padres es un factor que influye en su visión sobre la contribución del juego a la educación de los niños con autismo. Los padres más educados son más propensos a expresar sus puntos de vista sobre la contribución del juego al desarrollo de las habilidades de comunicación. habilidades de los niños con autismo, mientras que creen que el juego ayuda a adaptar a la persona para ser obediente a las reglas y mantener constante el interés de los niños.

Por otro lado se observan las conclusiones extraídas de la muestra de docentes de educación especial respecto al juego y la forma en que afecta a la población de niños con autismo. Hay ciertas características del maestro que afectan su visión del juego. Uno de ellos es la posición del docente, su especialidad, más concretamente, los docentes de infantil parecen comprender más la importancia del juego para el buen desarrollo de las habilidades cognitivas y comunicativas de los niños con autismo, en comparación con los docentes de secundaria. educación.

Al mismo tiempo, el género de los profesores es un factor que influye significativamente en su visión del juego. Las educadoras expresan la opinión de que la selección de juguetes apropiados afecta el desarrollo de los niños autistas ya que cada juguete afecta de manera diferente el desarrollo de las habilidades de los niños. Asimismo, los años de experiencia en la escuela general y especial son factores relacionados con la forma en que evalúan el papel del juego en el desarrollo de los niños. El nivel de formación de los docentes y la formación que han recibido respecto a la educación especial incide en la visión de los docentes sobre cuánto ofrece el contacto del niño con el proceso lúdico, pero también la comunicación de los niños con sus compañeros. Según la investigación de Kalpakoula et al. (2017),

los docentes reconocen que el juego ayuda a mejorar los sentidos del niño, a crear fuertes lazos sociales y a posibilitar que el niño autista participe en una clase inclusiva, potenciando sus capacidades cognitivas, educativas, habilidades estéticas y sociales (Garani, 2008).

El análisis de los datos de la investigación en combinación con la revisión de la literatura sobre el juego y su contribución al desarrollo cognitivo, sensorial y comunicativo de los niños con autismo. La forma en que los padres de niños con autismo perciben la contribución del juego está influenciada por la forma en que afecta el nivel de educación que han recibido, pero también el número de hijos y el orden de nacimiento del niño autista. Las opiniones de los maestros sobre lo que el proceso de juego ofrece a los niños con autismo están determinadas por su especialidad y el género de los maestros. La experiencia laboral en la escuela general y especial, así como la educación y capacitación adicional de los maestros en educación especial determinan la visión de los maestros sobre cómo el juego puede afectar a los niños con autismo.



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DOCTORANDA/O

ATHANASIA THANOPOULOU

TÍTULO DE LA TESIS:

El uso del juego en las habilidades de educación y desarrollo de niños con autismo: opiniones y puntos de vista de padres y maestros de educación especial

INFORME RAZONADO DE LAS/LOS DIRECTORAS/ES DE LA TESIS

(se hará mención a la evolución y desarrollo de la tesis, así como a trabajos y publicaciones derivados de la misma)

El trabajo realizado por la doctoranda, a nuestro juicio, cumple con todos los criterios y requisitos para ser presentado y sometido a valoración. El desarrollo de la tesis ha necesitado de cinco años, teniendo que solicitar dos prórrogas, los cuales han sido necesarias no solo para finalizar la investigación sino también para conseguir el indicio de calidad que permitirá su depósito. También al inicio afectó el período de confinamiento y las consecuencias que, por diversos factores, entre ellos se puede destacar las consecuencias derivadas de la pandemia sanitaria internacional (COVID-19), puesto que el acceso a los centros educativos se vio restringido, Sin embargo, estos hechos acontecidos, y dado que al tratarse de una tesis basada en educación. De ahí que ello haya sido la mayor dificultad en la recolección de los datos. La fundamentación teórica realiza un recorrido exhaustivo y concreto además de actualizado La metodología y el proceso de diseño, considera los preceptos y reglas de la investigación en el campo educativo. De manera más detallada, ha sido necesario un grado de objetividad y de protección de datos muy exigente, debido a que la investigación se dirige a población estudiantil menor de edad. Con respecto a los resultados han sido adecuados y posibilitan responder de manera coherente y fiable a los interrogantes planteados con la investigación.

Por todo ello, se autoriza la presentación de la tesis doctoral.

Córdoba, a 23 de febrero de 2024

Las/los directoras/es

Fdo.: VERÓNICA MARÍN DÍAZ & BARBARA
FERNÁNDEZ ROBLES