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FACULTY OF SOCIAL SCIENCES
THIRD CYCLE PHD STUDY PROGRAM
CLINICAL PSYCHOLOGY

INTEGRATIVE – PSYCHODYNAMIC THERAPY FOR CHILDREN WITH MENTAL DEVELOPMENT DELAY AND PERVASIVE DEVELOPMENT DISORDER

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Gostivar, North Macedonia, 2025

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Acknowledgments

From the beginning of my doctoral studies until the successful completion of my thesis defense, I have been fortunate to receive continuous support, encouragement, and guidance from many individuals and institutions, to whom I owe my deepest gratitude.

First and foremost, I wish to express my profound appreciation to my family, whose from the very beginning of my doctoral studies until the completion of my thesis defense, my family has continuously supported and encouraged me throughout this journey.

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Finally, this thesis is especially dedicated to my father, who long envisioned me as a doctoral researcher contributing to the academic field. His belief and inspiration have been a guiding force in bringing this work to realization.

Statement of Authorship

I, Elmedina Çesko, hereby declare that this doctoral dissertation is my own authentic work, carried out independently under the supervision. All sources of information and data used in the preparation of this work have been duly acknowledged and referenced in accordance with academic standards.

I state that this work has not been submitted, in whole or in part, for the award of a degree at any other institution.

I give the statement under full substantive, moral and legal responsibility.

Elmedina Çesko, _____

Gostivar, ____ September 2025.

Abstract:

The study aim to understand the importance of the therapeutic work, particularly the importance of integrative – psychodynamic therapeutic approach in working with children with mental developmental delay and pervasive development disorder.

The gender distribution of total of 52 articipants in the experimental group are girls 18 participants and boys 34 of the total sample. In the control group, the gender distribution was similar, with girls accounting for 19 and boys 34 of the total 53 participants. According to the age distribution participant in both groups are between 2 and 8 years old. For the child examination part were applied the Brunet–Lézine scale and the M-CHAT-R/F with an integrative psychotherapeutic intervention. The study is in experimental design and there are experimental group with pre and post test and the control group.

The findings revealed significant developmental progress in the experimental group compared to the control group. While demographic factors such as gender, residence, and birth order showed minor influence, they were not decisive. In the other side, there are significant findings that highlight the importance of early therapeutic intervention and support the use of integrative–psychodynamic therapy as an effective and adaptable model for mental development and autism spectrum disorder.

***Key words*:** integrative – psychodynamic therapy, early childhood, experimental study, mental development, autism spectrum disorder

Апстрактни:

Студијата има за цел да ја разбере важноста на терапевтската работа, особено важноста на интегративно-психодинамичкиот терапевтски пристап во работата со деца со ментално задоцнување во развојот и первазивно развојно нарушување.

Родовата распределба на вкупно 52 учесници во експерименталната група е 18 девојчиња и 34 момчиња од вкупниот примерок. Во контролната група, родовата распределба беше слична, при што девојчињата учествуваа со 19, а момчињата со 34 од вкупно 53 учесници. Според возрастната распределба, учесниците во двете групи се на возраст помеѓу 2 и 8 години. За делот со преглед на детето беа применети скалата Брун-Лезин и M-CHAT-R/F со интегративна психотерапевтска интервенција. Студијата е во експериментален дизајн и има експериментална група со пред и пост тест и контролна група.

Наодите покажаа значителен развојен напредок во експерименталната група во споредба со контролната група. Додека демографските фактори како што се полот, живеалиштето и редоследот на раѓање покажаа мало влијание, тие не беа одлучувачки. Од друга страна, постојат значајни наоди кои ја истакнуваат важноста на раната терапевтска интервенција и ја поддржуваат употребата на интегративно-психодинамичка терапија како ефикасен и прилагодлив модел за ментален развој и нарушување на аутистичниот спектар.

Клучни зборови: интегративна-психодинамичка терапија, рано детство, експериментална студија, ментален развој, нарушување на аутистичниот спектар

Özet:

Çalışmanın amacı, zihinsel gelişim geriliği ve otizmli çocuklarda bütüncül - psikodinamik terapinin, terapötik yaklaşımın önemini anlamaktır.

Deney grubundaki toplam 52 katılımcının cinsiyet dağılımı, toplam örneklemin 18'ini kız, 34'ünü erkek çocuklar oluşturmaktadır. Kontrol grubunda da cinsiyet dağılımı benzer olup, toplam 53 katılımcının 19'unu kız, 34'ünü erkek çocuklar oluşturmaktadır. Yaş dağılımına göre her iki gruptaki katılımcılar 2 ile 8 yaş arasındadır. Çocuk muayenesi bölümünde Brunet-Lézine ölçeği ve bütüncül psikoterapötik müdahale ile M-CHAT-R/F uygulanmıştır. Çalışma deneysel tasarımda olup, ön ve son test uygulanan deney grubu ve kontrol grubu bulunmaktadır.

Bulgular, deney grubunda kontrol grubuna kıyasla anlamlı gelişimsel ilerleme olduğunu ortaya koymuştur. Cinsiyet, ikamet yeri ve doğum sırası gibi demografik faktörler küçük bir etki gösterse de belirleyici olmamıştır. Diğer yandan, erken terapötik müdahalenin önemini vurgulayan ve bütüncül-psikodinamik terapinin zihinsel gelişim ve otizm spektrum bozukluğu için etkili ve uyarlanabilir bir model olarak kullanımını destekleyen önemli bulgular mevcuttur.

Anahtar kelimeler: bütüncül-psikodinamik terapi, erken çocukluk dönemi, deneysel çalışma, zihinsel gelişim, otizm spektrum bozukluğu

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CHAPTER I

1. Introduction

The early child development, pervasive development disorder and children with various developmental problem has been becoming a highly interested field in psychology in one side, and in other side the number of cases with various children's developmental problems that ask for help is trending up. Due to these circumstances the whole process starting from the diagnosis and then the treatment process as well are becoming in important issues (Zablotsky, Black, Maenner, Schieve, Danielson, Bitsko, Blumberg, Kogan & Coleen, 2019).

Currently, psychologist, child therapist and behavior therapist are working in psychological centers and preschool institutions on implementing inclusive education and different approaches which can be effectively apply in children with pervasive disorder and developmental problems. From this point of view, we were interested to see which psycho-therapeutic approach can be more effectively in working with neurotypical children, particular with autism spectrum disorder (Odom, Buysse, & Soukakou, 2011).

Developmental delay is a condition where a child does not meet the expected developmental milestones within the typical age range. These milestones encompass various aspects of growth and development, including physical, cognitive, language, social, and emotional skills. Children with developmental delay may experience delays in one or multiple areas of development, and the severity can range from mild to severe. Children with developmental delay They are facing unique challenges that necessitate specialized psychological interventions to support their growth and development (Glascoe, 2000).

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition that affects individuals worldwide, presenting a myriad of unique challenges and opportunities for understanding human behavior and cognition. This disorder encompasses a range of complex symptoms and characteristics, making it a fascinating and critical area of study for researchers, psychologists, educators, and healthcare professionals alike (Camero, Martinez & Callego, 2020).

In recent decades, there has been a significant increase in the diagnosis of ASD, bringing this condition to the forefront of public attention and scientific inquiry. With its

trending prevalence nowadays, there is a pressing need for a deeper understanding of the disorder's underlying mechanisms, the factors contributing to its development, and the most effective interventions for individuals diagnosed with ASD (Kasari & Smith, 2014).

This thesis aims to provide a comprehensive exploration of ASD by delving into its etiology, clinical presentation, diagnostic criteria, and associated challenges faced by individuals on the autism spectrum. By synthesizing current research from various disciplines such as neuroscience, psychology, genetics, and education, this study seeks to contribute to the existing knowledge base surrounding this complex disorder.

Furthermore, this thesis will critically analyze different intervention approaches tailored to individuals with ASD, including behavioral interventions, social skills training, and emerging therapeutic strategies, with the goal of shedding light on the most efficacious and evidence-based treatments available. By examining both traditional and innovative interventions, this research endeavors to offer insights and recommendations for the improvement of ASD-related services, ultimately enhancing the quality of life for individuals on the spectrum and their families.

In conclusion, this thesis seeks to contribute to the field of research, education, and clinical practice by providing an in-depth examination of Autism Spectrum Disorder. By exploring its multifaceted nature, potential causes, diagnostic criteria, and evidence-based interventions, this study aims to broaden our understanding of ASD and pave the way for improved support, inclusion, and empowerment for individuals with the condition.

1.1. The Aim of the Current Study

The main aim of the current study is to underline the importance of the therapeutic work, particularly the importance of integrative – psychodynamic therapeutic approach in working with children with mental developmental delay and pervasive development disorder.

Through a comprehensive review of existing literature and empirical evidence, this research study seeks to elucidate the benefits of integrative and psychodynamic therapy approaches in addressing the complex needs of children with developmental challenges. By examining the effectiveness, applicability, and outcomes of integrative - psychodynamic therapy interventions, this study aims to highlight the critical role of a holistic and personalized approach in promoting the cognitive, emotional, and social development of children with mental delay and pervasive development disorder.

By examining the effectiveness, applicability, and outcomes of integrative therapy interventions across diverse contexts and populations, this study aims to highlight the critical importance of adopting a holistic and personalized approach in clinical practice. Furthermore, the research aims to elucidate the mechanisms underlying the efficacy of integrative – psychodynamic therapy, including the role of therapeutic rapport, neurobiological processes, and environmental factors, in promoting resilience and adaptive functioning in children with mental delay and pervasive development disorder.

Ultimately, this study seeks to contribute to the advancement of evidence-based practices and inform clinical guidelines for the provision of integrative therapy services for this vulnerable population. By synthesizing current knowledge and identifying gaps in research, this research aims to pave the way for future investigations and innovations in the field of child mental health and developmental challenges.

1.2.The Research Problems

These research problems provide a framework for investigating the efficacy, mechanisms, and implementation of integrative therapy interventions for children with developmental challenges, with the ultimate goal of informing clinical practice and improving outcomes for this population.

1. Efficacy of Integrative Approach: Assessing the effectiveness of integrative psychodynamic techniques with some of therapeutic modalities that was found the researches in addressing the unique needs of children with mental developmental delay and pervasive developmental disorder.
2. Long-term Outcomes: Investigating the long-term impact of integrative psychodynamic therapy on the cognitive, emotional, and social development of children with developmental delays and pervasive developmental disorders.
3. Family Involvement: Importance of the role and support of the family in enhancing the effectiveness of integrative psychodynamic therapy for children with developmental delays and pervasive developmental disorders.
4. Cultural Considerations: Having in consideration the cultural factors impact during the implementation and effectiveness of integrative psychodynamic therapy for children with developmental delays, particularly in diverse populations.

5. Comparative Studies: Conducting comparative studies to evaluate the relative effectiveness of integrative psychodynamic therapy compared to other therapeutic approaches commonly used for children with developmental delays, such as behavioral therapy or cognitive-behavioral therapy.
6. Barriers to Implementation: Identifying barriers and challenges to implementing integrative psychodynamic therapy in various clinical settings, including training requirements for therapists, access to resources, and acceptance among caregivers and healthcare professionals. These research problems provide a framework for investigating the efficacy, mechanisms, and implementation of integrative therapy interventions for children with developmental challenges, with the ultimate goal of informing clinical practice and improving outcomes for this population.

1.3.Importance of the study

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vulnerable population. By synthesizing current knowledge and identifying gaps in research, this research aims to pave the way for future investigations and innovations in the field of child mental health and developmental challenges.

CHAPTER II

2. Literature Review

In this chapter, the main theoretical perspectives on developmental delay and pervasive developmental disorders will be examined, with particular attention to their relevance in early childhood. The discussion will also address the impact of integrative-psychodynamic approaches in therapeutic work with these conditions, highlighting evidence and insights related to preschool-age groups. By synthesizing existing research, this chapter aims to provide a foundation for understanding both the theoretical framework and the practical implications of intervention in this field.

2.1.Early Childhood Development

The early childhood period, which lasts from the child's birth until the child starts primary school and includes the first six years of life, has critical importance in terms of lifelong development. Especially, the development between the ages of 3 – 5 have an impact throughout the child's life. Nowadays importance of the early childhood period became more and more significant, so the opportunities and environment provided to the child have an impact throughout child’s life. The development of a child is very rapid and intensive during this period (Kargı, 2012).

Early childhood covers the period of human life between the ages of 0-8, and it covers half of children developments they will have throughout their lives in many developmental areas. Children's development should be supported in correct and appropriate ways during early childhood, because its importance affects human whole life (Tunçeli & Zembat, 2017).

Mostly maturity seems only as a part of physical development but it should be seen more broadly, as a whole growing, changing, and a development process. According to this, learning is the experiences that an individual acquires under the influence of all kinds of environmental factors and the permanent changes that occur in the individual as a result. The individua, in some developmental periods and ages tend to show high sensitivity to certain types of learning and these periods are defined as critical periods (Senemoğlu, 2012).

According to Tunçeli & Zembat (2017), scientists that are working as developmental specializations have presented different views over the years about what the development is and what path it follows. In recent years, the need for inter-disciplinary approach it has been accepted. This situation has also led to differences in the definition of development. Generally, the concept of development refers to the individual's adaptation to the world as a result of heredity and interactions with the environment, which occur in different areas of the organism such as biological (changes in our physical existence), social (changes in our social relationships), emotional (changes in our emotional understanding and experiences) and cognitive (changes in our thinking processes) areas. So, the individuals' development can be defined as a set of systematic and continuous changes that increase.

The various aspects of early childhood development (Shonkoff & Phillips, 2000):

1. Physical Development
2. Cognitive Development
3. Social Development
4. Language Development

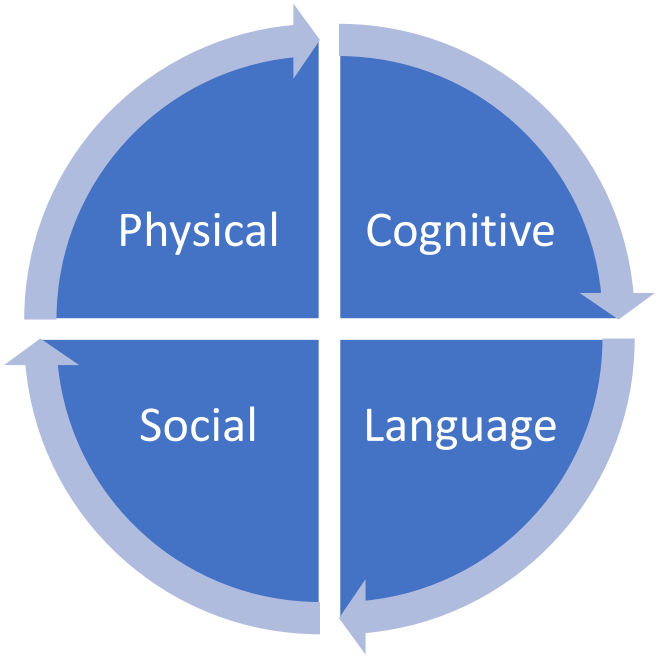

Figure 1. Early childhood development (Shonkoff & Phillips, 2000).

Physical development. During early childhood, children experience rapid physical growth and development. What plays an important role are the child's motor skills. While we talk about

motor skills it is related with inclusion of both gross motor skills (such as walking, running, and jumping) and fine motor skills (like grasping objects and drawing), undergo significant refinement. Gross motor skills involve the coordination of large muscle groups and are essential for activities such as running, jumping, and climbing. Fine motor skills involve the coordination of smaller muscle groups and are necessary for tasks such as drawing, writing, and buttoning clothes. Proper nutrition for each stage of growth, adequate sleep according the age of the child, and regular exercise are essential for supporting healthy physical development. Early childhood witnesses further refinement of motor abilities, with children engaging in more complex physical activities and refining coordination and balance.

Motor development can be categorized into general stages, such as the development of posture and locomotion, as well as the coordination of reaching and grasping movements. These abilities allow infants to interact with their environment and gradually gain independence in their movements. The basic stages of motor development are starting from the infant's ability to hold their head up, progressing to sitting, crawling, standing, and eventually walking. It is important the head control as a foundational skill that supports further motor milestones. For instance, an infant must first learn to control their head movements before they can achieve other milestones like sitting up or pulling themselves to a standing position (Vasta, Haith & Miller, 2007).

Motor skills development in early childhood encompasses the gradual improvement and refinement of both gross and fine motor abilities essential for physical coordination and movement proficiency. This period, from infancy through early childhood, is characterized by significant milestones and rapid growth in motor competence (Gallahue, & Ozmun, 2006).

The principle of cephalocaudal it is the first principal of physical development, where control over motor functions develops from the head downwards through the body. This means that infants typically gain control over their head and upper body before mastering movements involving their lower limbs. The second principle is the proximodistal principle, which states that motor control develops from the center of the body outward, so children first gain control over their arms and legs before their hands and fingers (Vasta, Haith & Miller, 2007).

During infancy, milestones such as lifting the head, rolling over, and sitting upright mark the progression towards independent mobility. As children grow, they refine gross motor skills through activities like climbing, hopping, and riding a bike, enhancing balance, strength, and coordination. Fine motor skills entail the coordination of small muscle groups for precise movements, such as grasping, manipulating objects, and hand-eye coordination tasks. Infants develop early fine motor skills through activities like grasping objects, transferring items

between hands, and exploring textures. As children progress, they refine fine motor abilities through tasks like drawing, writing, cutting with scissors, and intricate hand movements, crucial for tasks such as tying shoelaces and buttoning shirts (Gallahue, & Ozmun, 2006).

The motor skills are acquired through an increasing complex movement. For example, the process of crawling involves a progression from rolling over to lifting the head and chest, to eventually moving forward using the arms and legs. There is variability in motor development among infants, while the general sequence of motor milestones is consistent, the timing can vary from child to child. It underscores the importance of allowing infants to explore their environment and practice these movements, which in turn facilitates their motor development (Vasta, Haith & Miller, 2007).

Several factors influence motor skills development in early childhood, including genetic predispositions, environmental stimuli, and opportunities for practice and exploration. Additionally, socio-cultural influences, such as parental encouragement and cultural expectations regarding physical activity and play, shape children's motor development trajectories. Supporting motor skills development in early childhood requires providing a conducive environment rich in opportunities for movement, exploration, and skill-building activities. Encouraging outdoor play, providing age-appropriate toys and materials, and incorporating structured physical activities into daily routines promote the development of both gross and fine motor skills. Moreover, offering scaffolding and guidance during challenging tasks helps children develop confidence and mastery in their motor abilities. Motor skills development in early childhood is a dynamic process influenced by various factors and experiences. By understanding the milestones, factors, and strategies associated with motor development, parents, caregivers, and educators can create supportive environments that foster children's physical competence and overall well-being (Gallahue, & Ozmun, 2006).

Lastly, the psychological implications of motor development, suggesting that the drive for motor competence is motivated by the infant's desire to interact with and control their environment. This desire for effectiveness is a key factor in the infant's learning process, helping them achieve mastery over their physical actions and contributing to their overall development (Vasta, Haith & Miller, 2007).

Cognitive development. The brain is most miraculous and in the same time the most mysterious organ in the human body. The development and growth of a child's brain, emphasizing its complexity and adaptability. The brain is described as an essential organ, pivotal for the regulation of bodily functions as well as for cognitive and emotional processes.

During fetal development, the brain undergoes significant expansion, with the formation of more than 200 billion neural cells, which begin to establish critical early connections that continue to evolve throughout early childhood. This period is marked by the brain's extraordinary capacity to change and grow, particularly in response to external stimuli. While genetics (nature) provide the foundational structure and organization of brain cells, it is the external stimulation (nurture) through experiences and environmental factors that significantly influences the connectivity and functionality of these neural cells. There is the critical role of a nurturing environment in enhancing or mitigating genetic influences, drawing an analogy to the construction of a house where both the materials (genes) and the environmental conditions (neuroplasticity) are integral to the final structure. A supportive environment can bolster brain development, aiding in the mitigation of inherent genetic weaknesses and protecting against potential damage from adverse experiences (Shannon & Heckman, 2013).

The brain's development is described as a complex process involving the creation, pruning, and strengthening of neural connections. Early experiences and environmental factors, such as nutrition and emotional support, are crucial in building a robust brain architecture. Also, it is needed to emphasizes the importance of ongoing parental involvement throughout a child's development, not just in the early years but also during adolescence when the brain undergoes significant changes, particularly in the frontal lobe, which is responsible for decision-making and emotional regulation. While genetics lay the foundational structure of the brain, it is the environment through experiences, relationships, and stimuli that shapes and refines neural connections. This process is dynamic, by having in a consideration the brain's remarkable plasticity and adaptability, especially during early childhood but continuing into adolescence and early adulthood. The insights provided underline the importance of a nurturing environment and active parental engagement in ensuring optimal brain development and mental health for children and adolescents (Shannon & Heckman, 2013).

Early childhood is marked by significant cognitive growth as children begin to understand and interact with the world around them. Cognitive development encompasses processes of learning, memory, problem-solving, and decision-making. During early childhood, children demonstrate increasing abilities in language development, problem-solving, memory, and attention (Shonkoff & Phillips, 2000).

Piaget's theory of cognitive development outlines four important stages through which children progress as they construct their understanding of the world: sensorimotor, preoperational, concrete operational, and formal operational stages. Each stage is characterized by specific cognitive achievements, such as object permanence, symbolic representation,

conservation, and abstract thinking, shaping children's perception, reasoning, and problem-solving abilities. While sensorimotor stage starts from birth approximately till 2-year infants learn about the world primarily through their senses, by sensory experiences and actions, by motor activities. The preoperational stage is the second stage, typically occurring between the ages of 2 and 7 years old. During early childhood this is characterized by symbolic thought, egocentrism, and the emergence of language. While children exhibit significant cognitive development but they have still lack of certain logical and operational abilities. The concrete operational stage is the third stage, typically occurring between the ages of 7 and 11 years old. This stage represents a crucial period of cognitive development characterized by the improvement of logical thinking skills, the ability to understand conservation, classification, and improved problem-solving abilities. The formal operational stage is the fourth and final stage, typically occurring during adolescence and extending into adulthood. This stage represents a significant leap in cognitive abilities, marked by abstract thinking, hypothetical reasoning, and the ability to systematically solve complex problems (Piaget, 1952).

Executive function skills, including attentional control, working memory, and inhibitory control, play a crucial role in regulating cognitive processes and goal-directed behavior. These skills undergo significant development during early childhood, influencing children's ability to focus attention, to plan, to organize, and to adapt to new situations. The cultivation of executive function skills is supported through experiences that encourage self-regulation, problem-solving, and decision-making, laying the groundwork for academic success and lifelong learning (Diamond, 2013).

Social and Emotional development. The stimulation plays the crucial role in growth and development of a child's brain. Child's brain can only grow and develop optimally through interaction, by emphasizing the importance of parents understanding how stimulation affects brain development. The right kind of stimulation, particularly intimate and loving contact with another human being, is essential for the brain's self-assembly and organization. Without adequate stimulation, brain development suffers, leading to weakened neural connections (Shannon & Heckman, 2013).

Children development theories highlights the importance of early childhood experiences in forming a sense of trust, autonomy, initiative, and competence. Social development encompasses the improvement of social skills, interpersonal relationships, and understanding of social norms and roles. Relationships with caregivers, family members, and peers play a crucial role in shaping social and emotional development. During this critical

period, children learn to understand and express their feelings, empathize with others, and develop interpersonal skills that lay the foundation for healthy social relationships and emotional well-being. Attachment theory, pioneered by John Bowlby, emphasizes the importance of secure attachments with caregivers in fostering emotional security and social competence. During infancy and early childhood, secure attachment relationships with caregivers play a crucial role in shaping children's social and emotional development. Early experiences and attachments influence a child's ability to regulate emotions, form friendships, and develop empathy and social skills. Secure attachment fosters feelings of safety, trust, and security, providing a foundation for exploration and healthy emotional regulation. Peer interactions become increasingly salient during early childhood, facilitating the development of empathy, cooperation, and conflict resolution skills. Infants display a range of basic emotions, which become more nuanced and regulated during early childhood. Emotional development involves the recognition, expression, and regulation of emotions. Psychosocial theories describe stages of psychosocial development, with early childhood marked by the conflict of autonomy versus shame and doubt (Shonkoff & Phillips, 2000).

Early childhood is characterized by the emergence of social skills and the formation of peer relationships. Children learn to interact with peers, negotiate conflicts, and collaborate in group settings. Positive peer interactions contribute to social competence and a sense of belonging within social groups. In the same time, during this time children have a significant growth in emotional regulation skills. They learn to identify, understand, and manage their emotions, gradually developing strategies for coping with stress, frustration, and anxiety. Caregiver support and modeling play a vital role in teaching children effective emotion regulation techniques. During early childhood, children develop a sense of self-concept and identity, including beliefs, values, and self-perceptions. Self-awareness and self-esteem gradually emerge as children compare themselves to others and receive feedback from caregivers and peers. Cultural values, beliefs, and practices shape social and emotional development in early childhood. Caregivers and socialization agents transmit cultural norms regarding emotional expression, social roles, and interpersonal relationships, influencing children's socialization experiences and identity formation. As children mature, they begin to demonstrate empathy and perspective-taking abilities, understanding and responding to the emotions and perspectives of others. Empathy encourages prosocial behaviors, such as kindness, sharing, and cooperation, and promotes positive social relationships. The other importance that starts to be develop in early childhood is moral development, as children internalize social norms, rules, and ethical principles. Through experiences and guidance from

caregivers, children develop an understanding of right and wrong, empathy, and fairness, laying the groundwork for moral reasoning and ethical behavior. One of the best way that helps social and emotional development in early childhood is the play. Through play, children explore social roles, practice problem-solving, and express their emotions and creativity. Imaginative play allows children to experiment with different scenarios, perspectives, and emotions in a safe and supportive environment (Denham & Brown, 2010).

Language development. Language development progresses rapidly during early childhood, with children acquiring vocabulary, grammar, and communication skills at a remarkable rate. Language improvement begins shortly after birth, with infants attending to speech sounds and gradually discerning phonetic distinctions. During this critical period, children undergo significant growth in their ability to comprehend and produce language, laying the foundation for literacy, social interaction, and academic success. Theories such as Noam Chomsky's universal grammar theory and Lev Vygotsky's sociocultural theory emphasize the role of both innate abilities and social interactions in language improvement (Shonkoff & Phillips, 2000).

Theories on language development have traditionally followed three main perspectives: biological, cognitive, and social. The section emphasizes the role of psycholinguistics, particularly the work of Noam Chomsky, who challenged earlier behaviorist theories, such as those proposed by Skinner, which viewed language acquisition as a result of conditioning. Chomsky introduced the idea that language acquisition is an innate ability, suggesting that children are born with a "language acquisition device" (LAD) that allows them to rapidly learn and organize language. His theory posits that children do not simply imitate language but rather develop it through a complex interaction of innate structures and environmental stimuli. Language development theories, from behaviorist to cognitive and psycholinguistic models, emphasizing the significant contributions of Chomsky in understanding how language is acquired and processed by the human brain (Vasta, Haith & Miller, 2007).

During infancy, prelinguistic development lays the groundwork for language development. Infants engage in prelinguistic communication through gestures, vocalizations, and eye contact, gradually developing joint attention and turn-taking skills essential for early communication (Bretherton & Bates, 1979).

Chomsky's psycholinguistic approach suggest that language learning is not solely dependent on children's cognitive abilities but is significantly influenced by environmental interactions and social contexts. The Piaget’s approach, for example, highlights the role of cognitive development stages in language acquisition, where children gradually acquire the

ability to use language to express complex thoughts. Other models emphasize the importance of social interactions in language learning, suggesting that children need to actively engage with their environment to develop linguistic skills (Vasta, Haith & Miller, 2007).

Psycholinguistics had criticisms toward the earlier behaviorist theories, such as those by Skinner, that language learning is not just about imitation and rewards, because it will be too slowly to learn all needed information. But learning involves a deeper cognitive processing of abstract grammatical structures, so this can help on understanding of how children learn language by interacting with their environment and that their linguistic abilities are shaped by the social interactions they experience. The psycholinguistic model offers a more comprehensive understanding, suggesting that language development is influenced by both genetic predispositions and cognitive processes that allow for the acquisition of grammar and syntax (Vasta, Haith & Miller, 2007).

It is important to highlight that the early years are crucial for both growth and susceptibility to harm, with children's trajectories influenced by both resilience and vulnerability factors. Rather than single risks or protections, the accumulation of positive or negative experiences greatly impacts developmental well-being. Early opportunities shape academic success, health, and overall well-being, with self-regulation, early relationships, knowledge improvement, and skill development being key dimensions. These dimensions are influenced by neurobiology, caregiver relationships, and environmental factors. The interaction between biology and the social environment significantly impacts a child's ability to learn and succeed in school, ultimately affecting later-life health outcomes (Anderson, Shinn, Fullilove, Scrimshaw, Fielding, Normand, Carande-Kulis & TFCPS, 2003).

The quality of stimulation is also crucial; consistent, nurturing, and rich interactions foster strong and healthy neural connections, while neglectful or stressful environments can lead to sluggish brain responses and underdeveloped neural pathways. In extreme cases, where children are exposed to high levels of stress or trauma, their brains may become attuned to seeing the world as a dangerous place, leading to chronic stress responses that hinder their ability to process information and develop emotionally and behaviorally. The negative impact of insufficient or harmful stimulation, using the example of Romanian orphans who were deprived of human interaction, leading to severe developmental issues, including brain damage, attention difficulties, and emotional and behavioral disorders. This example illustrates that the lack of stimulation and interaction, rather than genetics alone, is a significant risk factor for developmental challenges. By having in a consideration, the importance of early and active

intervention to mitigate can be effective and supporting the healthy brain development (Shannon & Heckman, 2013).

Early childhood is one of the critical developmental period. This period lays the foundation for the child's learning experiences, well-being and productivity later in life. During this period, children grow and develop faster than in other periods of their lives. Early interventions will have a lasting impact on child's cognitive capacities, personalities and social behaviors. Considering the speed of the child's development in early childhood and the contribution of the developmental processes and learning experiences in this period to the following years, it is necessary to evaluate the development of children in this period for reasons such as evaluating the child's development with appropriate and reliable measurement tools, supporting his development at the optimum level, and identifying possible problems early and making the necessary (Tunçeli & Zembat, 2017).

Children experiencing mental developmental delay encounter obstacles that hinder their cognitive, social, and emotional growth. These challenges can stem from a variety of factors, including genetic conditions, environmental influences, and neurological disorders. Early identification and intervention are crucial for optimizing outcomes and promoting healthy development. Mental developmental delay poses significant challenges for children and their families, impacting various areas of functioning including cognitive, social, and emotional development. Mental developmental delay encompasses a broad spectrum of conditions characterized by delays in cognitive, language, and social skills improvement. From intellectual disabilities to specific learning disorders, children with developmental delays face unique hurdles in their journey towards independence and self-fulfillment. Understanding the underlying causes of developmental delay, such as genetic abnormalities, prenatal exposure to toxins, or perinatal complications, is essential for tailoring interventions to meet the individual needs of each child (American Psychiatric Association, 2013; Fletcher-Janzen, Reynolds & Weiner, 2019).

In early childhood education professionals are recognizing that typical, healthy children develop at different rates in different domains. Sometimes child who is not early in developing in some domain later can develop another — for example fine motor skills are developing more slowly, while language and social skills are well developed. Some early childhood professionals are concerned about using static assessments, which compare younger children to a proficiency norm, a method commonly used in state assessments for older children. They find that such tests provide weaker information when children's abilities are further from the proficiency mark. Due to the higher levels of variability both within and between individual

younger children, some experts worry that assessments may lack precision or provide inadequate information for children who are either performing below or above average levels of achievement (Jiban, 2013).

Children's experiences in the first three years of life significantly influence their development, learning, and interactions with the world. This period is marked by tremendous growth and lays the foundation for future learning and ongoing development. Traditionally, this age group has been served by a medically based model that emphasizes health and hygiene practices. However, this approach overlooks the multiple strengths and needs of infants and young children, failing to address their holistic development. Social and emotional education is as crucial as physical care for this age group. Quality care for children under three is not merely a scaled-down version of a preschool program; it requires a specialized approach. The concept of providing quality service to children aged 0-3 in educational and care settings is increasingly referred to as a pedagogy of care. This approach is based on the notion of an ethic of care in early childhood education, where interactions are seen as valuable learning experiences for young children. A pedagogy of care goes beyond managing children and following predetermined routines. It emphasizes the ethical perspectives involved in how society cares for its youngest members, ensuring their holistic development is supported (Rockel, 2009).

Babies and children continuously, naturally, and fluently receive information. Although they often focus on one thing at a time, their focus can change quickly. Through their actions, interactions, and observations, they gather various kinds of information that they use to build knowledge and skills. A single interaction can lead to learning in multiple areas. While a child may begin by focusing on something of interest in one domain, the physical, emotional, intellectual, social, and linguistic components of that experience are processed almost simultaneously. Because babies and toddlers learn holistically, they may not always concentrate on the specific content area an adult wants to emphasize. If adults structure interactions to achieve specific outcomes in a particular content area, such as language, they may miss out on the child's broader learning experience. Therefore, plans to help infants learn are best designed to reflect the child's openness to all aspects of an experience (Kamburi & Brame, 2020).

Research and professional expertise emphasize the significance of early childhood education as a pivotal stage that requires careful attention and consideration. With the potential for significant impact through quality educational programs and interventions, it's crucial to rely on reliable data sources for decision-making. An effective assessment strategy in the early

years utilizes age-appropriate tools tailored to specific purposes and children, incorporating various authentic methods. The aim of professionals has to guide for decisions regarding eligibility, instructional planning, and intervention effectiveness within the educational program's objectives. Above all, the assessment plan prioritizes the well-being of the assessed children, ensuring positive outcomes without any adverse effects. Thoughtful assessment planning offers a unique opportunity to support children and influence their future outcomes positively (Jiban, 2013).

2.2.Children development theories

Child development theories provide critical insights into the complex processes that shape children's growth, learning, and behavior. Understanding these theories is essential for parents, educators, and caregivers as they offer a framework for interpreting children's actions, guiding effective practices, and fostering optimal development. By exploring the principles outlined by renowned theorists, we can better appreciate the diverse factors influencing cognitive, social, and emotional development. These theories not only highlight the stages and milestones of development but also emphasize the importance of the environment, social interactions, and cultural contexts in shaping a child's journey toward becoming a well-rounded individual.

2.2.1. Sigmund Freud's Psychoanalytic Theory – Developmental Stages of Personality

Sigmund Freud as a neurologist is the founder of psychoanalytic theory, while he developed his theory during a medical experience of treating people with mental disorders. Freud emphasizes that the driving forces of human behavior are instincts that have an inherited basis. He divides instincts into two groups: instincts of life (eros) and instincts of death (tantos). Freud proposed a theory of personality development that emphasizes the role of unconscious processes and childhood experiences (Murtezani, 2014). According to Freud, person's two basic instincts, the life instinct is related with sex and the death instinct is related with aggression. The libido is the energy associated with the life instinct, and sexual excitation arises from erogenous zones in the body. As these zones change, they mark the transitions between different developmental stages, with the goal of achieving equilibrium in the sex drive. The

death instinct reflects a desire to return to an inorganic state, and Freud believed that suicidal behavior satisfies this instinct. Freud's model of the mind includes three regions: the unconscious, where are stored repressed thoughts and feelings, the preconscious, where are present thoughts that can become conscious, and the conscious, where are on surface familiar and accessible thoughts. The preconscious can become conscious by forming mental images or linking with language (Janetius, Alemayehu & Mini, 2015).

Sigmund Freud's psychosexual development theory describes how an individual's psychological and sexual capacities develop in harmony within an ordered and ethical value system. Psychological growth is driven by the libido, or inner energy, which is expressed through sexual development. According to Freud, personality develops through a series of psychosexual stages, with the libido focusing on different body parts, people, and objects at each stage. Influenced by Charles Darwin's theory of evolution, Freud emphasized the biological basis of human development. He identified five stages of development, each with specific demands for libido gratification. If normal development is disrupted, fixations can occur, impacting personality throughout life (Janetius, Alemayehu & Mini, 2015).

The developmental stages also are named as psycho-sexual stages and they are: Oral, Anal, Phallic, Latency, and Genital. Here are highlighting key aspects and their implications (Murtezani, 2014):

1. **Oral stage (0-1 years)**

This stage starts from birth and last approximately to 12-18 months. During this stages, the child's satisfaction comes from the mouth area due to the mother's sucking. If the child, at this stage, feels frustrated for many reasons such as: intimidation, obstruction, neglect, and so, then the libido will be fixed at this stage. All this will be reflected in adulthood, creating an individual with an oral character, who will have a permanent need to eat, to drink, to talk excessively (Murtezani, 2014). During the first postnatal year, libido (sexual pleasure) is focused on the mouth, with activities such as nursing providing gratification through reducing tension in the oral region. Infants seek this gratification by sucking, feeding, crying, and other oral explorations, which Freud termed the oral stage of development. Fixation at this stage can negatively impact the child's personality, leading to adult behaviors like passivity, dependency, verbal aggression, impatience, greediness, and a preoccupation with giving and taking. Habits such as smoking, overeating, thumb sucking, and chewing objects are expressions of oral fixations and poor development during this stage (Janetius, Alemayehu & Mini, 2015).

2. **Anal stage (1-3 years)**

This is second stage that is around the age of 18 months and end up to the age of 3 years. During this stage, the child's pleasure from the oral area is transferred to the anal area. According to Freud, during this period the focus of pleasure shifts to the anus, and the child finds pleasure in controlling bowel movements. If the formation of the habit of cleanliness does not have a normal course - for example, the parents are not tolerant towards the child - they show rudeness, as a result, the libido will be fixed exactly at this stage. All this can influence the creation of the character of the anal type like extreme pedantry, stubbornness or stinginess (Murtezani, 2014). During the second year, the focus of sexual excitation shifts to the anal area, with the beginning of toilet training leading the child to invest libido in anal functions. Freud claimed that the successful resolution of this stage leads to a sense of achievement and independence. Excessive stress or harsh toilet training can result in an anal-resistant (rigid, obsessive) or an anal-expulsive (messy, disorganized) personality. Insufficient gratification during this stage can result in fixation, often manifesting as traits such as orderliness, neatness, rigidity, stubbornness, stinginess, possessiveness, and other compulsive behaviors (Janetius, Alemayehu & Mini, 2015).

3. Phallic stage (3-6 years)

This stage occurs between the ages of three and six. During this stage, children focus their attention on their genitals. This is the stage where the so-called Oedipus complex appears: when the son expresses sexual interest in his mother, while he considers his father to be his opponent. For this reason, he experiences the fear of castration (castration) that can come from his father as a revenge. While boys develop the Oedipus complex, at the same time, girls develop an Electra complex that makes them feel inferior toward men. These make them to blame their mother for their situation and start to be identied with their mother, by repressing their feelings towards their father. Freud believed that, if the Oedipus / Electra conflict is not resoling properly, this will lead to the subsequent appearance of impotence, frigidity and various neuroses. (Murtezani, 2014). Between the ages of three and six, a child's focus shifts to sensations from the genitals, a period Freud called the phallic stage. This stage is crucial for psychological development, marked by the Oedipus complex in males and penis envy as Electra Complex in females. The resolution of the Oedipus or Electra complex involves identifying with the same-sex parent, which helps the child develop a mature sexual identity. issues. In the Oedipus complex, a male child becomes aware of sex differences, identifies with his father, and desires his mother, leading to castration anxiety—a fear of losing his sex organ. In females, the Electra complex (as later psychologists termed it) involves the desire for the father and resentment toward the mother, whom the child blames for not having a penis. Freud

believed that unresolved conflicts and fixations at this stage could result in problems with authority and unresolved sexual identity like homosexuality, authority issues, and rejection of traditional gender roles (Janetius, Alemayehu & Mini, 2015).

4. Latency stage (6 to puberty)

This stage lasts from about six years end up to puberty. Freud described this period as one of relative calm. The sexual impulses are repressed, allowing the child to focus on developing other skills and interests. During this stage, children develop social and communication skills and self-confidence (Murtezani, 2014). The latency stage occurs before puberty, during which there are no significant developments, and the libido remains dormant. During this period, repressed drives may lead to the formation of friendships or the development of hobbies and social skills. Fixation at this stage is relatively rare compared to other stages (Janetius, Alemayehu & Mini, 2015).

5. Genital stage (puberty to adulthood)

This stage begins at puberty and lasts into adulthood. The libido reawakens and is directed towards others rather than oneself, leading to mature sexual intimacy. The genital stage marks the final phase of development, where mature gratification is sought through heterosexual relationships. The person establishes the intimate relationship. Successful navigation of this stage results in a well-balanced, warm, and caring individual. Issues during this stage can lead to difficulties in forming healthy and fulfilling relationships. Freud believed that adult emotional problems stem from either deprivation or excessive gratification during the earlier oral, anal, or phallic stages (Janetius, Alemayehu & Mini, 2015).

2.2.2. Erik Erikson's Theory - Psycho-Social Theory of Development

In recent years psychologists, specially, developmental psychologists have put forward the importance of some basic theories about human developmental stages and learning. The Erikson's theory of stages of psycho-social development, is one of these theories that have greatly influenced the philosophy of contemporary Western education. Erikson suggests that human development occurs through eight psychosocial stages throughout life. Each stage involves unique developmental goals and during each stage is appearing specific conflicts the and the ability to cope with these conflicts leads to healthier personality development. Both the social environment and innate biological characteristics influence this process. Successfully overcoming conflicts in each stage equips individuals to handle future challenges, while

unresolved conflicts can be addressed in later stages with the right environmental support (Gürses & Kilavuz, 2011).

These eight stages of human development developed by Erikson are as follows (Gürses & Kilavuz, 2011):

1. Trust Versus Mistrust (Infancy, 0-1 Years Old)

Meeting a baby's basic needs in the first year of life affects the development of the baby's sense of "trust." If the period is spent healthily, a sense of "basic trust" is gained. Acquiring the "basic sense of trust" plays an important role in the mother's ability to give the baby the needed peace and the individual's consistency in trustworthiness. Getting through the period in a healthy way improves the person's sense of "hope" and "harmony". Erikson thought that the acquisition of "religious feelings" was also related to this period (Gürses & Kilavuz, 2011).

The first signs of social trust in a baby are observed in the presence of order and comfort in functions like nutrition, sleep, and digestion. At this stage, the baby is entirely receptive, while the mother's nurturing nature establishes mutual order and balance. The baby's initial social success is measured by their ability to endure being away from their mother without significant anxiety or anger. This indicates the baby has internalized a sense of the mother's constant presence (Gürses & Kilavuz, 2011).

1. **Autonomy versus Doubt and Shame (Early Childhood, 1-3 years)**

At this stage, the child begins to recognize that their behavior is under their own control. If a child's every action and initiative is met with parental intervention, they may start to doubt their abilities, leading to feelings of shame. However, if the child is allowed and encouraged to explore their environment, they will develop a sense of "autonomy" (Gürses & Kilavuz, 2011).

2. **Initiative versus Guilt (Preschool, 3-6 years)**

At this stage, the child begins to take initiatives independently. The child's ability to develop in this regard depends on the support and encouragement they receive to satisfy their curiosity. If a child is criticized for their behavior and interests, they may develop a tendency to blame themselves for their initiatives (Gürses & Kilavuz, 2011).

According to Erikson, the child's motor and language development enhances their ability to explore their physical and social environment. As the child's initiative increases, so might problematic behaviors. If parents and teachers punish a child's initiatives, the child may internalize the belief that their actions are wrong, both now and in the future, leading to feelings of guilt. Conversely, approving every behavior can negatively impact moral development.

Therefore, it is crucial to establish a balance regarding acceptable behaviors and support the child's initiatives appropriately (Gürses & Kilavuz, 2011).

3. **Industry versus Inferiority (School Age, 7-11 years)**

During this period, child begin to understand the consequences of their actions and develop problem-solving skills. The key achievement of this stage is the development of a sense of "hard work." However, feelings of inadequacy and inferiority can arise from self-comparison with peers. School life significantly impacts children aged 7-11, providing support that parents might not be able to offer. While parents encourage skill development at home, teacher attitudes at school can sometimes harm a child's self-esteem (Gürses & Kilavuz, 2011).

Admiration and appreciation for achievements become essential during this period, making the roles of teachers and parents critical in fulfilling the child's need for success. It's important to focus on what the child can do, rather than on their limitations. Encouraging success by assigning responsibilities that match the child's strengths, rather than setting unrealistic expectations, helps to foster a sense of accomplishment and avoids labeling the child as a failure.

4. **Identity versus Role Confusion (Adolescence, 11-17 years)**

During this period, individuals ask themselves, "Who am I?" They become aware of their cognitive and physical development, start recognizing their bodies, and begin to shape their identities accordingly. They seek to answer these questions by identifying with and imitating people they admire or consider role models, acting like them in the process (Gürses & Kilavuz, 2011).

Successfully navigating this stage results in a strong sense of identity, while failure leads to identity confusion. Adolescents strive to develop their identities, often showing interest and passion for people of the opposite sex, heroes, religious issues, doctrines, and ideologies. Indecision and confusion during this time often lead them to form solidarity groups. Adolescents oscillate between the rules learned in childhood and the value judgments they must develop as adults (Gürses & Kilavuz, 2011).

The personality traits developed in earlier stages play a crucial role in forming a positive sense of identity. Parents, teachers, and significant others in the teenager's environment should encourage the exploration of new roles. By healthily exploring these new roles, adolescents are more likely to develop a positive identity with constructive orientations (Gürses & Kilavuz, 2011).

5. **Intimacy versus Isolation (Young Adulthood, 17-30 years)**

An individual who finds their identity during adolescence can begin to form close relationships and friendships during this period. They start to establish connections beyond their adolescent peer group and integrate more fully into society. Marriage and career become significant aspects of a young person's life. Successfully navigating this stage enables them to give and receive love securely (Gürses & Kilavuz, 2011).

However, those who struggle to form friendships may experience psychological loneliness, leading to feelings of isolation and abandonment from society. Teachers and others in the young adult's environment have mutual responsibilities in supporting them through this crisis. Successful resolution of these conflicts is possible within a social structure grounded in love and respect for others (Gürses & Kilavuz, 2011).

6. **Generativity versus Stagnation (Middle Adulthood, 30-60 years)**

This period encompasses the middle adulthood years, during which individuals are productive, efficient, and creative. Productivity goes beyond having and raising children; while continuing one's lineage is significant, contributing to the upbringing of future generations can also occur outside the home (Gürses & Kilavuz, 2011).

Adults who are unable to secure a job or remain unmarried may feel unproductive during this stage. To navigate this period positively, the support and encouragement from those with whom the individual shares their home and workplace are crucial (Gürses & Kilavuz, 2011).

7. **Integrity versus Despair (Late Adulthood, 60+ years)**

In this period, encompassing the elderly years, individuals either achieve a sense of self-fulfillment from the positive experiences of the previous seven stages or fall into despair due to unresolved conflicts from those stages. This period is characterized by the conflict between the satisfaction of a productive life and the regret of having spent years meaninglessly.

An elderly person who has successfully navigated all developmental stages attains wisdom and can accept death. For those who achieve self-integrity, there is joy in seeing younger generations benefit from their contributions (Gürses & Kilavuz, 2011).

Ultimately, from the nurturing role of the mother or primary caregiver to the influences of family, school, community, and society, each plays a crucial role in shaping and developing a person's personality. To create a healthy society of happy individuals, it is essential to address and fulfill an individual's basic needs at every stage and assist in resolving their conflicts effectively (Gürses & Kilavuz, 2011).

This theory emphasizes that early education programs should focus on a curriculum that supports both the cognitive and social development of children, as these aspects are

intertwined. Education should cater to children's psycho-social needs, recognizing that their personalities and social skills are shaped by societal influences. Therefore, parents and teachers play a crucial role in fostering children's psycho-social development (Duraku, 2021).

Erikson's theory explains developmental stages through both individual and social factors, making it an intergenerational model. He emphasized that from birth to death, human development requires interaction with social influences for physical and psychological maturity. Positive intergenerational communication contributes to healthy cognitive, emotional, social, and spiritual development. According to Erikson, well-guided and well-raised children can, in turn, positively influence and guide their parents. Essentially, if parents develop themselves well, they can raise their children effectively. Children need adults to serve as "trusted role models" (Gürses & Kilavuz, 2011).

2.2.3. Jean Piaget's Theory – Stages of Cognitive Development

According to the theoretical perspective of Jean Piaget children's knowledge is constructed through direct and active interaction with their environment. Piaget believed that children learn by being active participants, with the physical environment playing a critical role in their development. Education should aim to prepare children to acquire new knowledge when they are ready. In Piaget's view, children are seen as natural scientists who explore the world and develop their understanding through this exploration. Teachers are expected to support this process by providing guidance and resources while allowing children to develop independently without unnecessary interference. However, his assumptions that at early ages children are egocentric led, for a time, other researchers to consider that commitment to peer relationships in children would not be productive. According to Piaget, egocentrism begins to diminish during the concrete operational stage, which starts in the elementary school years. Social interactions, which Piaget emphasized as crucial for developing operational thinking, were thus initially considered more appropriate for older children (Duraku, 2021).

Piaget's theory posits that over time, an individual's cognitive apparatus, specifically logical structures, become increasingly adept at managing the complexities of experience. This bears a resemblance to Immanuel Kant's categories of understanding, which serve a similar function; however, unlike Kant's inborn categories, Piaget's cognitive structures develop over time. The developmental stages identified by Piaget are characterized by several criteria: they introduce new and qualitatively distinct forms of knowing; each stage integrates and builds

upon its predecessor; they follow an invariant sequence, meaning lower stages occur before higher ones; they are hierarchical, with each stage coordinating more dimensions or perspectives than the previous one; they are structural, organized by what Piaget called a structure-of-the-whole, grouping together cognitive strategies for different tasks; and they involve a phase of preparation, where the individual transitions from a lower to a higher stage, and a phase of consolidation, where the new stage is firmly established in the individual's mind (Lourenço, 2014).

Cognitive development proceeds through four stages (Lourenço, 2014):

1**. Sensori-motor stage (from birth to age 2 approximately):** During the sensorimotor stage, infants learn through interacting with the world using their senses and motor skills. This stage is characterized by the development of object permanence and early representational thought. Children relate to others and the world through their senses and movements, demonstrating what Piaget called practical intelligence. Children start to understand that objects continue to exist even when they cannot be seen. It is a stage also for the beginning to use symbols to represent objects and events.

2**. Preoperational stage (from ages 2 to 7 roughly):** In the preoperational stage, children begin to use language and think symbolically, but their thinking remains intuitive and egocentric. In this stage, children are capable of mental actions but they have not developed operations, which are mental actions that are reversible and governed by rules of transformation. For example, they cannot grasp that in a set of 10 flowers consisting of eight roses and two daffodils, there are more flowers than roses because daffodils are also flowers (class-inclusion) or understand the concept of number conservation. As preoperational children are more focused on perception, when asked in a class-inclusion task whether there are more flowers or roses, they tend to say there are more roses because they see many roses and only a few daffodils. Since both roses and daffodils are visible, unlike the abstract category "flowers," preoperational children compare the two visible groups rather than considering them as subclasses of the broader category, flowers.

3. **Concrete Operational stage (from ages 7 to 12 on average):** During the concrete operational stage, children start thinking logically about concrete events. They develop a better understanding of the concept of conservation and can perform mental operations on concrete objects. Understanding that quantity remains the same despite changes in shape and achieve the ability to think logically about concrete objects and events. So, the child is capable of logical thinking, but this thinking is grounded in concrete or tangible things that can be organized through seriation, class-inclusion, conservation, transitivity, and similar concepts. A

child who can perform these intellectual operations is also able to cooperate with others in social settings and engage in disputes or arguments in verbal interactions.

4. **Formal Operational stage (from ages 12 or 13 to 16, on average):** In the formal operational stage, adolescents develop the ability to think abstractly and reason logically. They are going to have an ability to think about concepts and ideas that are not physically present. Also, they will enhance ability to solve complex problems.

Piaget utilized biological concepts to explain cognitive development, using terms like adaptation, equilibrium, and assimilation to describe the evolution of thought processes. According to Piaget, intelligence is a process of adapting to the changing environment. In their interactions with the environment, humans employ structures that can be repeatedly applied and generalized to various situations. These structures are composed of schemas, which are behavioral patterns formed through direct and indirect actions in life, essentially serving as behavioral frameworks (Eroğlu, 2019).

Eroğlu (2019), on his paper describe that Piaget's theory of cognitive development is based on five key concepts:

Schema: Schemas are the foundational cognitive structures that allow individuals to represent and operate on the external world. Newborns use reflexive schemas initially but acquire new schemas through maturation, experience, and adaptation, evolving in quality and content as the child's perception changes.

Organization: Information in the mind is interconnected rather than isolated. Children naturally attempt to relate and integrate pieces of information, a mental functioning tendency Piaget termed organization.

Assimilation: This is the process of incorporating new situations, conditions, objects, events, and facts into pre-existing cognitive structures. It involves the symbolic transformation of objective reality into conscious structures.

Accommodation: Following assimilation, accommodation involves adapting by developing new behaviors that differ from previous patterns, allowing individuals to adjust to new experiences.

Equilibration: This is the process of balancing assimilation and accommodation. When there is a conflict between reality and one's perception of it, accommodation becomes necessary, leading to an imbalance that eventually resolves as the individual adapts.

2.2.4. Lev Vygotsky – Socio-Cultural Theory

Lev Vygotsky's socio-cultural theory posits that children are active participants in their learning, which occurs through social and cultural interactions. Vygotsky emphasized that social interaction is crucial for mental, linguistic, and social development, facilitated by more experienced members of society. He argued that children learn best through experiences aligned with their abilities and that the social environment plays a vital role in learning. Vygotsky highlighted the importance of cooperation among children and suggested that mixed-age groups could support children's achievements. He believed that teachers should provide support only when children struggle to complete tasks independently. Researchers have since advocated for greater emphasis on Vygotsky's theoretical perspective in early education, as it focuses more on the social and cultural context of children's thinking compared to Piaget. Despite this, both Vygotsky's and Piaget's theories continue to influence early childhood education practices worldwide (Duraku, 2021).

This theory emphasizes the critical role of social interaction, language, and cultural context in cognitive development. Unlike theories that prioritize individual maturation, Vygotsky posits that learning is fundamentally a socially mediated process (Vygotsky, 1978). This framework has substantial implications for understanding and supporting children with developmental delays and Autism Spectrum Disorder (ASD), particularly in educational and therapeutic contexts (Kozulin, Lebeer, Madella-Noja, Gonzalez, Jeffrey, & Rosenthal, 2003).

According to Vygotsky, the environment plays a crucial role in cognitive development. He stated that a rich social environment positively contributes to cognitive growth. Vygotsky defined the zone of proximal development as the gap between a child's actual development level, determined by independent problem-solving, and their latent development level, determined by problem-solving with adult guidance or collaboration with more skilled peers (Nicolopoulou, 2004). The zone of proximal development defines the limits between what a child can do independently and what they can achieve with guidance from a more knowledgeable other. Within this zone, learning is optimized through social interaction. These ideas laid the groundwork for instructional strategies like scaffolding and dialogic learning (Bodrova & Leong, 2007).

Vygotsky posits that while young children are born with various physiological and psychological predispositions that support distinctively human functions, their abilities are significantly shaped by the cultural practices and thought systems of their community. Unlike Piaget, who suggests that children independently construct their conceptual world, Vygotsky

asserts that children must assimilate the conceptual resources of the existing cultural world, which are transmitted to them by parents, adults, peers, and even researchers (Nicolopoulou, 2004).

According to Vygotsky, cognitive development is influenced primarily by environmental, social, and cultural factors rather than maturation. He emphasized that mental development occurs on an inter-mind level between individuals. Adults play a significant role in this process. When children work with adults or other children, their cognitive development is enhanced and strengthened. Cognitive growth progresses from behaviors regulated by others to those regulated by the individual. Thus, adults contribute significantly to children's cognitive development by providing meaningful actions and activities that help them achieve cognitive growth. Vygotsky's socio-cultural theory highlights the importance of society and culture in facilitating cognitive development. Vygotsky used this concept to describe tasks that children struggle to accomplish on their own but can successfully complete with the assistance and guidance of others. This concept represents the gap between the child's actual developmental level, demonstrated when solving problems independently, and their potential developmental level, achieved when solving problems in collaboration with more capable peers or under the guidance of an adult (Eroğlu, 2019).

Children with developmental delays often face difficulties in reaching age-appropriate cognitive, social, and motor milestones. Vygotsky’s theory provides a strength based approach that highlights the child’s potential rather than their current limitations. Educators and therapists can support development through scaffolding adjusting the level of support based on the child's current capabilities, thus enabling meaningful learning within the zone of proximal development (Bodrova & Leong, 2007). This perspective promotes inclusion and recognizes the dynamic nature of learning, particularly for children receiving individualized support plans (Kozulin et al., 2003).

Meanwhile autistic children often struggle with social reciprocity and communication areas this leads to Vygotsky’s theory of mediated learning. However, the theory’s focus on structured social interaction provides strong justification for implementing peer-mediated instruction, collaborative activities, and guided play to support their development (Fernandes, Amato, & Molini-Avejonas, 2020). Importantly, Vygotsky argued that assessment should include not only current skills but also latent capacities, which is especially relevant for understanding the diverse developmental trajectories seen in children with ASD (Kozulin et al., 2003).

Vygotsky's ideas have influenced a range of educational and therapeutic practices. Dynamic assessment, for example, evaluates a child's ability to learn when provided with assistance, reflecting the zone of proximal development concept (Kozulin et al., 2003). Narrative-based interventions and role play support language development, drawing from the Vygotskian emphasis on the mediating role of language in higher order of thinking (Vygotsky, 1978).

A child learns and develops within a social context that includes more knowledgeable and competent peers and adults who carry a cultural heritage. This transmission is primarily accomplished through the use of language and communication, and is supported by the use of cultural artifacts such as written documents, physical objects, and symbolic representations. According to this perspective, then, psychological development appears to progress from the social - interpsychological level to the individual - intrapsychological level (Nicolopoulou, 2004).

Vygotsky's Socio-cultural Theory offers a compelling framework for understanding and supporting children with developmental delays and autism. It shifts the focus from static developmental norms to a dynamic view of learning potential shaped by social interaction, language, and culture. This perspective continues to inform best practices in inclusive education, early intervention, and therapy, highlighting the enduring value of Vygotsky's contributions to developmental psychology (Bodrova & Leong, 2007; Kozulin et al., 2003).

2.2.5. Lawrence Kohlberg – Moral Development Theory

Kohlberg's theory posits that moral reasoning forms the foundation of ethical behavior, encompassing six identifiable developmental stages, each progressively more sophisticated in addressing moral dilemmas. Building on Piaget's work, which asserted that logic and morality evolve through constructive stages, Kohlberg extended the study of moral judgment beyond the age range examined by Piaget. Kohlberg's model is divided into three levels of moral reasoning: preconventional, conventional, and postconventional, each containing two stages. Each stage's social perspective and moral content reflect the interplay of innate and environmental influences (Nucci, 1997).

Kohlberg's theory of moral development is an adaptation of Piaget's theory of development. According to the that, moral reasoning develops at three predictable levels, named as pre - conventional, conventional and post-conventional. Within each level there are

two stages, and eachstage can be divided into a component of the social perspective and a component of moral content. The stages of moral development are (Vasta, Haith, & Miller, 2007):

1. The preconventional level consists stages of: a). *Persuasion or punishment* (begins around age 2 to age 6) – this is the stage in which all toddlers start (and some of the old ones stay in it). Rules are seen as fixed and absolute. Obeying the rules is important because it means you avoid punishment; b). *Individualism* (begins between ages 5 and 7, or as young as 9 in some cases) – as the child is growing, they start to see that other people have their own goals and preferences and so there is a need for negotiation. Decisions were made based on the principle "what is it in it for me?". For example: if I do what my mother and father ask, then they will reward me therefore I must do it.

2. The conventional level consists stages of: a) Social conformity (begins from age 7 to age 12) – since adolescence most people have developed this stage. Here is the sense of that being a 'good boy' or a 'pretty girl' and the emphasis is on living up to social expectations and norms due to the impaction social relationships; b) Law and order (begins at age 10 and averages up to age 15) – when the individuals reach the adulthood, they usually consider society as a whole while there are making judgments. The focus is in maintaining law and order by following the rules, doing one's duty, and respecting the authority.

3. The post-conventional level consists stages of: a) Social contract (begins as early as age 12) – on this point, the individua understand that there are different opinions on what is right and wrong and that the laws are really just a social contract on the basis of majority decision and an inevitable compromise. People in this stage sometimes disobey rules if there is a conflict with their personal values and will also argue in changing some rules if they no longer 'work'. While our modern democracy is based on the reasoning of the fifth stage; the last stage, b) Universal ethical principles – is the stage where the only few people stay at this stage all the time. This is based on abstract reasoningand the ability to put yourself in other people's shoes. At this stage, people have a principled conscience and will follow universal ethical principles regardless of what the official laws and rules are.

According to Kohlberg, people move through these stages in an orderly fashion from low to high: most children have preconventional morality, and most adults have postconventional morality. He estimates that only 20-25% of the adult's reache the post-conventional level of morality. During his later career, Kohlberg also describes the 7th "mystical stage" which he considers meta-ethical: here, the individua become capable of

problematizing any action or goal by asking themselves why it might be moral (Vasta, Haith, & Miller, 2007).

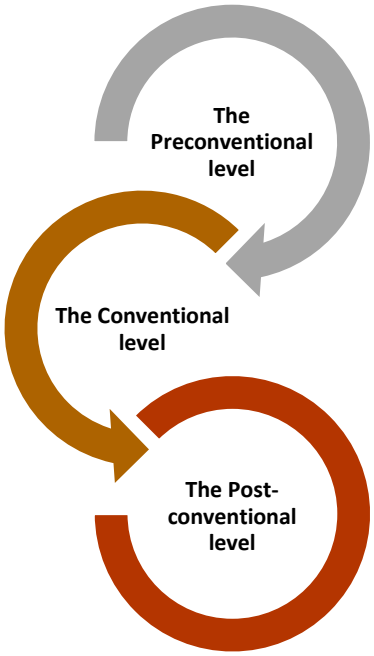

Figure 2: Three level of Kohlberg's moral development Vasta, Haith, & Miller, 2007).

The Preconventional level. Given the importance of the child's moral development with a vacant focus of the first stages, namely the pre- conventional level, which will initially affect the formation of reasoning and moral behavior and then the developmentand restructuring of other stages, then now I will give special importance to the first two stages - the pre-conventional level.

The preconventional level begins around age 2 to age 7 – it is the first level of moral development of Kohlberg'staxonomy where the individual's ethical principles are guided by the consequences of the action and the benefit given to him or her. At this level of development, the child will not be able to take someone else's piece of candy because he/she is afraid of the punishment that is guided by feelings of morality or having knowledge of laws. This consists of the first and second stages of moral development. The first two stages of the first level, preconventional morality occur before the individual becomes aware of social conventions.

In stage 1 (from about age 2 or 3 to about age 5 or 6), children primarily seek to avoid the punishment of authorityfigures such as their parents where you can measure and limit them.

In this stage (persuasion and punishment), individuals focus on the immediate consequences of their actions for themselves. For example, an action is perceived as morally wrong because the perpetrator is punished. "Last time Idid it and I'm sorry so I won't do it again." This can lead to a conclusion that even innocent victims are guilty in relation to their suffering. This is "egocentric", a lack of recognition of the perspectives of others that are different from one's own. There is no "respect for power or prestige" (Vasta, Haith, & Miller, 2007).

In stage 2 (ages 5 to 7, or in some cases up to age 9), children learn that it is in their best interest to behave well, because rewards will follow if they do. The second stage (individualism) advocates "what's in it for me," in which right behavior is determined by whatever is in the individual's best interest. The second stage of reasoning shows a limited interest in the needs of others, butonly to the point where it can further lead to the individual's own interests. As a result, concern for others is unfounded loyalty or inner respect, but rather in the "you kick my back, and I'll kick yours" mentality. The lack of social perspective at the preconventional level is quite different from the social contract (the fifth stage), as all actions are intended to serve the needs or interests of the individual himself. For the second phase, the perspective of the world often sees as relevant to morality.

According to Kohlberg most children have pre-conventional morality while most adults have post-conventional level of morality. The preconventional level is self-centered with self-centered behavior. A child with preconventional morality has not yet conceptualized society's conventions regarding what is right or wrong, but insteadfocuses primarily on the external consequences that certain actions may bring (Vasta, Haith, & Miller, 2007).

Each stage of moral reasoning forms an integral unit, so children use the same level of reasoning to cope with most problems and situations. Later studies using Kohlberg's new assessment method suggest that children's reasoning follows this pattern. In Kohlberg's studies, which involved long-term observation of children's moral development, it was frequently noted that children would sometimes deviate from their expected developmental stages and even regress to lower stages. However, subsequent studies have found that such deviations and regressions are actually very rare (Yilmaz, Bahçekapili, Sevi, 2019).

The Conventional level. At this level, individuals adhere to personal expectations and social order out of conformity and loyalty. This level comprises two stages: the "good boy-nice girl" orientation (Stage 3) and the "law and order" orientation (Stage 4). In Stage 3, good behavior is characterized by actions that please and help others, with individuals conforming to stereotypical norms of what is considered "natural" behavior. In Stage 4, moral behavior

involves fulfilling one's duties, respecting authority, and maintaining social order for its own sake (DeSantis, 2020).

The Post-conventional level. At the third level, individuals seek to establish moral values that are valid and applicable independently of their authority figures and social group. This level includes two stages: the social-contract legalistic orientation (Stage 5) and the universal ethical-principle orientation (Stage 6). In Stage 5, moral rightness is defined in terms of individual rights and standards that have been critically examined and agreed upon by society. In Stage 6, moral rightness is determined by decisions of conscience aligned with self-chosen ethical principles. These principles are abstract and ethical rather than concrete, emphasizing logical comprehensiveness, universality, and consistency (DeSantis, 2020).

Kohlbergians believe that moral judgment structures develop through cognitive processes like assimilation and accommodation, helping individuals deduce the most moral solutions to problems. They assume that all moral judgments arise from the same underlying structure, leading to consistent judgments about oneself and others. In contrast, evolutionary theorists suggest that evolved mechanisms from genetic variations in ancestral environments help individuals solve real-life adaptive problems (DeSantis, 2020).

2.2.6. John Bowlby – Attachment Theory

Attachment theory is a leading approach to studying interpersonal relationships, explaining the powerful impact of parental relationships on children's personalities. Developed by John Bowlby in the 1940s and made testable by Mary Ainsworth, the theory emerged from Bowlby's observations of children separated from their parents during wartime in England. Bowlby, a British psychoanalyst, faced criticism for challenging the dominant Freudian view that child development is primarily driven by internal dynamics, excluding external interpersonal experiences. Influenced by ethological research, including Konrad Lorenz's concept of imprinting, as well as evolution, cognitive-developmental psychology, cybernetics, and community psychiatry, Bowlby argued that children deprived of basic socio-emotional needs develop deficiencies in their own relationships. This concept, known as intergenerational transmission, is central to the theory (Jones, 2015).

Attachment Theory emphasizes the profound importance of early emotional bonds between children and their primary caregivers. Bowlby (1969) asserted that the quality of these

early attachments plays a pivotal role in shaping a child's emotional regulation, social behavior, and cognitive development throughout life.

Bowlby's attachment theory asserts that children are born with an attachment behavioral system that motivates them to seek or maintain proximity to a primary caregiver, usually identified as the attachment figure who protects the child from threats. This proximity-seeking is an instinctual affect-regulation mechanism. Key claims of the attachment behavioral system include: children seeking closeness to the attachment figure, especially in stressful situations (proximity-seeking), deriving comfort and security from the attachment figure (secure base), and protesting when the attachment figure is unavailable (separation). Consistent, responsive care leads to positive internal working models of oneself and others, fostering a sense of attachment security. This security helps children view the world as interesting and safe, encourages exploration and effective engagement with others, and validates seeking help during stress. Bowlby believed attachment security is crucial for healthy relationship formation. In other side, neglected or inconsistently cared-for children develop negative internal working models, using maladaptive affect-regulation strategies. These strategies include hyperactivation (clingy or coercive behaviors) and deactivation (distancing and thought suppression), leading to dysfunctional interpersonal relationships (Jones, 2015).

Attachment security, is characterized by trust and confidence between infants and toddlers and their parents, and it is crucial for early relationships. In rare cases where infants lack the opportunity to form an attachment with a trusted adult, their development can deteriorate rapidly. However, when these infants receive stable care and loving attention, they often show remarkable recovery, highlighting the importance of early intimate relationships. Historical evidence shows that even toddlers in institutional settings could thrive cognitively, emotionally, and physically when provided with loving care, such as being held, played with, and given attention by caregivers. Researchers studying attachment believe that children's first relationships, particularly with their parents or primary caregivers, meet two essential needs. First, the presence of a caregiver reduces a young child's fear in new or challenging situations, allowing the child to explore confidently (known as secure base behavior) and manage stress. Second, attachment relationships enhance a young child's sense of competence and efficacy, which can be referred to as the self-efficacy function of early attachment relationships (Shonkoff & Phillips, 2000).

Bowlby proposed that attachment behaviors such as seeking proximity to a caregiver during distress are biologically rooted and evolutionarily adaptive. A secure attachment relationship provides the child with a "secure base" for exploration and learning, and a "safe

haven" during emotional distress (Bowlby, 1969). These functions are universally significant but may manifest differently in children with developmental challenges. As emphasized by Ainsworth, Blehar, Waters, & Wall, (1978), caregiver sensitivity and responsiveness are essential determinants of attachment security, which become even more crucial when the child experiences developmental vulnerabilities.

A core tenet of Bowlby's attachment theory is that the attachment system, once established in childhood, remains relatively stable throughout an individual's life into adulthood. In adults, attachment style is commonly characterized by two dimensions: avoidance and anxiety A core tenet of Bowlby's attachment theory is that the attachment system, once established in childhood, remains relatively stable throughout an individual's life into adulthood. In adults, attachment style is commonly characterized by two dimensions: avoidance and anxiety (Jones, 2015).

Most research on early attachments has focused on the parent-child relationship, particularly the mother-infant bond. However, young children form close relationships with a variety of people, including relatives, childcare providers, and friends. Children can develop secure attachments to their fathers independently of their attachments to mothers. Grandmothers also play a crucial role as attachment figures, and their support of the mother can facilitate secure attachment in infants. Grandmothers are particularly important as caregivers during the early months and years of a child's life (Shonkoff & Phillips, 2000).

Early attachments are crucial not only as indicators of the parent-child relationship but also for their significant impact on various aspects of a child's development. These attachments have the most consistent and lasting influence on young children's social and emotional development. Additionally, they encourage the exploratory behavior essential for early learning and reinforce parents' efforts to support their child's learning. The securely attached child when become a young children, they tend to have a more balanced self-concept, advanced memory processes, a sophisticated understanding of emotions, a positive perspective on friendship, and greater conscience development compared to insecurely attached children (Shonkoff & Phillips, 2000).

Children with neurodevelopmental diversity including Autism Spectrum Disorder (ASD), intellectual disabilities, and other developmental delays may express attachment behaviors in atypical ways, yet research consistently supports their capacity to form meaningful and secure bonds with caregivers. Despite challenges in communication or social reciprocity, attachment development in these populations follows the same fundamental principles as in typically developing children, centering on caregiver sensitivity, consistency, and

responsiveness (Howe, 2006). This aligns with Bowlby's (1969) original framework, which emphasized that secure attachment is a function of the caregiver's attunement rather than the child's behavior alone.

Neurodevelopmental differences may require caregivers and professionals to expand their understanding of what attachment "looks like." For example, a child with a sensory processing disorder may resist physical closeness while still displaying strong attachment through seeking verbal reassurance or predictability in routines. Similarly, nonverbal children may express attachment through affective behaviors, such as vocalizations or object-sharing, rather than through conventional verbal communication. These alternative pathways reflect the adaptive nature of attachment behaviors in response to each child's neurobiological profile (Duschinsky, Greco, & Solomon, 2015).

Children with developmental delays often struggle with social, communicative, and cognitive skills, which can hinder the expression of typical attachment behaviors. Nonetheless, research indicates that such children are capable of forming secure attachments when caregivers adapt their responses to the child's developmental level (Howe, 2006). For instance, even in the presence of delayed verbal skills or limited emotional expression, children can develop secure attachment bonds through consistent, sensitive caregiving. These findings are consistent with Bowlby's view that attachment is not solely dependent on developmental milestones but on the quality of interaction and emotional attunement (Bowlby, 1969).

Children with ASD present a distinct profile of social communication difficulties, restricted interests, and sensory sensitivities. These traits can affect how attachment behaviors are expressed, leading to early misconceptions that autistic children cannot form secure attachments. However, empirical studies show that many children with autism do form secure attachments, particularly when caregivers are attuned to their unique social and communicative styles (Capps, Sigman, & Mundy, 1994). In a meta-analysis, confirmed that while children with ASD show a lower rate of secure attachment compared to neurotypical peers, the presence of secure attachment is still significantly associated with caregiver sensitivity—echoing Bowlby's central hypothesis (Rutgers, Bakermans-Kranenburg, van IJzendoorn, & van Berckelaer-Onnes, 2004).

In children with ASD, difficulties with joint attention, eye contact, and interpreting emotional cues can complicate traditional displays of attachment behavior, such as proximity seeking or social referencing. Nonetheless, these children often develop strong preferences for specific caregivers and rely on them for emotional regulation—hallmarks of attachment (Capps, Sigman, & Mundy, 1994). Importantly, Rutgers et al. (2004) showed that the rate of

secure attachment in children with autism was significantly predicted by caregiver sensitivity, not by the severity of autistic symptoms. This finding underscores the necessity of adjusting caregiving approaches to match the child's communicative and sensory profile.

From a developmental systems perspective, attachment formation is not merely a one-way process from caregiver to child; rather, it is co-constructed through repeated interactions over time. Children with developmental delays may have fewer opportunities for reciprocal interaction, but supportive environments and structured interventions can promote these interactions and strengthen attachment bonds (Van Ijzendoorn, Bakermans-Kranenburg, & Juffer, 2007).

In educational settings, emotionally responsive teacher-student relationships can function as secondary attachment bonds, particularly for children with insecure or disrupted primary attachments. These attachment-informed practices are vital in improving emotional stability and engagement in learning for children with neurodevelopmental disorders (Howe, 2006).

Additionally, research in inclusive and trauma-informed education emphasizes the role of teachers and peers as potential attachment figures or relational buffers. For neurodiverse children who experience disrupted home attachments or institutional care, stable school relationships can offer emotional scaffolding that compensates for early adversity. This reinforces Bowlby's later assertion that multiple attachment figures can contribute to a child's developmental security, especially when primary relationships are compromised (Versolato, de Jong, & Sterkenburg, 2017).

2.3. Children's Mental Developmental Delay

The earliest years of a child existence are most crucial for the person's development. What happens during childhood is crucial to the child's development trajectory. Highly significantly influence during early child development are nurture qualities of the environment as parents, family, community and caregivers where the child is grown, live and learn. It has to be in consideration that as a child has a biological base, he/her also is developing continuously in a social setting. There is always present a combination of biological and environmental factors, which is known as the nature vs. nurture factors, that directly determinants how a child develops him/her self. Life circumstances, especially early life experience have impact on early child development. The early infancy is recognized as the

most crucial developmental years of a person's life. While a child born into a biological family and grows up in a social setting, the combination of biological factors and characteristics of people's environments in which they are exposed influence child's long-term health consequences (Likhar, Baghel & Patil, 2022).

Children's mental developmental delay refers to a condition in which a child's cognitive, emotional, or behavioral development lags significantly behind their peers. This delay can manifest in various ways, such as difficulties in learning, understanding, processing information, regulating emotions, or interacting with others. Developmental delay can have diverse underlying causes, including genetic factors, prenatal or perinatal complications, environmental influences, or medical conditions. The mental development delay can present with a wide range of characteristics and abilities, depending on the severity of their condition, underlying causes, and individual differences (American Academy of Pediatrics, 2020). Early identification and intervention are crucial for children with developmental delay to support their optimal development and improve long-term outcomes (Centers for Disease Control and Prevention, 2020).

Children with mental development delay often exhibit delays or deficits in cognitive abilities, such as attention, memory, problem-solving, and language skills. These challenges may affect their ability to learn, understand concepts, and acquire new knowledge at the same rate as their peers. Social and emotional development may also be affected in children with mental development delay. They may experience difficulties in forming and maintaining relationships, understanding social cues, and regulating emotions. Social isolation and peer rejection may further compound these challenges. Some children may exhibit behaviors such as tantrums, repetitive movements, or difficulty transitioning between activities. Regarding to speech and language are they also can may have limited vocabulary, difficulty forming sentences, and challenges with articulation and pronunciation. Some children may rely on gestures, nonverbal communication, or alternative communication methods to express themselves. Children with mental development delay may struggle with adaptive skills such as dressing, feeding, toileting, and managing personal hygiene, requiring ongoing support and intervention. They may require ongoing support and assistance to complete daily tasks and activities necessary for self-care and social participation (APA, 2013).

Families of children with mental development delay may experience significant emotional, financial, and practical challenges. They may need to adjust their expectations, seek additional support services, and advocate for their child's needs within educational and community settings. Building a strong support network and accessing community resources

can help families cope with the stress and challenges associated with raising a child with mental development delay (Hagan, Shaw & Duncan, 2017).

Advocacy efforts play a crucial role in promoting the rights, inclusion, and equal opportunities for children with mental development delay. Advocates work to raise awareness, challenge stigma and discrimination, and ensure access to appropriate educational, healthcare, and community services for individuals with developmental disabilities (Hagan, Shaw & Duncan, 2017).

Mental development in childhood lays the foundation for lifelong learning, social interaction, and overall well-being. However, for some children, achieving developmental milestones can be challenging due to a variety of factors. (Glascoe, 2000).

2.3.1. Affecting Factors in Mental Development Delay of Children

The epigenetic pathways by which adversity experienced early in life can lead to lasting changes in disease risk through epigenetic pathways, which are part of broader adaptive processes shaping biological regulation. For instance, a fetus exposed to poor nutrition in the womb may undergo metabolic changes to adapt to an anticipated scarcity of food postnatally. However, if the postnatal environment is characterized by abundance and a sedentary lifestyle, it can lead to later problems like obesity and metabolic disorders (Shonkoff, Boyce & McEwen, 2009).

In early childhood there are present some developmental problems, such as language development problems are present in 5-10% of children, learning difficulties are present in 8%, and cognitive dysfunction are present in 1-1.5% of them. Most children have delays in more than one of development area. Factors that indicate the risk for developmental delay are the low education level of the mother, maternal depression or mental illness, poisoning, premature birth, malnutrition (growth delay and anemia), and the male gender, is one of the factors that is included. Developmental delay may be limited to just one area or may occur in two or more areas. As a result of the studies, it was found that the detection rate of children with developmental delays was only 30% by clinical judgment without using any tools, and 70-80% using tools. Further on, identifying children that are at the risk for developmental delay with standardized tools is crucial for early intervention programs. (Kahraman, Ceylan & Korkmaz, 2016).

Children from low-income families are particularly vulnerable to these effects due to their exposure to various stressors like violence, dysfunctional schools, maltreatment, and household chaos, compounded by limited access to healthy foods and high consumption of energy-dense products. Moreover, they may experience fewer positive interactions and opportunities compared to their more affluent counterparts, which can impact brain development, especially in areas related to emotion regulation, social behavior, reasoning, language skills, and stress response (Shonkoff, Boyce & McEwen, 2009).

Research indicates that children from lower socioeconomic backgrounds exhibit heightened activation of stress-responsive systems, and differences in parenting influenced by income and education levels can affect brain maturation, particularly in the prefrontal cortex. Animal studies also demonstrate that stress-related changes in brain circuitry can persist into adulthood, affecting emotional stability, decision-making, substance abuse, aggression, obesity, and stress-related disorders. The cumulative burden of multiple early-life risk factors may limit the effectiveness of interventions aimed at reversing these neurobiological and health consequences (Shonkoff, Boyce & McEwen, 2009).

Assessment of developmental delay typically involves monitoring developmental milestones, utilizing standardized screening tools, and observing the child's behavior and interactions by parents, caregivers, and healthcare professionals. Multidisciplinary evaluation by specialists such as pediatricians, developmental pediatricians, psychologists, or therapists may also be necessary to determine the specific needs of the child (Glascoe, 2000).

Accurate assessment is fundamental to identify and understanding the specific strengths and challenges of children with mental developmental delay. Psychometric tools, behavioral observations, and developmental screenings play a vital role in evaluating children's cognitive abilities, adaptive functioning, and socio-emotional skills. Moreover, a multidisciplinary approach involving psychologists, pediatricians, educators, and related health professionals is often necessary to obtain a comprehensive understanding of the child's developmental profile (Volkmar, Paul, Klin & Cohen 2014).

Intervention strategies for developmental delay encompass a range of approaches aimed at addressing the individual needs of the child. These may include early intervention programs, individualized education plans and various therapy services such as physical therapy, occupational therapy, speech and language therapy, and behavioral therapy. Family-centered approaches are also crucial for providing support and promoting the child's overall well-being (Shonkoff & Fisher, 2013).

Mental delay in children, also known as intellectual disability, is a condition characterized by limitations in cognitive functioning and adaptive behaviors. By understanding the multifaceted nature of mental delay and implementing effective interventions, healthcare professionals and caregivers can support the holistic development of affected children (Zablotsky, et. al., 2019).

Overall, developmental delay is a complex condition that requires a comprehensive approach involving early identification, tailored intervention, and ongoing support to help children reach their full potential (Spittle, Orton, Anderson, Boyd & Doyle, 2015).

2.4. Pervasive Development Delay

In 1994, American Psychiatric Association's fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) were included Autism-related clinical features in the Pervasive Developmental Disorder (PDD) section and classified the conditions as Childhood Autism, Asperger Syndrome (AS), Pervasive Developmental Disorder-Not Otherwise Specified (PDD-CTA), Rett Syndrome and Childhood Disintegrative Disorder. Diagnosed children typically demonstrated deficits in three areas: social interaction, communication, and repetitive/restricted behaviors. Symptoms included marked impairment in nonverbal behaviors such as eye contact and body posture, as well as stereotyped repetitive behaviors and loss of interest in social interaction, communication, and activities (Kadak & Meral, 2019).

A child with autism is loyal to his ideas and behaviors and conditions so if something suddenly changes in them, then the child start to feel fear. This cases, can make to child to react with chaotic behavior expressing anxiety. Because in the situations that conditions are changed the it starts to become un-usual conditions for that child, it also can be the behavior and reactions of a familiar person. Even the smallest changes can affect the child (Manukyan, 2023).

“Autism” derives from the word “autós” which in Greek means “self”. Paul Eugen Bleuler was the first one whom used the word autism while he observed in schizophrenic patients in 1908. Later on, in 1943 Leo Kanner used the word autism for describing children who are not diagnosed as schizophrenic or any other psychiatric disorder but the one who has social isolation and language disorder. Those children have difficulties to create relationship

and interaction, difficulties to take part in social activities and expressing repetitive behaviors (Kadak & Meral, 2019).

Austrian-American physician Leo Kanner published his article titled "Autistic Disturbances of Affective Contact" in 'The Nervous Child' journal where was described his work with 11 children with disorder where eight boys and three girls between the ages of 2 – 8 who displayed extreme preferences for solitude, who need sameness, persistent and repetitive behaviors, lack of imagination and language difficulties. He differentiates this condition from childhood schizophrenia. He also noted that five of eleven children had macrocephaly and described their parents with less interest in science, literature or art than other people. Later on, he described routine preference, social awkward and comorbid of anxiety that is often seen in first degree relatives. Dr. Kanner considered that early infatile autism was due to cold, detached and rigid parents (Blake, Hoyme & Crotwell, 2013).

Then, in 1944, Hans Asperger identified the group among autistic children with socialization deficits but without linguistic abnormalities (Kadak & Meral, 2019). An Austrian pediatrician Asperger, published his article where were describing four boys between ages 6 to 11 with what he called 'autistic psychopathy of childhood'. What was interested that, Asperger noticed that some of their parents had the similar personality traits or were eccentric, and he considered this as a genetic link to autism. But he had a positive approach in describing higher function forms of autism. Where some of his patients became a professor, and one of them became a Nobel Laureate in literature (Blake, Hoyme & Crotwell, 2013).

Autism is a developmental disorder that affects many aspects of child development and the way how a child sees and learn the world through his/her own experiences. Children with autism has no interest for social contact but is does not mean that they have lack of desire for affiliation but it is relative (Siegel, 1996).

Autism spectrum disorder (ASD) is a neurological development disorder that is characterized by emotional and social difficulties, and also together with problems of communication and patterns of restricted behavior. Children with ASD show difficulties when attending to socially relevant areas and as a consequence they do not adequately can analyze gestures and social information from social interaction. They appear to have difficulty when acquiring basic social knowledge that neurotypical children learn easily. This specific deficit for paying spontaneous and to the activities of others is present in the children from the first year of life (Camero, Martinez & Callego, 2020).

Autism takes place of a group of disorders known as the pervasive developmental disorders (PDD). Based on the fact that autism is classified as a developmental disorder means

that there are conditions a child is believed to be born with, or born with a potential for developing. Autism is the result of an abnormality in the structure and function of the brain. But not yet we have detailed information about how nerve cells grow and work, neither we cannot say that structural differences of an autistic brain arise during pregnancy, either some injuries of brain or due to a genetic factor. There are also children that are affected in the areas of social and communication development with a manner of a child with syndrome of autism that is diagnosed with PDD not otherwise specified (PDD - NOS). Among the category of PDD-NOS is Asperger's syndrome, Fragile X syndrome, Rett syndrome and childhood disintegrative disorder. About eighty percent of children with autism (PDD) also have some degree of mental retardation. And children with diagnosis of PDD-NOS are less often mentally retarded but half of them have some degree of mental retardation too. By the time they grow up, about ten percent of children with autism have normal intellectual functioning in both verbal and nonverbal abilities. Usually autism affect boys 4 – 5 time more as affect girls. Only when autism form is inherited from family girls are twice affected than boys. Related with genetic aspect it is yet unknow how autism is inherited only from sibling or a first cousin and not with more distant autistic relatives (Siegel, 1996).

There where wide differences in symptom severity, both within the same diagnoses and within PDD, and it makes difficult to differentiate effectively one disorder from another, therefore DSM-5 has grouped the separate diagnostic headings under the umbrella of PDD into the broader category known as Autism Spectrum Disorder (ASD). Diagnostic criteria have been reduced to two areas instead of three core areas: social communication and interaction and repetitive behavior. ASD, now, can be diagnosed when a patient exhibits at least three symptoms in the area of social communication and at least two symptoms in the area of limited interest/repetitive behaviors. In the sensory dimension has been added the repetitive behavior criteria, where there are sensory hypersensitivity or hyposensitivity or excessive interest. In addition, although there are verbal and non-verbal communication deficiencies in DSM-5 that negatively affect their social relationships, for children who do not meet the ASD criteria because there are no repetitive behaviors was defined as a new diagnosis as Social Communication Disorder (SCD) (Kadak & Meral, 2019).

One of the symptoms that is showed in children with ASD is visual in-attention. So, visual attention could serve as a characteristic for identification and diagnosis of children at risk of having ASD. It is possible to find studies that uses certain task of gaze following that is linked with children with ASD, according to this has been made observations that eye movements in children at risk of autism, between six and nine months, show significantly lower

gaze fixation in comparison with the neurotypical group (Wass, et al., 2015). Babies that carry out shorter gaze fixations were afterwards diagnosed with autism by the age three. (Camero, Martinez & Callego, 2020).

During the study is has been observed that a two-year-old child diagnosed with ASD show greater preference in fixing attention on geometric figures than on the human face. Likewise, significant differences have been found in children with ASD, compare to neurotypicals, in changes during a word task since the first group do not move their gaze towards an object when they hearing the word (Chita-Tegmark, et. al., 2015).

Studies shows that autonomic nervous system in children with ASD has atypical regulation which can be contributing to the difficulties they show in social processing (Camero, Martinez & Callego, 2020).

Autism Spectrum Disorder is a neurodevelopmental condition that significantly impacts children's development. It is characterized by persistent deficits in social communication and interaction, as well as restricted, repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2013). The effects of ASD on children's development are far-reaching, affecting various domains, including social skills, language improvement, cognitive abilities, and adaptive functioning.

Numerous studies have highlighted the intricate relationship between autism and developmental processes. Research has shown that children with ASD often experience delays or atypical development in foundational skills such as joint attention, imitation, theory of mind, and emotional regulation (Dawson, Toth, Abbott, Osterling, Munson, Estes & Liaw, 2004).

In terms of social development, children with ASD may struggle with initiating and maintaining interactions, interpreting and responding to social cues, and developing empathy and perspective-taking abilities (Kasari, Freeman & Paparella, 2011). Language and communication deficits are also common in ASD, with many children experiencing challenges in expressive and receptive language skills, as well as pragmatic language use (Tager-Flusberg, 2006). Additionally, cognitive abilities may vary widely among individuals with ASD, ranging from intellectual disability to areas of exceptional talent or intelligence (Happé & Frith, 2009).

It is crucial to understand how autism affects these domains of development as it informs the design and implementation of tailored interventions and support strategies for children with ASD. By elucidating the specific developmental challenges associated with the disorder, researchers, clinicians, and educators can develop evidence-based practices that facilitate optimal growth and well-being for children on the autism spectrum.

Even there are many studies for children with Autism Spectrum Disorder, still there is a great need to investigate problems related with their everyday life challenges.

2.4.1. Epidemiology of Autism Spectrum Disorder

The epidemiology of Autism Spectrum Disorder refers to the study of its prevalence, incidence, and distribution in populations. Over the past few decades, there has been a noticeable increase in the reported prevalence of ASD worldwide, sparking interest in understanding its epidemiological patterns and exploring potential contributing factors. The prevalence of ASD varies globally, with estimates based on different studies and methodologies. According to the Centers for Disease Control and Prevention (CDC) in the United States, as of 2020, the prevalence of ASD among children is estimated to be around 1 in 54 (CDC, 2020). However, it is important to note that reported prevalence rates may differ due to variations in diagnostic criteria, screening methods, and population sampling.

In the first epidemiological studies, the prevalence of autism was estimated to be approximately 4/10,000 and although the same diagnostic criteria were used in the prevalence of autism, there have been serious increases in the last few decades (Fombonne, 2005). Kadak & Meral (2019) on their study reported that according to World Health Organization, 2012 report the prevalence of ASD is 1% on average, while more recent compilations estimate that ASD is seen at a rate of approximately 1.5% in developed countries. Related with this, Center for Disease Control and Prevention in 2014 reported that the prevalence of ASD is in the same percentage, while mental disability is accompanied in approximately 45% of the cases, and in 32% of cases can be present skills and developmental regression.

Regarding to gender differences, ASD if more common in boys than in girls. In studies which are conducted from clinical sample, it was found that 4-6 times are more common in boys than in girls, also in the community sample, it was showed 2-3 times more common in boys. Girls with ASD have lower IQ but less repetitive stereotypic behaviors. So, because girls have higher well-functioning ability it may be undiagnosed (Fombonne, 2005). Also, according to the study from Loomes, Hull, Mandy & Lai (2017) it was found that autism is more commonly diagnosed in males than females, with estimates suggesting a male-to-female ratio of around 3 to 4:1. While the reasons for this sex difference are not entirely understood, it could be a result of both biological and social factors.

The causes of the increased prevalence of ASD are still being elucidated. While some of the observed increase can be attributed to improved awareness, changes in diagnostic criteria, and better identification practices, there is ongoing research to determine the extent to which other factors, such as genetic, environmental, and sociodemographic influences, contribute to the rising prevalence. Understanding the epidemiology of autism is essential for effective planning and allocation of resources to support individuals with ASD.

2.4.2. Affecting factors of autism spectrum disorder

Experiences during early childhood, even before birth, significantly shape a child's long-term health, education, and economic prospects. The first six years are particularly crucial, as experiences during this period can become physiologically imprinted and influence outcomes throughout life, both positively and negatively. Disruptions during early childhood can have substantial impacts on behavior, learning, and adult health. However, early and frequent intervention can effectively promote favorable outcomes and mitigate the effects of negative experiences. Early childhood development programs, including education, family support, and poverty reduction initiatives, yield substantial long-term benefits that surpass their initial costs. Overall, early childhood development plays a pivotal role in determining health, well-being, and learning abilities throughout life (Likhar, Baghel & Patil, 2022).

The causes of autism are complex and multifactorial, involving a combination of genetic, environmental, and developmental influences. While the exact causes remain unclear, research suggests that both genetic and environmental factors play a role in the development of ASD.

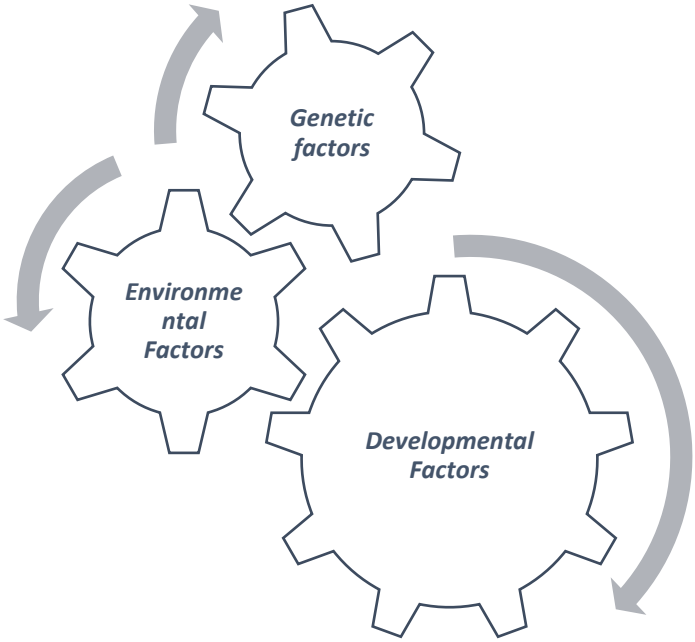

Figure 3: ASD affecting factors (Hallmayer, et. al., 2011).

Genetic factors. Even there is a possible genetic cause of autism but it is very difficult to say what really can cause a case of autism. It is linked to a variety of risk factors as genetics, and associated with pregnancy and delivery. A combination of factors - genetic factors, related to pregnancy and delivery determine whether a specific child develops autism or not.

There is no doubt that genetic factors play role in the early growth of autism, so the identification will have a major impact on understanding, as well as in treating of those cases. Knowledge of the genetics and other factors will reveal the risk for autism, diagnostic outcome and treatment responsiveness (Courchesne, Pierce, Schumann, Redcay, Buckwalter, Kenedy & Morgan, 2007).

Evidence from numerous studies indicates that genetic factors contribute significantly to the risk of developing ASD. It is believed that a combination of genetic variations and mutations may increase the susceptibility to the disorder. Twin and family studies have shown a higher concordance rate for ASD among identical twins compared to fraternal twins, indicating a genetic influence (Tick, Bolton, Happe, Rutter & Rijsdijk, 2016). Various genes associated with brain development and synaptic function have been implicated in the development of ASD (Bourgeron, 2015).

According to a study who had one of the largest population on twin-based study of autism reach the result that genetic factors play an important role but it became lower impact

than prior studies. The study result suggests that environmental factors common to twins explain about 55% of the liability to autism. While in other studies the genetic factors overestimated, the rate in dizygotic twins may have been underestimated, and so the other finding tried to underline the heritability of autism with less emphasis on potential environmental causes. Nongentic risk factors that may index environmental influences include parental age, low birth weight, multiple births and maternal infections during pregnancy (Hallmayer, Cleveland, Torres, Phillips, Cohen, Torigoe, Miller, Fedele, Collins, Smith, Lotspeich, Croen, Ozonoff, Lajonchere, Grether & Risch, 2011).

Environmental Factors. Environmental factors are also believed to contribute to the development of ASD, although their exact role is still being investigated. Prenatal exposure to certain environmental factors, such as maternal infections (e.g., rubella), use of certain medications (e.g., valproic acid), and exposure to certain chemicals (e.g., pesticides), has been associated with an increased risk of ASD (Rosenbaum & Rubin, 2017). However, it is important to note that these factors are not a direct cause of ASD but may interact with genetic vulnerabilities.

In the study that was conducted by Tick et. al. (2016), where made comparisons within different twin studies of heritability of autism. For example, the study from Ronald and Hoekstra (2011) demonstrated the proportion of diagnostic criteria for twins are 88% in monozygotic and 31% in dizygotic, which consistent with a high proportion of heritable effects on ASD. Also, a study of Hallmayer et. al. (2011), showed the significant clinical sample accounted by shared environmental factors of 58% and only moderate genetic factors with 38%. In the same way, a study by Frazier et. al. (2014), reached the higher estimate of shared environmental effects with 64-78%, which is depending on symptom measure. One of the important findings of the study is that the correlations in dizygotic twins will increase in relative to the monozygotic twin correlations, consistent with increasing the effect of shared environment (Tick et. al., 2016).

Developmental Factors: Early brain development is crucial in understanding the development of ASD. Disruptions or abnormalities in early brain development, particularly during the prenatal and early postnatal periods, may contribute to the development of ASD. These disruptions may include alterations in neural connectivity, synaptic pruning, and the development of specific brain regions involved in social communication and sensory processing (Johnson, 2010).

It is important to note that ASD is a highly heterogeneous disorder, and the relative contribution of these factors may vary from individual to individual. Additionally, it is likely that ASD arises from a complex interplay of multiple genetic and environmental factors, with each factor contributing to varying degrees. Further research is needed to gain a more comprehensive understanding of the causes of ASD and how these factors interact. A better understanding of the underlying mechanisms can help inform early identification, intervention strategies, and potential targets for therapeutic interventions.

2.5. Importance of evaluation in early childhood development

The early identification and intervention of developmental disorders are crucial for ensuring the well-being of children and are a fundamental responsibility of pediatric professionals within the medical home doctor. There is a comprehensive system for developmental surveillance and screening, designed to facilitate the early detection of conditions that may impact a child's early and long-term developmental outcomes. These conditions include, but are not limited to, autism spectrum disorders, hearing impairments, intellectual and motor disabilities, behavioral disorders, and other medical conditions (Lipkin & Macias, 2020).

Evaluation can be define as the ongoing process of collecting, organizing, and interpreting data on children's learning and development to make informed decisions. With growing recognition of the significance of early childhood and education, there has been a rise in studies focused on evaluating children, educational settings, and programs. Various entities, including government agencies, private institutions, and non-governmental organizations, are conducting multifaceted evaluations in this domain (Tunçel & Zambel, 2017).

In evaluation process it is important to integrate developmental surveillance into every health supervision visit, supported by the administration of standardized screening tests at the 9-, 18-, and 30-month pediatric visits. When developmental concerns are identified through surveillance at any point, they should be promptly addressed through standardized developmental screening or direct referral to specialized intervention and medical care. Particular attention is recommended during the 4 to 5 years, to do a well child visit, as a priority to the child's entry into elementary education, with additional screening conducted if concerns arise. The process of developmental surveillance involves active communication between

pediatricians and early childhood professionals in settings such as child care, preschools, professional program leads, and other related services, including home visitation and parenting programs. This communication is especially important in the context of developmental screening (Lipkin & Macias, 2020).

Evaluation can be defined as the process of continuously collecting data on children's learning and development and then organizing and interpreting the information obtained in order to make correct decisions regarding child's education (Bredekamp, 2015).

The identification of developmental concerns should trigger a comprehensive response, including developmental and medical evaluations, diagnosis, counseling, and treatment, along with early developmental intervention. Children who are diagnosed with developmental disorders are recognized as having special health care needs, necessitating the initiation of chronic condition management within the pediatric medical home (Lipkin & Macias, 2020).

Formal and unformal evaluations are the determinators of the evaluation. Standardized tests are the ones in which application and scoring criteria are determined in advance and all children are evaluated under the same conditions. Standard tests must have validity and reliability (Blake & Wise, 2014).

According to the information obtained the importance of an assessment in early childhood and how it should be done, in the developing and changing time, it is seen that evaluation methods and tools must be constantly renewed in line with the needs and in a way that will contribute to the development of children. In addition, it can be said that it would be more appropriate to evaluate children by developing measurement tools with standardized materials that evaluate children's development holistically, through observations and working directly with children, in which families and teachers are also involved in the evaluation process, and also it has to be culturally adapting measurement tools with validity and reliability studies (Tunçeli & Zembat, 2017).

As a conclusion, the evaluating of early childhood development has the unique challenges compared to older children. The early childhood learning is distinct due to rapid and individualized development heavily influenced by the environment. One-to-one assessments are recommended for more accurate results, but they should be brief or spread out due to children's short attention spans. This poses time management challenges. To ensure accurate and beneficial evaluations, certain principles must guide the planning and implementation phases. These principles aim to optimize evaluations for the benefit of children (Tunçeli & Zembat, 2017).

Theoretical perspectives and information related to IQ (Intelligence Quotient) are explored less frequently in academic studies and more in professional articles, with public opinion often shaping perceptions in both positive and negative about the value and validity of IQ testing. The concept of IQ it is not necessarily well-understood, especially within educational and child psychology contexts. The IQ tests have historically been a point of contention, particularly among educators and psychologists. Although, these debates are still relevant, but they have diminished in intensity (Vasta, Haith & Miller, 2007).

Jiban (2013), on his work has described that according to four international organizations (Division for Early Childhood -DEC, National Association for the Education of Young Children – NAEYC, National Education Goals Panel – NEGP, and Head Start National Reporting System -NRS) that conducted studies on this field determined two main methods for early childhood evaluating; multiple method and authentic method. In *multiple method* the importance is to use combination of the methods, as observation, interview, portfolio, standardize test, checklist and scales as the potential assessment tools during early childhood for providing deeper evaluation for child's current situation. The other side, *the authentic method*, is an observation where the evaluation has to be during games or activities, which are child's natural life. It is described as an interactive method and child centered. The information obtains by exhibited a behavior in many environments and situations.

Many measurement tools have been developed to evaluate and describe childen's development in all developmental areas (Tunçeli & Zembat, 2017).

Piaget's framework, which focuses on normative stages of child development, contrasts with the psychometric approach of IQ testing, which is more concerned with identifying individual differences in intelligence. While Piaget's theory is normative and applies broadly to all children, IQ testing seeks to differentiate between children, potentially labeling some as more or less intelligent than others. While Piagetian theory is more aligned with theoretical understanding, IQ tests have often been used for more practical purposes, such as determining the type of education a child should receive. The passage concludes by indicating that the chapter will review these IQ tests from both a theoretical and practical perspective, examining their strengths and weaknesses and considering alternative approaches to studying intelligence (Vasta, Haith & Miller, 2007).

While the tests themselves are often misunderstood, the concept of IQ is widely recognized and the measuring of the intelligence is mainly applied in children. The origins of IQ testing are dating back to Alfred Binet and Théodore Simon in 1905, where the pragmatic purpose of these tests in identifying children who required special educational support. The

Binet-Simon test, and its later iterations like the Stanford-Binet, aimed to differentiate children based on their intellectual capabilities, categorizing them to better tailor educational interventions (Vasta, Haith & Miller, 2007).

Furthermore, the reliability and validity in IQ testing it is important. For a test to be considered reliable, it must consistently produce similar results under the same conditions. Validity, on the other hand, is concerned with whether the test actually measures what it claims to measure intelligence. While IQ tests are reliable, their validity is more contentious, especially when it comes to predicting academic success and broader life outcomes (Vasta, Haith & Miller, 2007).

In the other side, for avoiding the implications of IQ testing, it is suggested that while these tests provide valuable insights into intellectual differences among children, they should not be used in isolation to make sweeping conclusions about a child's potential or abilities. The intelligence test has to takes into account a variety of cognitive, social, and environmental factors (Vasta, Haith & Miller, 2007).

It is important to have in a consideration the structure of intelligence and its measurement within the framework of psychometric approaches. In the same time has to be addressed the fundamental problem of defining and organizing intelligence, a challenge that has engaged both psychometricians and proponents of other psychological theories, such as Piaget's developmental theory. The central issue revolves around whether intelligence should be understood as a single, unified ability or as a collection of distinct. The psychometric tradition, which relies heavily on statistical methods to analyze data from intelligence tests, has produced varying conclusions about the structure of intelligence. These methods often involve factor analysis, a statistical technique used to identify underlying relationships between different cognitive tasks. Some theorists, like Spearman, have proposed a model of general intelligence (g-factor) as a dominant factor, while others, like Thurstone and Guilford, have argued for multiple, independent intellectual abilities (Vasta, Haith & Miller, 2007).

There is also a debate whether intelligence remains stable throughout life or changes as a person grows. Some theories suggest that while certain intellectual abilities are highly differentiated in early childhood, they may become more integrated as the child matures. Conversely, other views propose that the basic structure of intelligence remains consistent, with changes occurring primarily in the expression of these abilities rather than their organization. Finally, the ongoing debates and challenges in the field of intelligence research, particularly regarding the validity of different models and the implications of these models for understanding individual differences in cognitive abilities. The complexity of intelligence as a

construct, combined with the methodological difficulties in measuring it accurately, suggests that this area of research will continue to evolve as new data and analytical techniques become available (Vasta, Haith & Miller, 2007).

Another discussions are about the concept of intelligence stability and the ability to predict future intellectual performance from early measurements. The research on the stability of IQ from infancy through later childhood and adolescence, noting that while there is some continuity, the predictive power of early IQ tests is limited and varies depending on the age at which the test is administered and the specific abilities being measured. This has important implications for educational and psychological practices, particularly in identifying children who may require special support or enrichment (Vasta, Haith & Miller, 2007).

2.6. Treatment and working with Mental Development Delay and Pervasive Development Disorder

In recent years, the affective and behavioral difficulties in children with mental development delay and pervasive development disorder have been recognized as resulting from programmed disturbances in early life interpersonal relationships with their caregivers, which affect the development of stable internal representations of self and other (Bowlby, 1988), and compromise the improvement of social understanding and skills. While research students and clinicians appear to accept this viewpoint, there is very little literature directly addressing the mental health needs of this clinical group, and there is a paucity of convincing evidence-based practice in this area for child-focused therapy. Typically, system-focused approaches (Hughes and Douglas, 1997) based on modification of the environment and caregiver training are commonly used with the assumption that this will benefit the child. However, there are few well-controlled studies applying these interventions which make it difficult to know exactly how children's symptoms will respond.

Presently, intervention studies for children with delays focus on skill improvement and maladaptive behavior reduction using behavioral and cognitive-behavioral models, which though often effective, fail to address the underlying emotional causes of these deficits. Furthermore, they lack a formulation that can account for the broad pathology and differing symptom presentation within this highly heterogeneous clinical population. This often leaves parents uncertain as to why their children are receiving such therapies and whether it is different from what they receive at school. An alternative developmental approach of Specific Emotion

Focused Therapy (SIFT) (Kennedy, 2005) provides a theoretical basis for working directly with children's emotional problems, but does not have a specific model of therapy and to date has not been tested with children with moderate learning disabilities (Brookman-Frazee, Stadnick, Chlebowski, Baker-Ericzen & Ganger, 2012).

2.7. Integrative – Psychodynamic Therapy as a treatment approach

In recent years, it has begun to be accepted the need for an interdisciplinary approach when we are dealing with development-related issues (Tunçeli & Zembat, 2017).

Scientific and societal pressures have prompted changes in traditional psychoanalysis, advocating for a more active therapist stance and greater transparency in therapy. Studies emphasize the significance of transparency in the therapeutic relationship, particularly in lessening the hierarchy between therapist and patient. Research on the therapeutic alliance has yielded tools to observe, improve, and restore the alliance, enhancing the effectiveness of psychotherapy (Vinnars, Dixon & Barber, 2013).

Integrative therapy for children has gained significant attention in recent years due to its holistic approach towards addressing various developmental, emotional, and behavioral concerns. This integrative therapy techniques tailored for children, incorporating evidence-based practices from multiple therapeutic modalities including play therapy, art therapy, and mindfulness-based interventions. The effectiveness, applicability, and challenges associated with each approach are discussed, highlighting the importance of a personalized and integrative approach in promoting children's mental health and well-being. Children encounter a myriad of challenges during their developmental journey and integrative therapy approaches offer a comprehensive framework that incorporates various therapeutic techniques to address these challenges. By combining elements from different therapeutic modalities, integrative therapy aims to provide a tailored and holistic approach to meet the unique needs of each child (Angold, Costello & Erkanli, 2000). Psychodynamic psychotherapy aims to express feeling, understanding meaning of behaviors, activity and coping strategies. It emphasizes the importance of including parents also in psychoeducation process (Hoffman & Rice, 2012). By psychodynamic therapy we mean following up the children needs, his/her abilities, to see the dynamics during the process and to achieve the best version of each child. And the therapeutic process it is semi structured. If a child cannot communicate in words, regarded to this, paly therapy should be recommended for innervation. The simultaneous psychotherapy with child

and parents by the same therapist provides of understanding the impact of the behaviors, as well as emotions (Ozga, 2022).

Integrative therapy for children offers a versatile and comprehensive approach to addressing a wide range of developmental, emotional, and behavioral concerns. By combining techniques from cognitive-behavioral therapy, play therapy, art therapy, and mindfulness-based interventions, therapists can tailor treatment plans to meet the unique needs of each child. While evidence supporting the effectiveness of integrative therapy continues to grow, further research is needed to elucidate its mechanisms of action and optimal implementation strategies. Nonetheless, the holistic and personalized nature of integrative therapy holds promise in promoting children's mental health and well-being (Tattersall, Rolli, & Butwell, 2024).

Issue of global health inequalities, particularly in mental health treatment, with a significant treatment gap in low- and middle-income countries, among migrants, refugees, and indigenous populations. However, there's a need to culturally adapt these interventions to suit diverse populations. Cultural adaptation involves modifying treatment components and procedures to align with the cultural backgrounds of target groups. Existing frameworks provide guidelines for this adaptation process, emphasizing the importance of considering language, cultural values, social contexts, and historical factors. Studies indicate that culturally adapted interventions are more effective, but there's a lack of research comparing culturally adapted and non-adapted (Spanhel, Balci, Fedhalm, Bengel, Baumesitere & Sander, 2021).

2.7.1. Current treatment approaches for children with mental development delay and pervasive development disorder

Early intervention services play a crucial role in addressing the unique needs of children with ASD. Evidence suggests that intensive behavioral interventions initiated during the early developmental period can lead to significant improvements in communication, social skills, and adaptive behaviors (Dawson et al., 2010). Applied Behavior Analysis (ABA) is a widely recognized and empirically supported approach for teaching new skills and reducing problem behaviors in children with ASD.

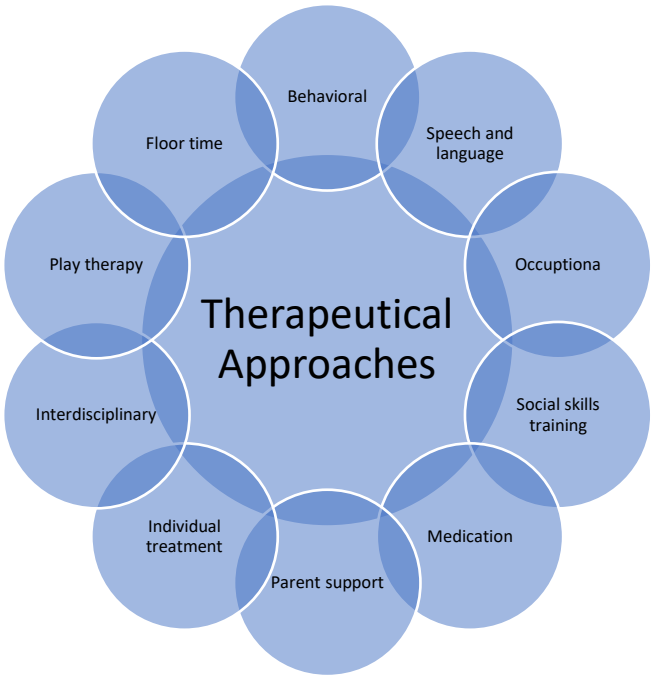

Figure 4: Treatment approaches on working with children.

The treatments for autism typically involve a multidisciplinary approach that addresses the individual's specific needs and challenges. Some common treatments are presented below:

Behavioral therapy: Behavioral therapy focuses on modifying maladaptive behaviors and teaching adaptive skills through systematic reinforcement and shaping techniques. In children with developmental delay, behavioral therapy interventions aim to address specific behavioral challenges, such as aggression, noncompliance, or self-injurious behavior, while promoting the improvement of functional skills (Smith, Klorman & Mruzek, 2015). Applied Behavior Analysis (ABA) is an evidence-based approach that focuses on teaching and reinforcing positive behaviors while reducing negative behaviors. It helps individuals with autism learn new skills and reduce problematic behaviors. ABA principles that consistent the use of operant conditioning, shaping and chaining. An intervention approach that uses teaching strategies of ABA are effectively for improving outcomes of young children with autism. (Dawson, Rogers, Munson, Smith, Winter, Greenson, Donaldson & Varley, 2010).

Behavioral interventions, including ABA, focus on identifying and modifying specific behaviors associated with ASD. These interventions utilize principles of reinforcement, shaping, and prompting to teach functional skills and reduce maladaptive behaviors (Smith et al., 2015). Positive behavioral supports, such as visual schedules, token economies, and social stories, are commonly employed to enhance communication and social interaction.

Cognitive Behavior Therapy (CBT) integrates cognitive and behavioral techniques to address cognitive distortions and maladaptive behaviors. In children with mental developmental delay, modified CBT approaches can help address comorbid mental health issues such as anxiety, depression, or disruptive behavior disorders. Adaptations may include simplified language, visual aids, and experiential exercises to accommodate cognitive limitations (Reaven, Blakeley-Smith, Culhane-Shelburne & Hepburn, 2009).

According to the cognitive-behavioral therapy (CBT) ASD as a disorder of information processing, leading to mental health problems and consequences in social life and due to this conceptualization, the interventions are focused on developing abilities to compensate for information processing difficulties. CBT therapy aimed to develop emotion regulation skills and the ability to cope with social and communication impairments. Although evidence of the efficacy of CBT for children with ASD provided that this type of therapy does not sufficiently take into account the child's developmental level and individual differences (Ozga, 2022).

Speech and language therapy: Many individuals with autism experience difficulties in expressive and receptive language skills. Speech and language therapy aims to improve communication abilities, including speech articulation, vocabulary development, pragmatic language skills, and understanding of nonverbal cues (Paul & Weetherby, 2005). Augmentative and alternative communication (AAC) systems may be recommended for nonverbal or minimally verbal children to facilitate communication.

Occupational therapy: Occupational therapy (OT) addresses sensory processing difficulties, motor coordination deficits, and activities of daily living skills in children with ASD. Sensory integration therapy, sensory diets, and adaptive equipment are commonly utilized to address sensory sensitivities and promote self-regulation (Case-Smith & Arbesman, 2008). Occupational therapy interventions also focus on improving fine motor skills, handwriting, and independence in self-care tasks. Occupational therapists work with individuals with autism to develop and improve skills necessary for daily living, such as self-care, fine motor skills, sensory integration, and adaptive behaviors.

Social skills training: Social skills interventions aim to help individuals with autism build and improve social interactions, including understanding nonverbal cues, making eye contact, and understanding social norms.

Medication: Certain medications can be prescribed to address specific symptoms associated with autism, such as hyperactivity, anxiety, aggression, or obsessive-compulsive behaviors. Psychotropic medications, including stimulants, selective serotonin reuptake inhibitors (SSRIs), atypical antipsychotics, and alpha-2 agonists, may be prescribed based on

individualized assessment and symptom presentation. Medications should be prescribed and monitored by a qualified healthcare professional (Fung, Mahajan, Nozzolillo, Bernal, Krasner, Jo, Coury, Whitaker, Vanderweele & Hardan, 2016).

Parent training and support: Providing information, training, and support to parents and caregivers of individuals with autism is essential. This helps them better understand and manage their child's behavior, communication, and overall development. Family-centered care is fundamental in supporting children with development delay and ASD as well, and promoting their overall well-being. Parents and caregivers play a vital role in implementing interventions, reinforcing skills, and advocating for their child's needs within the community and educational settings (Brookman-Frazee et al.2022). Family therapy and support groups offer opportunities for emotional support, education, and resource sharing among families affected by pervasive development disorder and mental development delay. Parent training programs focus on equipping parents with strategies to support their child's development and manage challenging behaviors effectively. These programs provide education, skill-building exercises, and ongoing support to empower parents in fostering their child's social, emotional, and behavioral competence. Parent training interventions have demonstrated effectiveness in improving parent-child interactions, reducing behavior problems, and enhancing family functioning (Barlow et al., 2019)

Individual treatment and planning: Treatment planning for children with ASD should be individualized based on the child's strengths, needs, and developmental level. Collaborative goal-setting involving parents, caregivers, educators, and multidisciplinary professionals is essential for optimizing outcomes and ensuring consistency across settings (National Autism Center, 2020). Regular progress monitoring and adjustments to intervention strategies are warranted to address evolving needs over time. Individualized education plans and specialized teaching methods can be used to address the unique learning needs of individuals with autism. These interventions may include visual supports, structured teaching, and incorporating sensory breaks.

Interdisciplinary Collaboration: Interdisciplinary collaboration among healthcare providers, educators, therapists, and community resources is essential for delivering comprehensive care to children with ASD. Regular communication and coordination of services facilitate seamless transitions between healthcare settings and promote continuity of care (Sheldrick, Neger, Perrin, & Henshaw, 2012). Multidisciplinary team meetings and case conferences provide opportunities for collaborative problem-solving and care planning.

Play therapy: is a widely utilized intervention for children with autism spectrum disorder (ASD), offering a developmentally appropriate approach to address social, emotional, and behavioral challenges. Play therapy, rooted in the principles of child-centered and psychodynamic approaches, offers a naturalistic and engaging framework for addressing the diverse needs of children with ASD. Play therapy provides a developmentally appropriate platform for children with ASD to express themselves, explore their environment, and develop social and emotional skills in a supportive context. Through play, children can engage in symbolic communication, regulate emotions, and build relationships with therapists and peers (Ray, Armstrong & Vickerm 2020).

In the early years of a child's life, "play is the source of development and creates a zone of proximal development." Play offers an imaginative framework for internalizing social rules, thereby enhancing children's ability to "set voluntary goals, form real-life plans, and develop voluntary motives." These abilities, which emerge and are refined through play, represent the pinnacle of preschool development. Thus, during the preschool years, play becomes a crucial "leading activity," driving significant developmental progress during a key phase of the child's sociopsychological growth. This role of play does not mean it is the most frequent activity or the sole contributor to development, but rather that it serves as a primary source of major advances, facilitating the reorganization and strengthening of existing psychological functions (Nicolopoulou, 2004).

Play therapy promotes therapeutic change through various mechanisms, including the provision of a safe and predictable environment, the facilitation of emotional expression and regulation, the scaffolding of social interactions, and the reinforcement of adaptive behaviors (Solomon, Van Egeren, Mahoney, Huber & Zimmerman, 2018). Play activities are tailored to the individual needs and preferences of the child, allowing for personalized and meaningful therapeutic experiences.

Several play-based interventions have demonstrated effectiveness in addressing core symptoms and associated difficulties in children with ASD. These include Floortime/DIR (Developmental, Individual Differences, Relationship-based) therapy, Pivotal Response Treatment (PRT), Social Skills Playgroups, and Video Modeling interventions. These interventions incorporate play-based activities to target social communication, joint attention, imaginative play, and emotional regulation skills (Wong, Odom, Hume, Cox, Fettig, Kucharczyk, Brock, Plavnic, Fleury & Schultz, 2015).

When implementing play therapy for children with ASD, therapists should consider individual differences in sensory processing, communication abilities, and play preferences.

Structured and predictable routines, visual supports, sensory accommodations, and flexibility in session pacing are essential considerations to optimize engagement and effectiveness (Liao, Yeh, Tsai & Lu, 2019).

Despite the growing interest in play therapy for ASD, further research is needed to evaluate its efficacy, mechanisms of change, and optimal implementation strategies. Longitudinal studies, randomized controlled trials, and comparative effectiveness research can provide valuable insights into the effectiveness of different play therapy approaches and their impact on long-term outcomes for children with ASD. Play therapy holds promise as a valuable intervention for children with autism spectrum disorder, offering a holistic and child-centered approach to address their social, emotional, and behavioral needs. By integrating play-based activities with evidence-based techniques, therapists can create meaningful therapeutic experiences that promote growth, resilience, and well-being in children with ASD (Kasari & Smith, 2014).

Floor time therapy: also known as DIR/Floortime, is a developmentally based therapy for children with autism spectrum disorder. It focuses on building engagement, communication, and social interaction skills through child-led play and interaction. Central to this intervention is the concept of "floortime," where therapists join children in their play, following their lead and expanding upon their interests to encourage reciprocal interaction and communication. (Wieder & Greenspan, 2003).

This method emphasizes the importance of fostering engagement and addressing individual differences by tailoring interventions to each child's unique profile and needs (Solomon, Necheles, Ferch & Bruckman, 2007). Through playful interactions and shared attention, the therapist aims to promote the child's ability to regulate emotions, engage in two-way communication, and develop a sense of self (Wieder & Greenspan, 2003). Furthermore, the therapy encourages parents and caregivers to incorporate floor time principles into everyday interactions, allowing for continuous support beyond the therapy sessions (Solomon et al., 2007).

Overall, floor time therapy offers a holistic and individualized approach that prioritizes the child's strengths and supports their developmental progress in a nurturing and interactive environment (Wieder & Greenspan, 2003).

2.8. Relevant studies

In this section, are going to present and discuss relevant studies that contextualize and support the findings of the research. By examining empirical studies it is aimed to compare finding data with established research in the field. The comparison allow to highlight consistencies, identify gaps in the literature, and position the current study within the broader framework of evidence-based child psychotherapeutical intervention.

The study that was done during the years 2009-2017, where included children aged 3-17 years, with sample size 88,530 participants. There were asked to check ten specific disabilities of the child, included attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder (ASD), blindness, cerebral palsy (CP), moderate to profound hearing loss, learning disability (LD), intellectual disability (ID), seizures in the past 12 months, stuttering or stammering in the past 12 months, or any other developmental delay. In the study were included selected demographic and socioeconomic characteristics as: age, sex, urbanicity of residence (dichotomized as urban/rural), race and ethnicity, current insurance status (categorized as private only, any public coverage), maternal education level (categorized as less than high school, high school or some college, and college degree or greater), family federal poverty ratio, and low birthweight (defined as less than 2,500 grams). The result showed that demographic characteristics are correlated with some or any diagnoses. According to the findings, there is significant difference in: age groups, higher group ages had higher diagnosis; in genders, where boys are disadvantaged group; race and ethnicity are significantly different where black and Hispanic have higher level of diagnoses present; health public insurance has higher mean level of diagnosis present; children with high birthweight have significancy different from children with low birthweight, where the last group of children is in a disadvantage group; children with mother university or greater degree had significant difference from the children group with mother less or high school education, in nine specific disorder mother with higher education have lower level of child disorder diagnostic except cerebral palsy; there is significantly different from children living in families with lower level of income, as a disadvantage group; and according to residency also was found significant different according to living area, children in rural area have higher rate of diagnosis in ADHD, hearing loss and learning disability, where in the other specific diagnosis children in urban are have higher level of diagnosis present (Zablosky et. al., 2019).

In some studies, developmental screening shows that gender affects development.

According to Doğan and Baykoç (2015), in the research was observed that there was a significant difference due to gender differences by the results of the two-way chi-square test conducted to determine whether to see if there is a relationship between the developmental

screening test results and the gender of the children and it was found that there was a significant relationship between the children's developmental screening test results and their gender. The researches that used standardized children development tests found a statistically significant relationship between male gender and developmental delay in their studies. In the same time, the researches found that according to birth order results did not find the differ in the significant level (Madan & Tekin, 2015; Öz-Göçer, 2006; Gökçay, Köklük, Kayadibi, Erarslan & Çalışkan, 2000).

The study by Kim, Kim, Park & You (2022), investigated the comparative effects of Integrative Autism Therapy (IAT) across multiple developmental domains in children diagnosed with autism spectrum disorder (ASD). With the sample of 24 children with ASD received therapy 2 times per week for 20 session in over ten weeks where assessments conducted pre and post - test. The findings shows that IAT produced more substantial improvements across nearly all measured domains. The holistic, interdisciplinary, and personalized nature of IAT allows for simultaneous engagement across physical, sensory, cognitive, and social domains, ultimately promoting greater gains in functional ability and overall well-being. These improvement were evident across multiple functional domains, including balance, sensorimotor processing, cognitive abilities, autism symptomatology, fall-related risk, and overall quality of life. Notably, the most substantial gains were observed in the domain of social integration. Participants receiving IAT showed marked advancements in occupational performance, subjective satisfaction, reduced fear of falling, and perceived quality of life. These improvements are particularly meaningful, as they contribute to the acquisition of essential social integration skills required for independent participation in daily community activities, both at home and in educational settings.

Another study that was conducted by Ozga (2022), highlights the importance of Integrative approach in psychotherapy while working with autism spectrum disorder. Implementing interventions that are tailed with autistic child's need, as the type and the severity of the difficulties, such the stage of development has high impact on the treatment and developing process of the children. Specially, when the child cannot communicate in words, integrating the play therapy and the simultaneous of psychotherapy impact the child and the dynamics of the relationship. It is important to mention that also therapist should carefully select and combine techniques and methods to target children's need and the affect therapeutic process.

The integrative therapy offers a framework for combining elements from various psychotherapeutic traditions into a coherent treatment model tailored to each individual's context. This adaptability is particularly relevant in work with children and adolescents who present with overlapping developmental, emotional, and behavioral difficulties. Tattersall et al. highlight that integrative therapy facilitates not only symptom reduction but also the enhancement of emotional regulation, interpersonal functioning, and self-awareness. The authors emphasize the therapeutic value of combining cognitive-behavioral, psychodynamic, humanistic, and systemic principles to foster emotional regulation, relational competence, and self-awareness. The integrative model is especially relevant when addressing the multifaceted presentations of children with autism spectrum disorder (ASD) and developmental delays, as it allows therapists to flexibly adapt techniques such as play, metaphor, and sensory-based interventions based on the child's cognitive and emotional developmental level. The integrative model described supports a holistic understanding of the client and promotes flexible, evidence-informed interventions grounded in both clinical theory and practice. These findings align with the principles outlined by Tattersall et al., highlighting how integrative frameworks can produce measurable clinical outcomes through personalized, relationship-focused, and multimodal interventions (Tattersall et al.,2021).

CHAPTER III

3. METHODOLGY

In the methodology section are going to be present detailed explanations regarding the research design, study sample, data collection instruments, and data analysis procedures. Statistical analyses are conducted using SPSS software. These include descriptive statistics to summarize sample characteristics, reliability testing like Cronbach's alpha, for internal consistency of scales, and inferential statistics such as paired and independent sample t-tests, ANOVA, and repeated-measures ANOVA to evaluate group differences across pre-test and post-test, and follow-up stages.

3.1. Purpose of the research

The main aim of the current study is to underline the importance of the therapeutic work, particularly the importance of integrative – psychodynamic therapeutic approach in working with children with mental developmental delay and pervasive development disorder.

Through a comprehensive review of existing literature and empirical evidence, this research study seeks to elucidate the benefits of integrative and psychodynamic therapy approaches in addressing the complex needs of children with developmental challenges. By examining the effectiveness, applicability, and outcomes of integrative - psychodynamic therapy interventions, this study aims to highlight the critical role of a holistic and personalized approach in promoting the cognitive, emotional, and social development of children with mental delay and pervasive development disorder.

By examining the effectiveness, applicability, and outcomes of integrative therapy interventions across diverse contexts and populations, this study aims to highlight the critical importance of adopting a holistic and personalized approach in clinical practice. Furthermore, the research aims to elucidate the mechanisms underlying the efficacy of integrative – psychodynamic therapy, including the role of therapeutic rapport, neurobiological processes, and environmental factors, in promoting resilience and adaptive functioning in children with mental delay and pervasive development disorder.

Ultimately, this study seeks to contribute to the advancement of evidence-based practices and inform clinical guidelines for the provision of integrative therapy services for this vulnerable population. By synthesizing current knowledge and identifying gaps in research, this research aims to pave the way for future investigations and innovations in the field of child mental health and developmental challenges.

The following objectives have been formulated for this research:

1. To identify the presence of moderate levels of mental developmental delay and/or pervasive developmental disorder in children within both the experimental and control groups
2. To examine whether the severity of developmental delay is positively correlated with the severity of autism symptoms in children diagnosed with autism and developmental delay.
3. To verify and explain whether if there is an effect of integrative-psychodynamic psychotherapy on mental development delay and the occurrence of autism prevalence in children, respectively, whether the experimental group demonstrates significantly higher results regarding mental development and autism prevalence compared to the second examination.
4. To verify whether there are significant differences in the rate of mental development and the occurrence of autism prevalence, depending on gender, place of residence and birth order?
5. To determine whether children who do not participate in therapeutic sessions exhibit a significantly higher presence of mental developmental delay and autism spectrum disorder compared to those who engage in integrative–psychodynamic psychotherapy.

3.2. Problem statement and research questions

This study aims to provide a comprehensive exploration of children with mental developmental delay and Autism Spectrum Disorder by delving into its etiology, clinical presentation, diagnostic criteria, and associated challenges faced by individuals on the autism spectrum.

These research problems provide a framework for investigating the efficacy, mechanisms, and implementation of integrative therapy interventions for children with

developmental challenges, with the ultimate goal of informing clinical practice and improving outcomes for this population.

1. Efficacy of Integrative Approach: Assessing the effectiveness of integrative psychodynamic techniques with some of therapeutic modalities that was found the researches in addressing the unique needs of children with mental developmental delay and pervasive developmental disorder.
2. Long-term Outcomes: Investigating the long-term impact of integrative psychodynamic therapy on the cognitive, emotional, and social development of children with developmental delays and pervasive developmental disorders.
3. Family Involvement: Importance of the role and support of the family in enhancing the effectiveness of integrative psychodynamic therapy for children with developmental delays and pervasive developmental disorders.
4. Cultural Considerations: Having in consideration the cultural factors impact during the implementation and effectiveness of integrative psychodynamic therapy for children with developmental delays, particularly in diverse populations.
5. Comparative Studies: Conducting comparative studies to evaluate the relative effectiveness of integrative psychodynamic therapy compared to other therapeutic approaches commonly used for children with developmental delays, such as behavioral therapy or cognitive-behavioral therapy.
6. Barriers to Implementation: Identifying barriers and challenges to implementing integrative psychodynamic therapy in various clinical settings, including training requirements for therapists, access to resources, and acceptance among caregivers and healthcare professionals. These research problems provide a framework for investigating the efficacy, mechanisms, and implementation of integrative therapy interventions for children with developmental challenges, with the ultimate goal of informing clinical practice and improving outcomes for this population.

Even there are many studies with children who has difficulties on their mental development and children with Autism Spectrum Disorder, still there is a great need to investigate problems related with their everyday life challenges. In the end, the study aim that integrative – psychodynamic therapy will be helpful and will improve the life quality of the child.

There are some research questions that are derived from the problem statements, as follows:

1. What is the prevalence of mental developmental delay and/or pervasive developmental disorder among children aged 2 to 8 years?
2. How is the severity of mental developmental delay associated with the severity of autism symptoms in children diagnosed with both conditions?
3. Is there an effect of integrative – psychodynamic psychotherapy on mental development and the occurrence of autism prevalence in children, whether the experimental group demonstrates significantly higher results regarding mental development and autism prevalence compared to the second examination?
4. Are there significant differences in children's mental development and autism prevalence based on gender, place of residence, and birth order?
5. Do children who do not participate in therapeutic sessions show a significantly higher presence of developmental delays and autism spectrum disorder compared to those who engage in integrative–psychodynamic psychotherapy?

3.3. Hypothesis

In the aim of the research we will be looking for these hypothesis:

H.1. There will present in moderate level of mental delay and / or autism spectrum disorder in children in experimental and control groups.

H.2. The severity of mental delay disorder level will be positively correlated with the severity of autism disorder level in children with autism and mental developmental delay.

H.3. At the first examination, experimental group will demonstrate the higher scores results in mental development delay and in prevalence of autism compared to the second examination of the experimental group where they demonstrated lower score results in mental development delay and in prevalence of autism.

H.3.1. At the first examination, experimental group will demonstrate the higher scores results in mental development delay compared to the second examination of the experimental group where they demonstrated lower score results in mental development delay.

H.3.2. At the first examination, experimental group will demonstrate the higher scores results in prevalence of autism compared to the second examination of the experimental group where they demonstrated lower score results in prevalence of autism.

H.4. There are significant differences in the rate of mental development delay and the prevalence of autism, depending on gender, birth order and residency.

H.4.1. There are significant differences in the rate of mental development delay, depending on gender, birth order and residency.

H.4.1.1. Boys have a higher level of mental development delay compared to girls.

H.4.1.2. First born children have a higher level of mental development delay compared to later born children.

H.4.1.3. Children who live in urban areas have a higher level of mental development delay compared to children who lives in rural areas.

H.4.2. There are significant differences in the rate of prevalence of autism, depending on gender, birth order and residency.

H.4.2.1. Boys have a higher level of prevalence of autism compared to girls.

H.4.2.2. First born children have a higher level of prevalence of autism compared to later born children.

H.4.2.3. Children who live in urban areas have a higher level of prevalence of autism compared to later born children.

H.5. In a group of children with none therapeutic session will be a significant present of mental development delay and prevalence of autism rather than children who participate in integrative – psychodynamic therapeutic sessions.

H.5.1. In a group of children with none therapeutic session will be a significant present of mental devalopment delay than children who participate in integrative – psychodynamic therapeutic sessions.

H.5.2. In a group of children with none therapeutic session will be a significant present of prevalence of autism than children who participate in integrative – psychodynamic therapeutic sessions.

H.6. The success of integrative - psychodynamic therapy as a criterion variable is predicted by the predictor variables: autism spectrum symptoms, mental developmental delay, and calendar age.

3.4. Research Variables

In this section is going to be present the research variables, including the independent variable and the dependent variables. These variables are measured using standardized assessment tools to evaluate therapeutic outcomes.

This study includes both independent and dependent variables designed to assess the effects of integrative - psychodynamic therapeutic approach on children with mental development delay and autism spectrum disorder.

Independent variable is therapeutical approach that is going to be used during the study, Integrative – psychodynamic therapy. So, there are to conditions, where this approach is being applied and for the control group that they will not have any therapeutical approach for the treatment.

Theoretical definition of integrative – psychodynamic therapy: Integrative–psychodynamic therapy is a holistic therapeutic approach that combines elements from different therapeutic modalities to address the wide range of developmental challenges across children and emphasizes following the child's needs and abilities, observing the dynamics that unfold during the therapeutic process, and fostering the child's potential

toward achieving their best possible version. The therapeutic process is semi-structured, allowing flexibility while maintaining a consistent framework (Ozga, 2022; Angold, Costello & Erkanli, 2000).

Operational definition: Integrative – psychodynamic therapy is including techniques such as playing, art and drawing, sensorial activities, fine motor and gross motor tasks, eye contact, verbal and none-verbal task and relaxing techniques (Ray, Armstrong & Vickerm 2020; Angold, Costello & Erkanli, 2000).

The dependent variables include: the mental development coefficient, prevalence of autism, age, gender, residency and birth order.

Theoretical definition of mental development coefficient: Mental Development Coefficient (MDC) refers to a widely recognized metric of general cognitive abilities, that is measured by individually administered standardized tests. It serves as one of the primary criteria for identifying and classifying intellectual disability in children (Brown, Parikh & Patel, 2019).

Operational definition: The Mental Development Coefficient (MDC) is calculated based on the child's performance on individually administered developmental tasks. For each successfully completed item, the child receives one point, with each task corresponding to a developmental value of three months of calendar age. The accumulated points are summed within each subscale to the developmental age (MA). The final MDC score is determined by dividing the developmental age by the child's chronological age (CA) and multiplying by 100, according to the formula: MDC = (MA / CA) × 100**.** (Kayaalp, Aygölü, Alsancak, Düzen, & Doğangün, 2010).

Theoretical definition of Autism Spectrum Disorder: Autism spectrum disorder (ASD) is a neurological development disorder that is characterized by emotional and social difficulties, in a combination with communication problems and patterns of repetitive behavior (Camero, Martinez & Callego, 2020).

Operational definition: Autism spectrum disorder (ASD) is operationalized through the scoring procedure where each item is scored based on the child's response, with "Yes" generally indicating a low likelihood of autism (0 points) and "No" indicating an elevated likelihood (1 point). Items 2, 5, and 12 are reverse scored, where "No" reflects a low likelihood (0 points) and "Yes" an elevated likelihood (1 point). Calculated totally score determines the screening outcome, where: 0-2 point are in low level, 3-7 point are in moderate level and 8-20 points are in high level. This operational procedure ensures a standardized identification of children at risk for ASD based on their screening outcomes (Robins, Fein, & Barton, 2009).

Theoretical definition of gender: Gender refers to the socially and legally recognized classification of individuals, often determined at birth through visual inspection of genitalia and recorded as the newborn's legal status (Lindqvist, Senden, & Renstrom, 2020).

Operational definition of gender: Most often, gender is represented by a dichotomous variable with the possible responses of woman and man or female and male (Lindqvist, Senden, & Renstrom, 2020).

Theoretical definition of residency: Describes dwelling types, physical residence, and geographic location where is included safety considerations such as railings or number of floors and steps (Winden, Chen, Melton, 2017).

Operational definition of residency: Residence is included as a demographic characteristic dichotomized as urban and rural (Zablosky et. al., 2019).

Theoretical definition of birth order: Alfred Adler attempted to understand how family affects youth outcomes by considering the order of when a child enters a family, where this formation impact individuals (Horner, Andrade, Delva, Grogan-Kaylor, & Castillo, 2012).

Operational definition of birth order: Adler's birth order positions looks at levels of first child, the second child, the middle of at least three children in a family, and the order can be the same way for the younger child coming up (Horner, Andrade, Delva, Grogan-Kaylor, & Castillo, 2012).

This study also includes controlled variables, such is period of therapeutical treatment. Therapeutical treatment include period of at least six month treatment with three times per week. In case when the children were not able to take part to the planned session, the scheduled session was postpone, so while the time period passed but the number of sessions were relatively the same.

3.5.Method of research

The study design of the research is going to be in quantitative experimental method. Excatly the study is going to be in longitudinal design with experimental method. It is predicted to be participating at least for six month of therapeutical sessions, only in face to face, so the study design is goint to be longitudinal design. Before and after therapeutic session is going to be applied pre and post tests. Some of the variables can be in control and some other can not be, so the study will be in quasi-experimental.

3.6. Measurements and Instruments

In this study, two assessment instruments were applied to evaluate the developmental characteristics of the participating children. The Brunet-Lézine Scale was utilized to assess the mental development levels of the participants. Additionally, the Modified Checklist for Autism in Toddlers (M-CHAT) was applied to screen for the prevalence and risk indicators of Autism Spectrum Disorder. The combined use of these tools provided a comprehensive overview of both general developmental functioning and autism-related traits in the study sample.

The Brunet–Lézine Scale. The scale was developed by French psychologists Odette Brunet and Irène Lézine in the 1950s and it aims to assessment the psychomotor development of children. After going through some changes, it was published in 1976. The scale assesses various domains of development, including motor skills, language abilities, cognitive function, and social-emotional development (Guimaraes, Cardoso, Kayenne, Formiga, Bizinotto, Tessler & Neto, 2017).

The Scale of Psychomotor Development of Children, as known as the Brunet–Lézine Scale, firstly was validated for the French population. The benefits of using the scale is easy administration, the short time of application and low cost of administrative materials. These qualities and also the good psychometric properties of the scale make it essential to choose the instrument and favor its use in follow-up out clinic patients (Guimaraes et. al., 2017).

The Brunet-Lezine Scale consists of different subscales or domains, each designed to assess specific aspects of a child's development. During the assessment, the child is observed and engaged in various activities designed to elicit behaviors relevant to each domain. The child's performance is then scored according to standardized criteria, and the scores are compared to age-appropriate norms to determine the child's developmental level. The test has accompanying sections for giving tasks during the application that consist of materials placed in the test box, these materials are different shapes from cubes that are 15 in total, then a cylinder (circle), then a bell, a mirror, a pulley, cardboard drawn with pictures of several objects, then a human figure divided into body and extremities (limbs), a small ball (tennis), a spoon, beads in a bottle (Brunet & Lezine, 1991).

Brunet Lézine is a test that measures psychological and motor development of children from birth to age 6. It consists of two subscales, a first subscale measures children development from birth to age of 2; and the second subscale from between the ages of two to age six. A complementary scale from 24 months to 6 years takes over but now only has 4 items per age

group. Each section makes it possible to establish a development quotient (Albaret & Noack, 1993).

The items aim to collect data on the child's development level through observation of the abilities that children should exhibit at a certain age, evaluation of reactions to certain stimuli, and reference to the mother's knowledge in limited areas. The child receives one point of score for each item in which he/she is successful. Each task has a score that is equal to 3 months of calendar age. Formula for calculating the mental development coefficient (MDC) is by calculating the calendar age (CA) / Mental age (MA). By adding up these scores, the final score the child gets in subscale is calculated, and the total score is looking up as the developmental age that corresponding to these scores is divided by the calendar age (MDC = MA/CA X 100) to determine the "Developmental Section" (Kayaalp, Aygölü, Alsancak, Düzen, Dogangün, 2010).

The Brunet-Lezine Scale is typically administered by trained professionals, such as psychologists, pediatricians, or early childhood educators and it is widely used in both clinical and research settings to identify developmental delays, monitor progress over time, and inform intervention strategies for children with developmental disabilities or special needs (Guimaraes et. al., 2017).

M-Chat-R/F (Modified Checklist for Autism in Toddlers. Revised). It is an measurement instrument for checking the prevalence of autism. The modified Checklist for Autism in Toddlers, Revised (M-Chat-R/F), is a screener with 20 questions about child behaviors. It can be administered and scored as part of well-child care visit by specialists to asses risk for Autism Spectrum Disorder (ASD). The primary goal of the M-Chat-R/F is to maximize sensitivity, meaning to detect as many cases as possible of ASD. The scale has three items that are reverse items, where the response ‘No’ indicates with the answer ‘Yes’, which indicates the risk for ASD. The psychometric properties of M-Chat-R/F has three level risk: Low risk, Medium risk and High – risk. Therefore, not all children who score at risk will be diagnosed in the future with ASD. However, these children are at the high risk for other developmental disorder or delays, and therefore evaluation is warranted for any child who screens positive. The scoring is easy and take less than two minutes (Robins, Fein & Barton, 2009).

The researchers supported by the National Institutes of Health (NIH, 2013) have developed an updated version of the Modified Checklist for Autism in Toddlers — Revised, with Follow-Up (M-CHAT–R/F) screening tool. This tool, administered to parents during well-

child checkups for children and toddlers that aims to identify children likely to have autism. The revised version is more accurate than earlier versions, enabling healthcare providers to classify a child's risk of autism as low, medium, or high based on parents' responses to 20 questions. High-risk scores prompt further evaluation for autism, while medium-risk scores lead to a follow-up questionnaire for more definitive classification.

The scoring algorithm for the M-CHAT-R/F is designed to identify responses that indicate an elevated likelihood of autism spectrum disorder. For the majority of items, a response of "Yes" reflects a low likelihood and is scored as 0 points, whereas a "No" response indicates a higher likelihood and is scored as 1 point. However, items 2, 5, and 12 are reverse scored: in these cases, a "No" response reflects a low likelihood (0 points), while a "Yes" response indicates an elevated likelihood (1 point). To score the M-CHAT-R/F, the examiner sums the number of responses that reflect an elevated likelihood and interprets the total score according to the established scoring guidelines. **A** total score of 0–2 on the M-CHAT-R/F indicates a **low likelihood** of autism. No follow-up is required, and the child is considered to have screened negative. However, referral may be considered if concerns arise through developmental surveillance or other assessment tools. If the child is under 24 months of age, rescreening is recommended at 24 months. A total score of 3–7 suggests a **moderate likelihood** of autism. In this case, the M-CHAT-R/F items should be administered, but only for those items that were initially scored as elevated likelihood. If **two or more items** continue to reflect elevated likelihood after the follow-up, the screening is considered positive. The child should then be referred promptly for an early intervention service and a comprehensive diagnostic evaluation. A total score of 8–20 reflects a **high likelihood** of autism. The child has screened positive, and it is not necessary to complete the M-CHAT-R/F. Immediate referral is recommended for both early intervention services and diagnostic evaluation (Robins, Fein & Barton, 2009).

The text reviews the Modified Checklist for Autism in Toddlers (M-CHAT) and its revised version, M-CHAT-R/F, commonly used to screen for autism spectrum disorder (ASD) in toddlers. It highlights the variability in sensitivity and specificity of these screeners due to differences in their use compared to original validation studies. The objective is to synthesize this variability across various factors such as identification of missed cases, screening age, and single vs repeated screenings. A systematic review and meta-analysis of 50 studies with 51 samples reveal that M-CHAT(-R/F) has a pooled sensitivity of 0.83 and specificity of 0.94. The study suggests the utility of M-CHAT(-R/F) as an ASD screener but emphasizes the

importance of considering differences in screener use in research and practice due to the wide variability in psychometric properties (Wieckowski, Williams, Rando, Lyall & Robins, 2023).

Demographic information. Demographic information of the child participants was collected through a parent-report questionary administered at the time of the assessment of the child. Parents were asked to provide relevant background details, including the child's full birth age, gender, birth order, and the residency, as well as information related to developmental history and medical conditions. The questionnaire was designed to ensure consistency in data collection and to facilitate the identification of potential confounding variables. All demographic data were collected in accordance with ethical research standards, with informed consent obtained from all participating parents prior to data collection.

3.7. Population and study sample

The population of the study consists of children diagnosed with mental developmental delays and autism spectrum disorders (ASD). These children represent a vulnerable group, facing significant challenges in mental development, which impact their daily functioning and quality of life. The study is designed to assess the effectiveness of integrative psychodynamic therapy as an intervention for this population,which presents unique challenges due to the complexity of their developmental needs. By focusing on these children, the research aims to address a critical gap in the understanding and treatment of developmental challenges, with the ultimate goal of improving therapeutic outcomes and enhancing the overall well-being of both the children and their families. The study adheres ethical guidelines, the study ensures that the participants' rights and well-being are protected.

Participants of the study will be children between ages two and eight years old. Children will be selected in two criteria. The first one is: all children will have their first examination and from there will be selected only the one whom will be evaluated with mental development delay and/or autism spectrum disorder. From that group of children whom will be ask to work in therapeutic session, we will be select the ones who will have at least 6 month of therapeutic work. The therapuetic sessions with each child will be only individulay. With that children, in the end of therapeutic process we will post examination and all children whom have therapeutic work will have evaluation. These group of children will be in the first group. The other children whom will have first examination but whom will have no psychotherapeutic sessions, will be

in the second group. And this is the second criteria. As a result, we will have two groups of children, so we decided to have experimental design of the study.

According to the participants descripteve datas, the participants are distribution by gender across three different conditions or phases: the first examination, the second examination, and the experimental group. Overall, boys are more represented in the study, comprising about two-thirds of the participants in all phases. Here's a detailed description of the data:

Table 1: Descriptive statistics according to gender of experimental group in first and second examination and of the control group

Gender	Experimental Group				Control Group	
	First Examination		Second Examination			
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Girl	18	34.6 %	18	34.6 %	19	35.8 %
Boy	34	65.4%	34	65.4%	34	64.2%
Total	52	100%	52	100%	53	100%

In table 1 are present the gender distribution of participants in the experimental across the first and second examinations and for the control group. In both the first and second examinations, girls comprised 34.6% (n = 18) and boys 65.4% (n = 34) of the total sample (N = 52). In the control group, the gender distribution was similar, with girls accounting for 35.8% (n = 19) and boys 64.2% (n = 34) of the total 53 participants.

Table 2: Descriptive statistics according to residence of experimental group in first and second examination and of the control group

Residence	Experimental Group				Control Group	
	First Examination		Second Examination			
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Urban	36	69.2 %	36	69.2%	28	52.8%
Rural	16	30.8%	16	30.8%	25	47.2%
Total	52	100%	52	100.%	53	100%

In table 2 present the distribution of participants by place of residence across the first and second examinations, as well as within the control group. In both the first and second

examinations, the majority of participants in the experimental group resided in urban areas with 69.2% (n = 36), while 30.8% (n = 16) were from rural areas, out of 52 participants.. In the control group, the distribution was more balanced, with 52.8% (n = 28) from urban areas and 47.2% (n = 25) from rural areas, out of a total of 53 participants.

Table 3: Descriptive statistics of experimental and control groups according to participants' birth order

Birth Order	Experimental Group				Control Group	
	First Examination		Second Examination			
	Frequency	Percent	Frequency	Percent	Frequency	Percent
First Born	32	61.5%	32	61.5%	35	66%
Second	11	21.2%	11	21.2%	9	17%
Third	8	15.4%	8	15.4%	7	13.2%
Forth	1	1.9%	1	1.9%	1	1.9%
Fifth	0	0.0%	0	0.0%	1	1.9%
Total	52	100%	52	100%	53	100%

In the table 3 present the distribution of participants based on their birth order across the experimental group, for first and second examination and for the control group. In both the first and second examinations, the majority of participants in the experimental group were first-born children, accounting for 61.5% (n = 32), followed by second-born (21.2%, n = 11), third-born (15.4%, n = 8), and fourth-born (1.9%, n = 1) individuals. No participants were recorded as fifth-born in the experimental group. In the control group, a similar pattern was observed, with first-born children representing the largest proportion (66%, n = 35), followed by second-born (17%, n = 9), third-born (13.2%, n = 7), fourth-born (1.9%, n = 1), and fifth-born (1.9%, n = 1) participants. The overall trend shows that first-born children are the most common participants in this study.

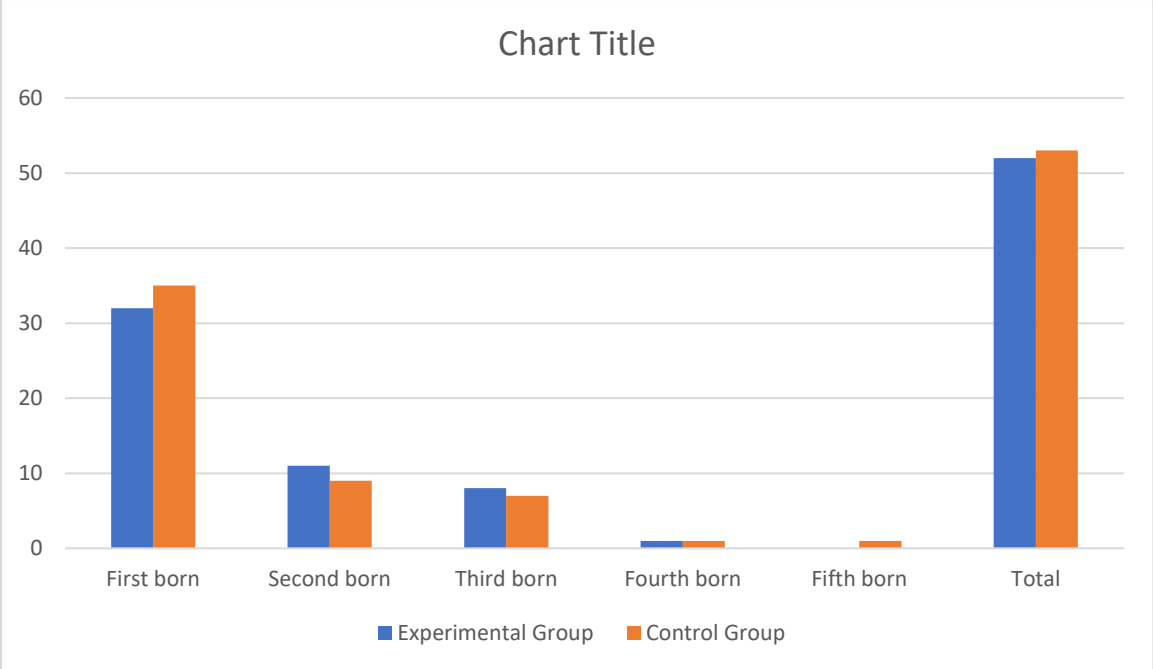

Figure 5. Distribution of participants by birth order

Table 4: Descriptive statistics according to calendric age of the first examination for the treatment group

Calendric Age	First Examination	
	Frequency	Percent
2 years old	6	11.6%
3 years old	15	28.8%
4 years old	14	26.9%
5 years old	4	7.7%
6 years old	7	13.5%
7 years old	5	9.6%
8 years old	1	1.9%
Total	52	100%

Table 4 presents the distribution of participants according to their calendar age at the time of the first examination. A total of 52 children were assessed, with the highest number of participants being 3-year-olds (n = 15, 28.8%), followed by the 4-year-old group (n = 14, 26.9%). These two age groups together accounted for more than half of the majority (55.7%), indicating a concentration involved in early preschool work. The youngest participants were 2

years old, making up 11.6% of the total (n = 6). Participation decreased with age with 5-year-olds: 7.7% (n = 4), 13.5% (n = 7) and 9.6% (n = 5) of 7-year-olds. The oldest group, aged 8, consisted of only one participant (1.9%).

Table 5: Descriptive statistics according to calendric age of the second examination for the treatment group

Calendric Age	Second Examination	
	Frequency	Percent
3 years old	11	21.1%
4 years old	10	19.2%
5 years old	12	23.1%
6 years old	11	21.1%
7 years old	4	7.7%
8 years old	4	7.7%
Total	52	100%

Table 5 presents the distribution of participants by calendar age at their second assessment. The age distribution for the 52 participants shows a relatively balanced representation across all age groups, with a slight shift towards older children compared to the first screening. The highest percentages are among 5-year-olds (n = 12, 23.1%), closely followed by 3- and 6-year-olds (n = 11, 21.1% each) and 4-year-olds (n = 10, 19.2%). These data indicate that the majority of the sample at the second screening ranged from 3 to 6 years old, comprising 84.5% of the total. Children aged 7 and 8 were less represented, each comprising 7.7% of the sample (n = 4). This change in age distribution compared to the first examination reflects the growth of participants within the study timeframe and highlights the longitudinal design of the research. These age-related changes are essential for interpreting developmental progress or outcomes between the two assessments.

Table 6: Descriptive statistics according to calendric age of the control group

Mental Age	Control Group	
	Frequency	Percent
2 years old	12	22.7%

3 years old	18	34.0%
4 years old	10	18.6%
5 years old	3	5.7%
6 years old	5	9.5%
7 years old	3	5.7%
8 years old	2	3.8%
Total	53	100%

Table 6 presents the age distribution of participants within the control group (N = 53). The majority of participants were between 2 and 4 years old, representing a combined total of 75.3% of the sample. Specifically, 34.0% were 3 years old (n = 18), 22.7% were 2 years old (n = 12), and 18.6% were 4 years old (n = 10). The smallest number of participants were those of older age. Specifically, children aged 5 and 7 each accounted for 5.7% (n = 3), while 6-year-olds accounted for 9.5% (n = 5). Participants aged 8 years old represented only 3.8% of the group (n = 2). This age distribution within the experimental group places a particular emphasis on early childhood.

3.4.Organization and Implementation of the research process

This section presents the detailed structure and sequential progression of the research process, including the technical and administrative organization, the method of implementing the assessment instruments, and the timing of their administration.

Participants were selected from children who initially visited the cabinet for psychology and psychotherapy named 'Psikodiagnostika'. Following this preliminary assessment, those identified as needing therapeutic support were included in the experimental group and received structured psychotherapeutic intervention. The control group consisted of children who underwent the same initial assessment procedure but either did not require treatment or were receiving support in other therapeutic centers. This procedure ensured comparability between groups at baseline.

The study was implemented in several phases. After obtaining all necessary administrative permissions, data were collected through standardized developmental and psychological instruments administered by a trained professional, a clinic psychologist of the

center. These instruments were used in both the pre-test and post-test stages under uniform and controlled conditions to ensure methodological reliability.

The data were collected between 2019 and 2024. Data collection was not restricted to specific dates but occurred based on when families independently required psychological assessment services at the center. Following the initial assessment, children who met the inclusion criteria and consented to treatment began regular psychological therapy sessions, scheduled up to three times per week. After a six-month treatment period, a second assessment was conducted to evaluate progress. During the same time frame, participants for the control group were selected from children who also presented for psychological assessment but did not continue with any documented treatment.

From the outset, informed consent was obtained from the parents of all participating children. Ethical procedures were strictly followed, and all subsequent steps of the research were carried out in continuous coordination with the parents. Parents were informed about the purpose, procedures, and potential benefits of the study, and their collaboration was maintained throughout both the assessment and intervention phases to ensure transparency and support for the children.

The interval between pre- and post-tests was a minimum of six months. This period was selected in accordance with the natural pace of child development and to allow for the therapeutic process to have a measurable effect. Literature in developmental psychology underscores that shorter durations are often insufficient for capturing significant and stable therapeutic changes in young children. For instance, Kazdin (2000), emphasizes that meaningful improvements in behavior and emotional functioning typically require sustained intervention over several months.

In addition to the duration, the timing of the assessments and therapy sessions was arranged based on the child’s daily rhythm. This careful scheduling further contributed to the validity of the results and the efficacy of the intervention. If a child was unable to attend a scheduled session, it was rescheduled for an alternative day and time in coordination with the family's and child's availability.

Generally therapeutic treatment started with general stimulations, which aims to see the interest of the child, to create secure attachment. Further on, during sessions were utilized therapeutic play, by including symbolic play, drawing, storytelling, sensory activities, role-playing to help children express internal conflicts and to develop coping strategies. In the treatment process, there were incorporating elements of attention focused and body-oriented work to support co-regulation for emotional and mental development.

In conclusion, the organization and flow of the research were designed with attention to developmental sensitivity, ethical standards, and procedural rigor. The integration of parental involvement, extended intervention duration, and controlled assessment conditions ensured a reliable framework for evaluating the outcomes of the psychotherapeutic intervention.

3.8. Statistical analysis of the data

The statistical analysis in this study aimed to evaluate the effectiveness of the psychotherapeutic intervention by comparing developmental outcomes between the experimental and control groups at pre-test and post-test intervals. Analyses were performed using IBM SPSS Statistics with a significance threshold set at $p < .05$.

Initially, descriptive statistics were calculated to summarize demographic variables, including gender, age, birth order, and residency, providing a comprehensive profile of participants.

To test the hypotheses regarding the effectiveness of the therapeutic intervention, several inferential statistical methods were employed based on standard guidelines.

Paired Sample t-Test: Used to evaluate within group differences in developmental indicators from pre to post-test in the experimental group, determining whether significant developmental improvements occurred after the intervention.

Independent Sample t-Test: Applied to compare the mean developmental scores between the experimental and control groups at both measurement points. This facilitated the identification of significant differences attributable to the psychotherapeutic intervention.

One-Way ANOVA: Conducted to examine interaction effects between group and time for variables measured at multiple points, offering deeper insights into the trajectory and stability of developmental gains across groups.

Cronbach's Alpha: Reliability analysis was undertaken to ensure internal consistency and validate the psychometric properties of assessment instruments employed in the study.

Prior to conducting inferential tests, assumptions of normality and homogeneity of variances were examined and adequately met.

Furthermore, for hypothesis 1 and 2 there were applied analysis of description and means; for hypethesis 3 (3.1 and 3.2, as well) and 4 (4.1, 4.1.1., 4.1.2., 4.1.3., 4.2, 4.2.1., 4.2.2.,

4.2.3., , as well) were applied indipendent simple and paired t-test; and for hypothesis 5 is applied Correlation analysis.

Detailed results from these analyses are presented comprehensively in the findings section through tables, clearly illustrating mean differences, statistical significance, and effect sizes, thereby strongly supporting the empirical verification of the hypothesis.

CHAPTER IV

4. Results

This chapter presents the data analysis conducted using the Statistical Package for the Social Sciences (SPSS), also known as IBM SPSS. The analysis encompasses a comprehensive range of statistical procedures, including descriptive statistics, Cronbach's Alpha reliability test, T-tests, ANOVA, and correlation analysis. These statistical techniques were done to ensure a thorough examination of the data and to support the study's findings.

4.1. Reliability of measurement instruments

This section presents the reliability analysis of the measurement instruments applied in the study: the Brunet-Lézine Scale and the Modified Checklist for Autism in Toddlers Revised with Follow-Up (M-CHAT-R/F). Cronbach's Alpha (α) was computed individually for the experimental group at two different assessment points (pre-test and post-test), as well as separately for the control group. Results are systematically presented in Table 7, indicating good internal consistency across groups and assessment times, thereby confirming the suitability of both instruments for reliable measurement within this study context.

Table 7: Reliability analysis of the measurement instruments

Instruments	First Examination α
Brunet-Lezine	0.74
M-CHAT – R/F	0.85

Table 7 presents the internal reliability (Cronbach's alpha coefficients, α) for two measuring instrument that are applied in this study, the Brunet-Lézine Scale and the Modified Checklist for Autism in Toddlers Revised with Follow-up (M-CHAT-R/F), under different assessment conditions. The Brunet-Lézine Scale showed high reliability (α = 0.74). Similarly, the M-CHAT-R/F showed consistently excellent internal consistency, with Cronbach's alpha values of 0.85 (α = 0.85).

These findings underscore the strong reliability of both instruments, affirming their suitability for accurately assessing developmental and autism-related characteristics within this research context.

To achieve all the objectives of this study, will present the results in alignment with the proposed hypotheses. Each hypothesis will be addressed systematically, ensuring that the relevant statistical analyses are conducted and interpreted accordingly. Descriptive statistics will be provided to offer an initial overview of the data, followed by inferential analyses such as t-tests, ANOVA, or correlation where appropriate, to test the significance of the relationships or differences outlined in the hypotheses. By structuring the results in this manner, the findings will be directly tied to the research questions, allowing for a clear evaluation of whether the hypotheses are supported or rejected, and providing a coherent narrative that connects the empirical data to the study's theoretical framework.

4.2. Descriptive statistic

In the beginning there are presented descriptive statistic for the measurement tests administered to the study population applied measurement tests for the population. These statistics included the participants' mental age, respectively mental development coefficient and mental development delay level, and the level of autism spectrum disorder.

Table 8: Descriptive statistics according to mental age in the first and second examination

Calendric	First Examination			Second Examination		
Age	Mental Age	Frequency	Percent	Mental Age	Frequency	Percent
2 years old	1 years old	4	7.6%			
2 years old	2 years old	2	3.9%	2 years old	2	3.9%
3 years old	2 years old	13	24.6%	3 years old	14	26.6%
3 years old	3 years old	2	3.9%	4 years old	1	2.0%
4 years old	2 years old	1	2.0%	3 years old	1	2.0%
4 years old	3 years old	11	20.9%	4 years old	11	20.9%
4 years old	4 years old	2	3.9%	5 years old	2	3.9%
5 years old	3 years old	2	3.9%	4 years old	3	5.7%
5 years old	4 years old	2	3.9%	5 years old	7	13.6%
6 years old	3 years old	1	2.0%			

6 years old	4 years old	3	5.7%			
6 years old	5 years old	2	3.9%	5 years old	4	7.6%
6 years old	6 years old	1	2.0%	6 years old	2	3.9%
7 years old	4 years old	2	3.9%			
7 years old	5 years old	1	2.0%	5 years old	2	3.9%
7 years old	6 years old	2	3.9%	6 years old	1	2.0%
7 years old				7 years old	1	2.0%
8 years old	5 years old	1	2.0%	6 years old	1	2.0%
Total	Total	52	100%	Total	52	100%

In the first examination, the majority of children exhibited a noticeable mental developmental delay, with many displaying a mental age considerably lower than their calendric age. For example, 24.6% of children aged 3 years demonstrated a mental age of 2 years, while 20.9% of children aged 4 years also scored at a mental age of 3 years. Several cases of higher mental developmental lag are evident, such as children aged 6 years showing mental ages between 3 and 5 years, and children aged 7 years displaying mental ages of 4 to 6 years. Only a limited proportion of participants matched their calendric and mental ages, indicating a prevalent gap between chronological development and measured cognitive abilities. In the second examination, there is a visible shift toward improved mental age alignment with calendric age. The proportion of children with age-appropriate mental development increased, as reflected in cases such as 26.6% of 3-year-olds demonstrating a corresponding mental age, and 20.9% of 4-year-olds achieving the same. Additionally, cases of severe developmental delays decreased, with fewer cases showing a gap of two or more years between calendric and mental ages. These findings suggest positive developmental changes between the two assessments, potentially associated with the effects of the psychotherapeutic intervention. The upward trend in mental age scores supports the hypothesis of progress in mental development over time.

Table 9: Descriptive statistics according to mental age in the control group

				Control Group	
Calendric Age	Frequency	Percent	Mental Age	Frequency	Percent
			1 years old	15	28.3%
2 years old	12	22.7%	2 years old	15	28.3%

3 years old	18	34%	3 years old	10	18.8%
4 years old	10	18.6%	4 years old	7	13.2%
5 years old	3	5.7%	5 years old	4	7.6%
6 years old	5	9.5%	6 years old	1	1.9%
7 years old	3	5.7%	7 years old	1	1.9%
8 years old	2	3.8%			
Total	53	100%	Total	53	100%

Table 9 presents the distribution of calendric age within the control group where the largest percentage of participants were 3 years old (34%), followed by 2 years old (22.7%) and 4 years old (18.6%). Smaller percentages were represented in older age categories, with 5 years (5.7%), 6 years (9.5%), 7 years (5.7%), and 8 years (3.8%), indicating that the majority of the sample consisted of children between 2 and 4 years of age. When examining mental age, the data reveal a marked concentration in the lower developmental categories. Specifically, 28.3% of the children scored at a mental age of 1 year, and another 28.3% at 2 years, while 18.8% were assessed at 3 years of mental age. Only a small percentage reached higher developmental ages, with 13.2% at 4 years, 7.6% at 5 years, and less than 2% each at 6 and 7 years. Notably, none of the children in the control group attained a mental age beyond 7 years, despite some being up to 8 years old. These findings highlight a pronounced developmental lag in the control group, where many children exhibit mental ages substantially below their calendric age. This suggests the presence of delays in mental developmental functioning.

Table 10: Descriptive statistics according Mental Development Coefficient

Mental Development Coefficient	First Examination		Second Examination		Control Group	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
60 - 70	16	30.8%	1	1.9%	23	43.4%
71 - 75	9	17.3%	7	13.5%	6	11.3%
76 - 80	3	5.8%	9	17.3%	7	13.2%
81 - 85	9	17.3%	8	15.4%	8	15.1%
86 - 90	7	13.5%	5	9.6%	6	11.3%
91 - 95	1	1.9%	9	17.3%	1	1.9%
95 - 100	4	7.7%	5	9.6%	2	3.88%
101 - 110	0	0.0%	5	9.6%	0	0.0%
111 - 120	1	1.9%	1	1.9%	0	0.0%
> 120	2	3.8%	2	3.8%	0	0.0%
Total	52	100%	52	100%	53	100%

Table 10 illustrates the distribution of participants based on their mental development coefficient (MDC) scores, comparing the first assessment with a follow-up evaluation conducted after psychotherapeutic intervention, respectively second assessment. The data reflect clear developmental improvement attributed to the therapeutic treatment.

At baseline, a significant percentage of participants (30.8%) had MDC scores in the lowest range (60–70), indicating notable developmental delays. Additionally, 17.3% of participants fell into the MDC categories of 71–75 and 81–85, respectively. Very few participants demonstrated average or higher cognitive functioning at the initial assessment, with just 7.7% scoring between 95–100, and minimal representation above 110 (only 1.9% in the 111–120 range and 3.8% scoring over 120). This pattern underscores the prevalence of lower cognitive functioning within the group prior to therapy.

However, after completing the psychotherapeutic intervention, the second assessment revealed substantial positive changes. The percentage of participants within the lowest MDC range (60–70) sharply decreased from 30.8% to only 1.9%, and there was also a moderate decrease in the 71–75 range (from 17.3% down to 13.5%). Higher mental development coefficient ranges displayed considerable growth: notably, 17.3% of participants now scored within the 76–80 and 91–95 categories, respectively. Furthermore, 9.6% of participants scored in the previously unrepresented 101–110 range. Importantly, the average and above average of MDC is reflecting an improved cognitive profile across the sample.

Conversely, the control group, which did not receive the intervention, demonstrates a persistent concentration in lower MDC categories, particularly in the lowest range of 60–70 (43.4%), highlighting ongoing developmental challenges. No participants in the control group scored above 100 MDC, reinforcing the substantial difference observed between the intervention and control conditions.

Overall, these finding results support the prediction that the psychotherapeutic treatment enhances developmental outcomes in children, as evidenced by substantial improvements within the experimental group compared to the control group.

To examine the differences among three distinct groups it is conducted a comprehensive statistical analysis. Descriptive statistics, including means and standard deviations, were calculated to provide an overview of the data distribution for each group.

Table 11: Descriptive Statistic of the participants' for the first and examination

	First Examination					Second Examination				
	N	Range	Min.	Max.	Mean	Std. Dev.	Range	Min.	Max.	Mean	Std. Dev.
Calendric Age	52	12	1	13	5.90	3.16	10	3	13	7.44	2.99
Mental Age	52	16	1	15	4.52	3.30	11	2	13	6.52	3.07
Develop Coeff	52	9	1	10	3.40	2.46	9	1	10	4.94	2.27
Develop. Delay	52	3	1	4	2.08	1.11	3	1	4	2.79	1.29
ASD	52	3	1	4	2.44	1.31	3	1	4	3.19	1.25

Table 11 presents descriptive statistics from the first examination of 52 participants, focusing on key developmental measures: Calendric Age, Mental Age, Development Coefficient, Development Delay, and ASD. The mean calendric age is 5.90 years, slightly higher than the mean mental age of 4.52 years, where there is some developmental delay within the group. The Development Coefficient has a mean of 3.40, with moderate variability, indicating differences in developmental progress. The Development Delay scores show means of 2.08 and Autism Spectrum Disorder (ASD) score the mean of 2.44, reflecting a somewhat consistent pattern of developmental delay and ASD characteristics across the participants. Overall, the data highlight variability in developmental progress and ASD traits within the group, with notable differences between calendric and mental ages. In the second examination provides descriptive statistics for the same 52 participants, focusing on same developmental measures as in the first examination. The mean calendric age has increased to 7.44 years, with a mental age mean of 6.52 years, indicating a narrowing of the gap between calendric and mental age compared to the first examination. The Development Coefficient shows a higher mean of 4.94, suggesting some developmental progress, though variability remains moderate. Development Delay has a mean of 2.79, higher than in the first examination, which means as much higher the mean is here it close to the none development delay in the children age. The mean ASD score is 3.19, also higher than in the first examination, reflecting an increase in ASD-related characteristics, the same meaning as in developmental delay. Overall, the data from the second examination suggest there are some mental developmental progresses in participants.

Table 12: Descriptive Statistic of the participants' for the control group

	Control Group					
	N	Range	Min.	Max.	Mean	Std. Dev.	Variance
Calendric Age	53	12.00	1.00	13.00	5.10	3.25	10.55
Mental Age	53	14.00	1.00	15.00	6.81	3.07	5.18
Development Coefficient	53	6.00	1.00	7.00	2.60	2.27	1.77
Development Delay	53	3.00	1.00	4.00	2.21	1.29	0.99
ASD	53	3.00	1.00	4.00	1.83	1.25	1.16

In the table 12 there are presented descriptive statistics for 53 participants of the Experimental Group, focusing on variables such as Calendric Age, Mental Age, Development Coefficient, Development Delay, and ASD. The mean calendric age is 5.10 years, while the mean mental age is higher at 6.81 years, indicating that on average, the participants' mental age is belove their calendric age. The Development Coefficient has a mean of 2.60, reflecting differences in developmental progress within the group. The Development Delay has a mean of 2.21, showing an average delay. The ASD score has a mean of 1.83, indicating moderate ASD characteristics in this group compared to the earlier examinations.

4.3. Descriptive hypothesis testing results

In this section are present the results related to the descriptive hypotheses of the study. Descriptive hypothesis of the study are hypothesis 1 (H.1) and hypothesis 2 (H.2).

In hypothesis H.1 it is stated that there is a moderate level of mental retardation and/or autism spectrum disorder in children in the experimental and control groups. To test the validity of the hypothesis, we used descriptive statistics through frequencies and percentages for the three groups corresponding to the experimental model. The results are presented in Table 13.

Table 13: Descriptive statistics according to Mental Development Delay

Mental Development Delay	First Examination		Second Examination		Control Group	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Mild	20	38.5 %	12	23.1%	17	38.1%
Moderate	17	32.7%	13	25.0%	12	22.6%

Severe	6	11.5%	1	1.9%	20	37.7%
None	9	17.3%	26	50%	4	7.5%
Total	52	100%	52	100.%	53	100%

Table 13 the comparative analysis of mental development delay severity across two assessment points for experimental and control groups. In the first examination, the experimental group showed a predominant distribution in the mild (38.5%) and moderate (32.7%) categories, followed by severe delays (11.5%). A smaller proportion (17.3%) demonstrated no delay. For the same group, in their second examination, after following the psychotherapeutic treatment, the experimental group exhibited a marked shift toward improvement. The proportion of participants with no developmental delay substantially increased from 17.3% to 50%. Correspondingly, the percentages in mild, moderate, and severe categories notably decreased, especially in the severe category, which dropped sharply from 11.5% to 1.9%. In other side, the control group, which did not receive the intervention, demonstrated a considerable percentage remained within the severe category (37.7%) and mild category (38.1%), and only a small percentage (7.5%) showed no delay.

These findings underline the effectiveness of the psychotherapeutic treatment in reducing mental development delays, as evidenced by the significant positive changes within the experimental group compared to the control group.

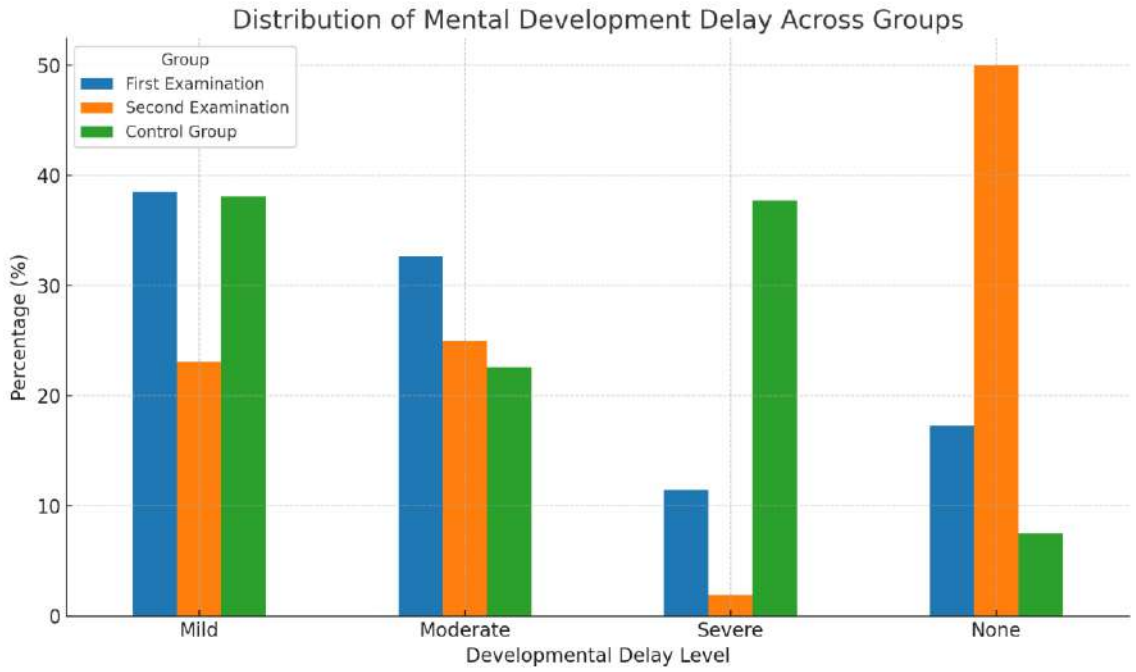

Figure 6. Distribution of Mental Development Delay Across Groups

Table 14: Descriptive Statistic According to Autism Spectrum Disorder

Autism Spectrum Disorder	First Examination		Second Examination		Control Group	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Low	18	34.6 %	10	19.2%	30	56.6%
Moderate	12	23.1%	6	11.5%	12	22.6%
High	3	5.8%	0	0.0%	1	1.9%
None	19	36.5%	36	69.2%	10	18.9%
Total	52	100%	52	100.%	53	100%

Table 14 presents a comparative analysis of Autism Spectrum Disorder (ASD) severity within the experimental and control groups, assessed at two distinct measurement in the beginning and after following the psychotherapeutic treatment. Initially, the experimental group demonstrated a heterogeneous distribution: 34.6% were categorized with low severity ASD, 23.1% with moderate severity, and 5.8% displayed high severity ASD symptoms. Notably, 36.5% showed no ASD symptoms in the first assessment. Following psychotherapeutic intervention, considerable improvements were observed in the experimental group at the second examination. The percentage of participants without ASD symptoms markedly increased from 36.5% to 69.2%. Concurrently, the percentages across all ASD severity levels decreased significantly, with no participants remaining in the high-severity category. In contrast, the control group, which received no therapeutic intervention, showed persistently higher proportions in the low (56.6%) and moderate (22.6%) severity ASD categories, with minimal reduction in ASD symptomatology; only 18.9% presented with no ASD symptoms.

These findings suggest that the psychotherapeutic intervention was notably effective in alleviating ASD symptoms, as evidenced by the significantly reducing symptom severity and increasing the proportion of participants categorized as symptom-free compared to the control condition.

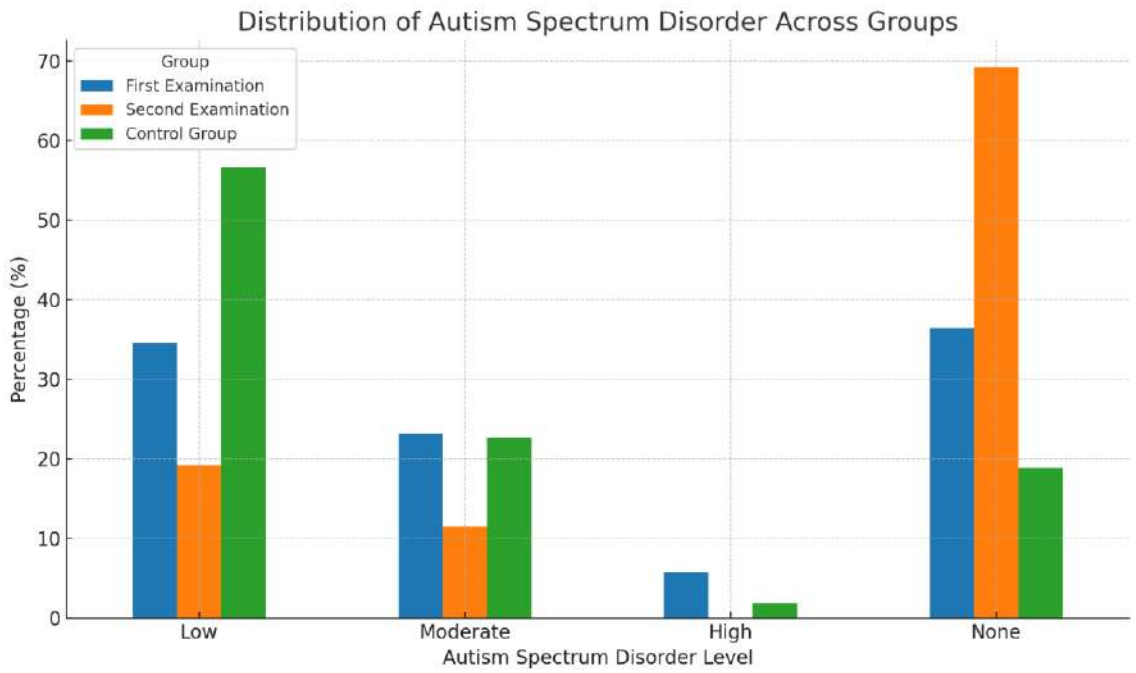

Figure 7. Distribution of Mental Development Delay Across Groups

Further on, are going to be present results from hypothesis 2 (H.2):

Hypothesis H.1 is stated that the severity of mental delay disorder level will be positively correlated with the severity of autism disorder level in children with autism and mental developmental delay. To test the validity of the hypothesis, it is used descriptive statistics through frequencies and percentages for the experimental and control groups. The results are presented in Table 15 and Table 16.

Table 15: Crosstabulation Descriptive of MDD and ASD of experimental group

Mental Development Delay		Autism Prevalence				
		Low	Moderate	High	None	Total
Mild	Count	9	3	0	8	20
	% with MDD	45.0%	15.0%	0.0%	140.0%	100%
	% with ASD	50.0%	25.0%	0.0%	42.1%	38.5%
	% Total	17.3%	5.8%	0.0%	15.4%	38.5%
Moderate	Count	2	6	1	8	17

		%with MDD	11.8%	35.3%	5.9%	47.1%	100.0%
		% with ASD	11.1%	50.0%	33.3%	42.1%	32.7%
		% Total	3.8%	11.5%	1.9%	15.4%	32.7%
	Severe	Count	0	1	1	0	9
		% with MDD	0.0%	33.3%	16.7%	50.0%	100.0%
		% with ASD	0.0%	16.7%	33.3%	15.8%	11.5%
		% Total	0.0%	7.5%	1.9%	7.5%	37.7%
	None	Count	7	1	1	0	9
		% with MDD	77.8%	11.1%	11.1%	0.0%	100.0%
		% with ASD	38.9%	8.3%	33.3%	0.0%	17.3%
		% Total	13.5%	1.9%	1.9%	0.0%	17.3%
Total		Count	18	12	3	19	52
		% with MDD	54.6%	23.1%	5.8%	36.5%	100.0%
		% with ASD	100.0%	100.0%	100.0%	100.0%	100.0%
		% Total	34.6%	23.1%	5.8%	36.5%	100.0%

Table 15 presents the crosstabulation between mental development delay (MDD) and autism spectrum disorder (ASD) prevalence in the experimental group. The results show a differentiated distribution, indicating a close relationship between the severity of developmental delay and the occurrence of autism symptoms. Children with mild MDD (n = 20) were predominantly classified in the low autism group (45.0%) and to a lesser extent in the moderate autism group (15.0%). Notably, none of these children presented with high autism symptoms, while 40.0% were categorized as having no autism. This suggests that mild developmental delay is more frequently associated with lower levels of ASD or absence of the disorder. Among children with moderate MDD (n = 17), 35.3% were found in the moderate autism category and 5.9% in the high autism category. A further 47.1% were identified as

having no autism. This distribution highlights that while moderate developmental delay can co-occur with autism, a significant proportion of children with moderate delay do not present autistic features. The group with severe MDD (n = 9) showed a stronger association with autism severity. Specifically, 33.3% were placed in the moderate autism group, 16.7% in the high autism group, and 50.0% were without autism. This indicates that although severe developmental delay increases the likelihood of more severe autism classifications, not all children with severe delay meet the criteria for ASD. Children without developmental delay (no MDD**,** n = 9) also displayed notable variation. The majority (77.8%) were in the low autism group, with smaller proportions in the moderate (11.1%) and high (11.1%) categories. This finding suggests that even in the absence of developmental delay, autistic features may still be present, though generally in milder forms. At the overall level, the majority of children were classified as low autism (34.6%) or none (36.5%), while moderate autism (23.1%) and high autism (5.8%) were less frequent. Importantly, higher levels of MDD tended to fit with greater representation in the moderate and high autism categories, supporting the assumption of a positive association between developmental delay severity and autism prevalence.

Lastly, the data indicate that while autism can occur across all levels of developmental functioning, its prevalence and severity are more pronounced among children with severe levels of mental developmental delay.

Table 16: Crosstabulation Descriptive of MDD and ASD of control group

Mental Development Delay		Autism Prevalence				
		Low	Moderate	High	None	Total
Mild	Count	11	3	6	0	17
	% with MDD	64.7%	17.6%	0.0%	17.3%	100%
	% with ASD	36.7%	25.0%	0.0%	30.0%	32.1%
	% Total	20.8%	5.7%	0.0%	5.7%	32.1%
Moderate	Count	5	4	0	3	12
	%with MDD	41.7%	33.3%	0.0%	25.0%	100.0%
	% with ASD	16.7%	33.3%	0.0%	30.0%	22.6%
	% Total	9.4%	7.5%	0.0%	5.7%	22.6%

	Severe	Count	11	4	1	4	20
		% with MDD	55.0%	20.0%	5.0%	20.0%	100.0%
		% with ASD	36.7%	33.3%	100.0%	40.0%	37.7%
		% Total	20.8%	7.5%	1.9%	7.5%	37.7%
	None	Count	3	1	0	0	4
		% with MDD	75.0%	25.0%	0.0%	0.0%	100.0%
		% with ASD	10.0%	8.3%	0.0%	0.0%	7.5%
		% Total	5.7%	1.9%	0.0%	0.0%	7.5%
Total		Count	30	12	1	10	53
		% with MDD	56.6%	22.6%	1.9%	18.9%	100.0%
		% with ASD	100.0%	100.0%	100.0%	100.0%	100.0%
		% Total	56.6%	22.6%	1.9%	18.9%	100.0%

The table 16 demonstrate crosstabulation in between mental development delay (MDD) and autism spectrum disorder prevalence (ASD). There are demonstrated a strong association between the MDD and ASD. Children with mild MDD were most frequently categorized within the low autism group (64.7%), with a smaller proportion in the moderate autism group (17.6%). Notably, none of the children with mild MDD were identified with high autism, and 17.3% were classified as having no autism. Among children with moderate MDD**,** 41.7% are into the low autism group, 33.3% into the moderate autism group, and 25.0% were without autism. This distribution indicates that moderate developmental delay is more evenly spread across autism severity levels, with a notable presence of cases without ASD. It is important to underline those children with severe MDD showed the strongest association with ASD. Over half (55.0%) were classified in the low autism group, 20.0% in the moderate group, and 5.0% in the high autism group. Importantly, 20.0% of children with severe MDD showed no autism diagnosis, yet the largest share of high-autism cases overall (100%) came exclusively from this group, underscoring the relationship between severe developmental delay and increased autism severity. Lastly, children with no presence of MDD were rare (n=4), but 75.0% of these fell within the low autism group and 25.0% in the moderate autism group, with none classified as

high autism or without autism. This suggests that the absence of developmental delay does not preclude autism but is more commonly associated with mild forms. At the total sample level, the largest proportion of children were classified as low autism (56.6%), followed by moderate autism (22.6%), no autism (18.9%), and high autism (1.9%). The strongest group of ASD severity are present within children presenting with severe levels of developmental delay, particularly those with severe MDD.

The findings reveal that higher severity of mental developmental delay is positively associated with increased likelihood and severity of autism spectrum disorder. This pattern supports the hypothesis that developmental delay severity and autism prevalence are correlated.

4.4. Inferential hypothesis testing results

This section presents the results of the inferential hypotheses, which examined the presence of statistically significant differences between the experimental and control groups, as well as within the experimental group across the pre-test and post-test measurements. The analyses were conducted to determine whether the observed changes in developmental and behavioral measures are statistically significant thereby providing evidence on the effectiveness of the applied psychotherapeutic intervention in the experimental group.

In this part are hypothesis 3 (H.3), respectively H.3.1, H.3.2.; and hypothesis 4 (H.4.), respectively H4.1., H.4.1.1, H.4.1.2., H.4.1.3., H.4.2., H.4.2.1., H.4.2.2., H.4.2.3.

In hypothesis H.3. is stated that at the first examination, experimental group demonstrated the higher scores results in mental development delay and in pervalence of autism compared to the second examination of the experimental group where they demonstrated lower score results in mental development delay and in prevalence of autism. In order to address the main hypothesis, first it is necessary to examine the sub hypotheses.

In sub hypothesis H.3.1. it is stated that at the first examination, experimental group demonstrated the higher scores results in mental development delay compared to the second examination of the experimental group where they demonstrated lower score results in mental development delay. To test the validity of sub hypothesis H.3.1, it is used inferential statistics through the paired samples t-test, the experimental design, for the two relevant groups. The results are presented in Tables 17 and 18.

Table 17: Descriptive statistic of mental development delay across experimental and control group

Groups		N	Mean	Std. Dev.	Std. Error Mean
Experimental	First Ex.	52	2.08	1.10	0.15
	Second Ex.	52	2.79	1.29	0.18
Control		53	2.21	0.99	0.13

Table 17 presents the mean values and standard deviations of the experimental and control groups across the two examinations. In the experimental group, the mean score increased from 2.08 (SD = 1.10) at the first examination to 2.79 (SD = 1.29) at the second examination, indicating a positive developmental progression over time. The control group showed a mean score of 2.21 (SD = 0.99). These findings suggest that participants in the experimental group demonstrated notable improvement following the intervention, whereas this improvement is greater than the means of control group. To determine whether the differences between the two groups are statistically significant, it was performed the t-test, and the results of the differential analysis are presented in Table 18.

Table 18: Paired sample T-test of mental development delay across experimental and control group

	Mean	Std. Dev.	Std. Error	t-test	df	Sig. (2-tailed)
Experimental First and Second Ex.	-0.71	1.67	0.23	-3.07	51	0.00
Experimental Second Ex. and Control Gr.	0.56	1.70	0.24	2.37	51	0.02

In the table 18 are presented results of the independent-samples *t*-tests, comparing developmental outcomes between the experimental group across two time points and between the experimental and control groups. The comparison within the experimental group (first and second examinations) yielded a statistically significant improvement, $t(51) = -3.07$, $p < .001$, with a mean difference of -0.71. This result indicates that children in the experimental group demonstrated significant developmental progress after the intervention.

The comparison between the experimental group at the second examination and the control group also revealed a statistically significant difference, $t(51) = 2.37$, $p = .02$, ($p < .05$), with a mean difference of 0.56. This finding concludes that, the intervention in the

experimental group has achieved higher developmental outcomes than the control group, thereby the effectiveness of the applied integrative psychodynamic psychotherapeutic intervention is significantly effective in improving mental developmental delay.

In hypothesis H.3.2. it is stated that at the first examination, experimental group demonstrated the higher scores results in pervalence of autism compared to the second examination of the experimental group where they demonstrated lower score results in prevalence of autism. To test the validity of hypothesis H.3.2, it is used inferential statistics through the paired samples t-test, the experimental design, for the two relevant groups. The results are presented in Tables 19 and 20.

Table 19: Descriptive statistic of prevalence of autism across experimental and control group

Groups		N	Mean	Std. Dev.	Std. Error Mean
Experimental	First Ex.	52	2.44	1.31	0.18
	Second Ex.	52	3.19	1.25	0.17
Control		53	1.79	1.13	0.16

Table 19 presents the descriptive statistics for the experimental and control groups across the first and second examinations. For the experimental group, in the second examination mean score increased from 2.44 (SD = 1.31) in to 3.19 (SD = 1.25). This upward shift indicates a notable improvement in developmental outcomes over the intervention period. The reduction in the standard deviation suggests a slightly more consistent performance among participants at the second measurement.

At the same time, the control group displayed a lower mean score of 1.79 (SD = 1.13). The difference in mean scores between the groups at the second examination highlights the beneficial effect of the psychotherapeutic intervention applied to the experimental group. These results provide descriptive evidence supporting the effectiveness of the intervention in promoting developmental improvements. To determine if the differences between two groups are statistically significant, it was performed the t-test, and the results of the differential analysis are presented in Table 20.

Table 20: Paired sample T-test of prevalence of autism across experimental and control group

	Mean	Std. Dev.	Std. Error	t-test	df	Sig. (2-tailed)
Experimental First and Second Ex.	-0.75	1.61	0.22	-3.36	51	0.00
Experimental Second Ex. and Control Gr.	1.40	1.47	0.20	6.87	51	0.00

Table 20 present the results of t-test comparisons about the prevalence of autism between the first and second examinations of the experimental group, as well as between the second examination of the experimental group and the control group. Within the experimental group, the comparison between the first and second examinations provided a mean difference of -0.75 (SD = 1.61), with a $t(51)= -3.36$ ($p < .001$). This statistically significant result indicates a clear improvement from the first to the second examination, demonstrating that participants in the experimental group showed substantial developmental progress following the psychotherapeutic intervention.

Furthermore, the comparison between the second examination of the experimental group and the control group revealed a mean difference of 1.40 (SD = 1.47), with a $t(51)= 6.87$ ($p < .001$). This highly significant difference highlights that the experimental group, after intervention, performed markedly better than the control group, which did not receive therapeutic treatment.

Conclusion of H.3.: Regarding to H.3., these findings provide significant statistical supporting the effectiveness of the integrative – psychodynamic psychotherapeutic intervention in strengthening measurable developmental improvements in children with mental developmental delay and autism spectrum disorder.

In hypothesis H.4. it is stated that there are significant differences in the rate of mental development delay and the prevalence of autism, depending on gender, birth order and residency. In order to address the main hypothesis, it is first necessary to examine the sub hypotheses.

In sub hypothesis H.4.1. is stated that there are significant differences in the rate of mental development delay, depending on gender, birth order and residency. For adressing this sub hypothesis there is a need to examine supporting hypothesis.

In supporting hypothesis H.4.1.1. is stated that boys have a higher level of mental development delay compared to girls. To test the validity of supporting hypothesis H.4.1.1, it is used inferential statistics through the independed simple t-test, the experimental design, for the two relevant groups and Levene's test of variances. The results are presented in Tables 21 - 22, and tables 23 - 24.

Table 21: Descriptive statistic of mental development delay according to gender differences in experimental group

Experimental Group		N	Mean	Std. Dev.	Std. Error Mean
	Girls	18	2.06	0.99	0.24
	Boys	34	2.09	1.16	0.20

Table 21 presents the mean scores between girls (n = 18) and boys (n = 34) within the experimental group. The results shows that girls obtained a mean score of 2.06 (SD = 0.99), while boys demonstrated a very similar mean score of 2.09 (SD = 1.16). The standard errors of the mean (0.24 for girls and 0.20 for boys) suggest that the observed means are stable and not subject to large sampling differentiation. Overall, the findings show minimal differences between genders, with both groups presenting nearly identical average values. This suggests that gender did not play a significant role in influencing the measured outcome within the experimental group, in contrast of the hypothesis, findings are supporting the assumption of relative homogeneity across male and female participants. To conduct if the differences between the two groups are statistically significant, it was performed Levene's test of variance and the independed t-test, and the results of the differential analysis are presented in Table 22.

Table 22: Independent t-test of mental development delay according to gender differences in experimental group

Mental Development Delay	Levene's Test	t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	1.13	0.29	-0.10	50	0.92	-0.03	0.32
Equal Variances Not Assumed			-0.11	39.70	0.92	-0.03	0.31

In the table 22 are present independent result with Levene's test of mental development delay according to gender differences in experimental group. The results of Levene's Test for Equality of Variances show a non-significant outcome ($F = 1.13$, $p = 0.29$), indicating that the assumption of homogeneity of variances was met. The *t*-test results showed no statistically significant difference between the compared gender groups ($t(50) = -0.11$, $p = 0.92$). The mean difference of -0.03 (SE = 0.32). These results suggest that the groups did not differ significantly in terms of mental development delay in between the gender, implying that the examined gender variable was consistent across both groups.

Table 23: Descriptive statistic of mental development delay according to gender differences in control group

Control Group	N	Mean	Std. Dev.	Std. Error Mean
Girls	19	2.05	1.03	0.24
Boys	34	2.29	0.97	0.17

Table 23 present descriptive statistic of control group about mental development delay according to gender differences. The descriptive statistics for the control group indicate that girls ($n = 19$) had a mean score of 2.05 (SD = 1.03), with a standard error of 0.24. Boys ($n = 34$) showed a slightly higher mean score of 2.29 (SD = 0.97), with a standard error of 0.17. Although boys presented a higher mean compared to girls, the difference between the two groups appears to be relatively small. The overlap in standard deviations further suggests that variability within each group is comparable, and any gender-related differences are unlikely to be substantial at the descriptive level. To conclude the significancy differences between the two groups it was performed Levene's test and the t-test, and the results of the differential analysis are presented in Table 24.

Table 24: Independent t-test of mental development delay according to gender differences in control group

Mental Development Delay	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	0.23	0.63	-0.85	51	0.40	-0.24	0.28
Equal Variances Not Assumed			-0.84	35.63	0.41	-0.24	0.29

In the table 24, the Levene's Test for equality of variances yielded a non-significant result ($F = 0.23$, $p = 0.63$), indicating that there is homogeneity of variances but there are not significant differences between the gender. The *t*-test results showed no statistically significant difference between the compared gender groups ($t(51) = -0.85$, $p = 0.40$). The mean difference of -0.24 (SE = 0.28) suggests that while one group demonstrated slightly lower scores in mental development delay, this difference was not statistically meaningful.

Overall, having in a count H.4.1. the findings shows that there is no evidence of a significant difference between the gender in both groups related to mental development delay.

In supporting hypothesis H.4.1.2. it is slated that the first born children have a higher level of mental development delay compared to later born children. To test the validity of hypothesis H.4.1.2, it is used inferential statistics through the ANOVA t-test, for the two relevant groups. The results are presented in Tables 25 - 26 and Table 27 - 28.

Table 25: Descriptive statistic of mental development delay according to gender differences in experimental group

Experimental Group	N	Mean	Std. Dev.	Std. Error
1st	32	2.22	1.21	0.24
2nd	11	1.73	0.90	0.27
3rd	8	2.00	0.93	0.33
4th	1	2.00		

Total	52	2.08	1.10	0.15

Table 25 shows the distribution of mental development delay scores across different birth orders within the experimental group indicates relatively small variations. First-born children (n = 32) had the highest mean score (M = 2.22, SD = 1.21), followed by second-born children (n = 11) with a lower mean (M = 1.73, SD = 0.90). Third-born children (n = 8) showed a mean of 2.00 (SD = 0.93), while the single fourth-born child recorded a score of 2.00. Although some differences in mean values are observable, particularly between first-born and second-born children, the overall standard deviations suggest notable variability within groups. The total mean score for the experimental group was 2.08 (SD = 1.10), indicating a generally consistent trend across birth orders. To conclude the significancy differences between groups it was performed ANOVA test, and the results of the differential analysis are presented in the Table 26.

Table 26: ANOVA test for mental development delay of birth order in experimental group

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.04	3	0.68	0.55	0.65
Withing Groups	59.65	48	1.24		
Total	61.69	51			

In the table 26 ANOVA test is conducted to examine whether there were statistically significant differences in mental development delay scores across the different birth order in experimental groups. The results indicate that the between-group variance (SS = 2.04, df = 3, MS = 0.68) was not statistically significant compared to the within-group variance (SS = 59.65, df = 48, MS = 1.24), $F(3, 48) = 0.55$, $p = 0.65$. This finding suggests that birth order does not exert a significant effect on developmental outcomes within the experimental group. The high p-value ($p > 0.05$) demonstrates that any observed differences in mean scores among first-born, second-born, third-born, and fourth-born children are likely due to chance rather than systematic effects of birth order.

Table 27: Descriptive statistic of mental development delay according to gender differences in control group

Control Group	N	Mean	Std. Dev.	Std. Error
1st	35	2.17	1.04	0.18
2nd	9	2.22	0.83	0.28
3rd	7	2.29	1.11	0.42
4th	1	2.00		
5th	1	3.00		
Total	53	2.21	0.99	0.14

In table 27 are present descriptive statistics of the control group where they indicate that the mean levels of mental development delay are relatively consistent across different birth order categories. First-born children (n = 35) demonstrated a mean score of 2.17 (SD = 1.04), which is closely comparable to second-born children (n = 9, M = 2.22, SD = 0.83) and third-born children (n = 7, M = 2.29, SD = 1.11). The single participants in the fourth- and fifth-born categories had mean scores of 2.00 and 3.00, respectively, though these values cannot be meaningfully generalized due to the very small sample size in these categories. Overall, the total mean score for the control group was 2.21 (SD = 0.99, SE = 0.14). These results suggest that birth order does not produce substantial variations in mental development delay scores within the control group, as the averages remain largely stable across different positions in the sibling order. For verifying the significant differences between groups was performed ANOVA test, and the results of the differential analysis are presented in the Table 28.

Table 28: ANOVA test for mental development delay of birth order in control group

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.76	4	0.19	0.18	0.95
Withing Groups	49.96	48	1.04		
Total	50.72	52			

Table 28 present ANOVA test that was conducted to examine whether mental development delay scores in the control group differed significantly across birth order categories. The analysis showed a non-significant result, $F(4, 48) = 0.18$, $p = .95$. This indicates that there are no statistically significant differences in mean scores between children of different birth orders. The between-groups variance (SS = 0.76, MS = 0.19) was minimal compared to the within-groups variance (SS = 49.96, MS = 1.04), suggesting that the variability in scores is largely attributable to individual differences within groups rather than birth order.

According to H.4.1.2., these finding results do not provide strong evidence of systematic differences in developmental outcomes based on birth order. As a conclusion birth order does not exert a measurable influence on levels of mental development delay.

In supporting hypothesis H.4.1.3. it is stated that children who live in urban areas have a higher level of mental development delay compared to children who lives in rural areas. To test if the differences between the two groups are significant, was performed Levene's test of variance and the t-test. The results of the differential analysis are presented in Tables 29 – 30 and Tables 31 – 32.

Table 29: Descriptive statistic of mental development delay according to residency differences in experimental group

Experimental Group	N	Mean	Std. Dev.	Std. Error Mean
Urban	36	2.03	1.16	0.19
Rural	18	2.19	0.98	0.25

Table 29 present presents the descriptive of mean scores for children in the experimental group based on their place of residence (urban vs. rural). The results indicate that children from rural areas (M = 2.19, SD = 0.98) had slightly higher mean scores compared to their peers from urban areas (M = 2.03, SD = 1.16). However, the difference between the two groups is relatively small. The standard deviations suggest a similar spread of scores across both groups, with urban children showing a somewhat larger variability (SD = 1.16) than rural children (SD = 0.98). For concluding the significant differences between two groups it was performed Levene's test and the t-test, and the results of the differential analysis are presented in Table 30.

Table 30: Independent t-test of mental development delay according to residency in experimental group

Mental Development Delay	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	0.77	0.38	-0.48	50	0.63	-0.16	0.33
Equal Variances Not Assumed			-0.51	33.79	0.61	-0.16	0.31

Table 30 presents the results of the independent samples *t*-test used to examine differences in mental development delay between children from urban and rural areas within the experimental group. Levene's test for equality of variances was not statistically significant (F = 0.77, p = 0.38), which indicating that there is present of homogeneity of variances. The *t*-test revealed no statistically significant difference between urban and rural participants [$t(50) = -0.48$, p = 0.63]. The mean difference (-0.16) was very small, with a standard error of 0.33, suggesting minimal variation attributable to residence.

Table 31: Descriptive statistic of mental development delay according to residency differences in control group

Control Group	N	Mean	Std. Dev.	Std. Error Mean
Urban	28	2.25	1.04	0.19
Rural	25	2.16	0.94	0.18

Table 31 presents the descriptive statistics for mental development delay in the control group, differentiated by participants' place of residence (urban vs. rural). Children from urban areas (N = 28) had a mean score of 2.25 (SD = 1.04), while children from rural areas (N = 25) had a slightly lower mean score of 2.16 (SD = 0.94). The standard errors of the mean were nearly identical (0.19 for urban and 0.18 for rural), suggesting comparable precision in the estimates across both subgroups. The similarity of mean scores between urban and rural children indicates that residence did not appear to directive influence developmental outcomes

in the control group. To examine the significant differences between two groups was performed Levene's test and the t-test, and the results of the differential analysis are presented in Table 31.

Table 31: Independent t-test of mental development delay according to residency in control group

Mental Development Delay	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	0.53	0.47	-0.33	51	0.74	-0.09	0.27
Equal Variances Not Assumed			-0.33	50.99	0.74	-0.09	0.27

Table 31 present the results of an independent samples t-test examining differences in mental development delay between children from urban and rural areas within the control group. The Levene's Test for Equality of Variances proceed a non-significant result ($F = 0.53$, $p = 0.47$), which provide that there is present of homogeneity of variances. The independent samples t-test revealed no statistically significant difference between urban and rural children [$t(51) = -0.33$, $p = 0.74$]. The mean difference (-0.09) was minimal, with a standard error of 0.27, suggesting that residential living area had no meaningful impact on developmental outcomes in the control group.

In summary about variable of residency, having a consideration hypothesis H.4.1.3., findings indicate that in the absence of therapeutic intervention, mental development delay scores were highly comparable between children from urban and rural backgrounds. Overall, these results indicate that children's place of residence (urban vs. rural) did not significantly influence mental development outcomes within both groups, experimental and control group.

Conclusion of H.4.1.: Corresponding to H.4.1., taken together all related variables with demographic data, respectively gender differences, birth order and living area (residency), findings show that gender differences, place of residence and birth order do not appear to provide significant effect on the outcomes measured within the experimental group, as well as for the control group.

In sub hypothesis H.4.2. is staded that there are significant differences in the rate of prevalence of autism, depending on gender, birth order and residency. In order to adress this sub-hypothesis there is a need to examine supporting hypothesis.

In supporting hypothesis H.4.2.1. it is stated that boys have a higher level of prevalence of autism compared to girls. For testing the validity of supporting hypothesis H.4.2.1, it is used inferential statistics through the independed sample t-test, the experimental design, for the two relevant groups and Levene's test of variances. The results are presented in Tables 32 - 33, and tables 34 - 35.

Table 32: Descriptive statistic of prevalence of autism according to gender differences in experimental group

Experimental Group	N	Mean	Std. Dev.	Std. Error Mean
Girls	18	2.67	1.33	0.31
Boys	34	2.32	1.30	0.22

In table 32 are presented descriptive statistics on prevalence of autism scores for boys and girls in the experimental group. The mean score for girls (M = 2.67, SD = 1.33) is slightly higher than that for boys (M = 2.32, SD = 1.30). The standard error values (0.31 for girls and 0.22 for boys) indicate that the sample means are reasonably stable. Although the mean difference suggests that girls exhibited higher prevalence of autism scores compared to boys, but this difference may not be statistically significant without further testing.

In summary, within the experimental group, girls tended to score somewhat higher on prevalence of autism measures than boys; however, the variation within both groups indicates that gender differences are modest and likely not yet significant. To conduct the validity of supporting hypothesis H.4.2.1, it is used inferential statistics through the independed sample t-test, the experimental design, for the two relevant groups and Levene's test of variances. The results are presented in Tables 33 - 34, and tables 35 - 36.

Table 33: Independent t-test of prevalence of autism according to gender differences in experimental group

Prevalence of autism	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	0.16	0.69	0.90	50	0.37	-0.34	0.37
Equal Variances Not Assumed			0.89	34.01	0.38	-0.34	0.38

The independent samples t-test examining the prevalence of autism between genders, within the experimental group. Levene's test confirmed the assumption of equal variances ($F = 0.16$, $p = 0.69$), and the subsequent t-test indicated that the mean difference of -0.34 ($SE = 0.37$) was not significant, $t(50) = 0.90$, $p = 0.37$. This suggests that the observed variation in autism prevalence between the genders is minimal and can be attributed to chance rather than to meaningful group differences. Accordingly, the finding shows there is not statistically significant difference.

Table 34: Descriptive statistic of prevalence of autism according to gender differences in control group

Control Group		N	Mean	Std. Dev.	Std. Error Mean
	Girls	19	2.16	1.26	0.29
	Boys	34	1.65	1.07	0.18

In table 34 are presented descriptive statistics on prevalence of autism scores for boys and girls in the control group. The mean score for girls ($M = 2.16$, $SD = 1.26$) is obviously higher than that for boys ($M = 1.65$, $SD = 1.30$). The standard error values (0.29 for girls and 0.18 for boys) indicate that the sample means are slightly different. The mean difference suggests that girls exhibited higher prevalence of autism scores compared to boys, but to conclude this difference need to check further with statistical testing of significancy. Testing of significancy analysis results are presented in the table 35.

Table 35: Independent t-test of prevalence of autism according to gender differences in control group

Prevalence of autism	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	1.43	0.24	1.56	51	0.12	0.51	0.33
Equal Variances Not Assumed			1.49	32.57	0.14	0.51	0.34

Table 35 presents the results of an independent samples t-test comparing the prevalence of autism between gender. Levene's test indicated that the assumption of homogeneity of variances was met ($F = 1.43$, $p = 0.24$), which means no significant difference between genders. The t-test showed no statistically significant difference in autism prevalence between the gender groups, $t(51) = 1.56$, $p = 0.12$, with a mean difference of 0.51 (SE = 0.33). When equal variances were not assumed, the result remained non-significant, $t(32.57) = 1.49$, $p = 0.14$. These findings suggest that although one group had a higher mean prevalence of autism, the difference was not large enough to reach statistical significance, indicating that gender did not have a meaningful effect on autism prevalence.

In supportive hypothesis H.4.2.2. it is stated thag first born children have a higher level of prevalence of autism compared to later born children. For testing the validity of supporting hypothesis H.4.1.2, it was used inferential statistics through the ANOVA test. The results are presented in Tables 36 - 37, and tables 38 - 39.

Table 36: Descriptive statistic of prevalence of autism according to birth order differences in experimental group

Experimental Group	N	Mean	Std. Dev.	Std. Error
1st	32	2.25	1.32	0.23
2nd	11	2.54	1.29	0.29
3rd	8	3.12	1.25	0.25
4th	1	2.00		

Total	52	2.44	1.30	0.18

Table 36 presents the distribution of autism prevalence scores in the experimental group according to birth order. The results show that first-born children (N = 32) had a mean score of 2.25 (SD = 1.32), while second-born children (N = 11) scored slightly higher, with a mean of 2.54 (SD = 1.29). Third-born children (N = 8) demonstrated the highest mean score of 3.12 (SD = 1.25), whereas the fourth-born child had a score of 2.00. The total sample (N = 52) had an overall mean of 2.44 (SD = 1.30). These findings suggest a gradual increase in autism prevalence scores with later birth order, particularly among third-born children, although the small sample size in later birth orders (especially third- and fourth-born) limits the generalizability of this trend. In order to verify the significancy that is done ANOVA test, where the results are presented in Table 39.

Table 37: ANOVA test for autism prevalence according to birth order in experimental group

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.23	3	1.74	1.02	0.39
Withing Groups	81.60	48	1.70		
Total	86.83	51			

Table 37 presents the results of a one-way ANOVA conducted to examine differences in autism prevalence across groups categorized by birth order within the experimental sample. The analysis shows that the between-groups sum of squares is 5.23 with 3 degrees of freedom, show a mean square of 1.74. The within-groups sum of squares is 81.60 with 48 degrees of freedom, corresponding to a mean square of 1.70. The resulting F-value is 1.02, with a significance level (sig.) of 0.39. Since the p-value (0.39) is greater than the conventional threshold of 0.05, the differences observed among the groups are not statistically significant. This indicates that birth order does not exert a meaningful effect on the prevalence of autism within the experimental group. Although slight variations in mean scores are present, these differences appear to be due to random variation rather than systematic effects of birth order.

Table 38: Descriptive statistic of prevalence of autism according to birth order differences in control group

Control Group	N	Mean	Std. Dev.	Std. Error
1st	35	1.86	1.67	0.19
2nd	9	1.56	1.01	0.34
3rd	7	2.00	1.41	0.53
4th	1	1.00		
5th	1	3.00		
Total	52	2.44	1.30	0.18

Table 38 presents the distribution of autism prevalence in the control group according to birth order. The results show that first-born children (n = 35) had a mean score of 1.86 (SD = 1.67), followed by second-born children (n = 9) with a slightly lower mean of 1.56 (SD = 1.01). Third-born children (n = 7) showed a mean of 2.00 (SD = 1.41), while the fourth- and fifth-born children, represented by single cases, reported values of 1.00 and 3.00 respectively. The overall mean for the control group was 2.44 (SD = 1.30), indicating moderate variability across participants. These findings suggest no consistent trend linking birth order to prevalence of autism within the control group, and the variations observed are not likely attributable to in a systematic effect. In order to conduct the significancy that is done ANOVA test, where the results are presented in Table 39.

Table 39: ANOVA test for autism prevalence according to birth order in control group

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.96	4	0.74	0.54	0.71
Withing Groups	66.51	48	1.39		
Total	69.47	52			

Table 39 presents the results of a one-way ANOVA examining differences in autism prevalence across birth order categories within the control group. The analysis shows that the between-groups sum of squares is 2.96 with 4 degrees of freedom showing a mean square of 0.74 (SS=2.96, df = 4, MS=0.74). The within-groups sum of squares is substantially larger at 66.51 with 48 degrees of freedom, resulting in a mean square of 1.39 (SS=66.51, df = 48,

MS=1.39). The obtained F-value is 0.54 with a significance level of p = 0.71, which is well above the conventional threshold of 0.05. This indicates that there are no statistically significant differences in autism prevalence scores between children of different birth orders in the control group. In other words, birth order does not appear to exert a measurable influence on autism prevalence within this sample.

In supporting hypothesis H.4.2.3. it is stated that children who live in urban areas have a higher level of prevalence of autism compared to later born children. For testing the significant differences between the two groups was performed Levene's test of variance and the t-test. The results of the differential analysis are presented in Tables 40 – 41 and Tables 42 – 43.

Table 40: Descriptive statistic of prevalence of autism according to residency differences in experimental group

Experimental Group	N	Mean	Std. Dev.	Std. Error Mean
Urban	36	2.19	1.26	0.21
Rural	18	3.00	1.26	0.32

Table 40 present the prevalence of autism between children from urban (n = 36) and rural (n = 18) areas within the experimental group. The mean score for urban children is 2.19 (SD = 1.26), while rural children have a higher mean score of 3.00 (SD = 1.26). The standard error of the mean (SEM) is 0.21 for the urban group and 0.32 for the rural group, suggesting greater variability in the rural sample due to the smaller group size. These descriptive results indicate that children from rural areas presented with a higher average level of autism prevalence compared to those from urban areas. However, without an accompanying significance test it cannot be concluded whether this observed difference is statistically significant or may have occurred by chance. For testing the significancy is done ANOVA test, and the results are presented in Table 41.

Table 41: Independent t-test of prevalence of autism according to residency in experimental group

Prevalence of autism	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	0.35	0.85	-2.12	50	0.39	-0.81	0.38
Equal Variances Not Assumed			-2.12	28.77	0.43	-0.81	0.38

In the table 41 are present the results of the Levene's Test and the independent-samples t-test assessing differences in autism prevalence between groups of residencies. The Levene's Test for equality of variances (F = 0.35, Sig. = 0.85) shows that the assumption of homogeneity of variances is satisfied, allowing the use of the "Equal Variances Assumed" row for interpretation. The t-test result (t = -2.12, df = 50, p = 0.39) indicates that the difference between the groups is not statistically significant, as the p-value is well above the conventional threshold of 0.05. The mean difference of -0.81 (SE = 0.38) suggests that one group had slightly lower mean scores than the other, but this difference is not meaningful in statistical terms. Overall, the findings demonstrate that there is no significant difference in the prevalence of autism between the residency living are, implying that the observed variation could be attributed to chance rather than a directive effect.

Table 42: Descriptive statistic of prevalence of autism according to residency differences in control group

Control Group	N	Mean	Std. Dev.	Std. Error Mean
Urban	28	1.89	1.20	0.23
Rural	25	1.76	1.13	0.23

In table 42 are present descriptive statistics for the control group, comparing participants from urban and rural areas in terms of the autism prevalence. The results show that the urban group (N = 28) had a mean score of 1.89 (SD = 1.20, SE = 0.23), while the rural group (N = 25) had a mean score of 1.76 (SD = 1.13, SE = 0.23). The mean difference between

the two groups is minimal (0.13 points), and the standard deviations are very similar, indicating comparable variability across groups.

Overall, these findings suggest that there are no substantial differences between urban and rural participants in the control group, but for conclusion it is necessary to check the level of significancy, so further on tests needs to be present. For checking the signficany differences between two groups was performed Levene's test and the t-test, where the results are presented in Table 43.

Table 43: Independent t-test of prevalence of autism according to residency in control group

Prevalence of autism	Levene's Test		t-test				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal Variances Assumed	0.06	0.81	0.41	51	0.69	0.13	0.32
Equal Variances Not Assumed			0.42	50.84	0.68	0.13	0.32

In table 43 are present the results of Levene's test for equality of variances and the independent samples t-test examining differences in the prevalence of autism between two groups of residencies. Levene's test (F = 0.06, Sig. = 0.81) indicates that the assumption of equal variances is met, as the p-value is much higher than 0.05, which mean the groups are homogeny. Thus, the first row of the t-test (equal variances assumed) can be interpreted. The t-test result (t = 0.41, df = 51, p = 0.69) shows no statistically significant difference between the participants who lives in urban area and with ones who live in rural area. The mean difference (0.13) is very small and given the relatively large standard error (0.32), this difference is not meaningful.

Conclusion of H.4.2: The analysis of autism prevalence in relation to gender, birth order, and residency revealed no statistically significant differences across these demographic factors. In both the experimental and control groups, girls displayed slightly higher mean scores than boys; however, the differences were not statistically significant, indicating that gender does not play a determining role in the appearance of autism prevalence. Similarly, birth order did not show a consistent or reliable association with autism prevalence. Although first-born children constituted the largest subgroup and showed higher prevalence compared to later-born children, these differences were minor and random attributable the result. Furthermore,

comparisons between children from urban and rural areas showed no significant differences, as both groups demonstrated nearly identical mean levels. Overall, the findings suggest that gender, birth order, and residency do not exert a significant or systematic influence on the prevalence of autism in this sample.

The results indicate that there is no significant difference in autism prevalence between the compared groups. The observed difference in mean values is minimal and likely due to random variation rather than a true indicator.

4.5. Correlative hypothesis testing results

Further on, the data analysis will continue to be present with the last part of hypothesis category that are related with correlative hypothesis. Related with this category are include hypothesis 5 (H.5.), with sub hypothesis H.5.1. and H.5.2. This hypothesis is going to examines whether the absence of therapeutic intervention is associated with a higher presence of mental developmental delay and autism prevalence compared to children who receive integrative–psychodynamic therapeutic sessions. The analysis aims to identify potential correlations between therapeutic involvement in children developmental outcomes.

In hypothesis H.5. it is stated that in a group of children with non-therapeutic session will be a significant present of mental development delay and prevalence of autism rather than children who participate in integrative – psychodynamic therapeutic sessions. For adressing this sub hypothesis there is a need to examine sub hypothesis.

In sub hypothesis H.5.1., it is stated that in a group of children with none therapeutic session will be a significant present of mental devalopment delay than children who participate in integrative – psychodynamic therapeutic sessions. To test the validity of sub hypothesis H.5.1, it is used correlative statistics through the Pearson correlations between experimental and control group. The results are presented in Tables 44.

Table 44: Pearson Correlation analysis of mental developmental delay in the group with and without psychotherapuetical intervention

		Control Group	Exp. Second Examination
Control Group	Pearson Correlation	1	-0.80
	Sig. (2-tailed)		0.01
	N	53	52
Exp. Second Examination	Pearson Correlation	-0.80	1
	Sig. (2-tailed)	0.01	
	N	52	52

In the table 44 are present the Pearson correlation analysis between the control group and the second examination of the experimental group. The results show a negative correlation (r = -0.80)**,** which means that as the outcomes in the experimental group increase, the outcomes in the control group decrease, and vice versa. This is a significant inverse relationship, suggesting that the two groups demonstrate opposing developmental patterns. The p-value (sig. = 0.01) indicates that this correlation is statistically significant at the 0.05 level. Thus, the observed relationship is unlikely to be due to chance.

The strong negative correlation demonstrates that participation in the integrative–psychodynamic therapeutic sessions is associated with markedly different outcomes compared to children who did not receive therapy. Specifically, as the mental developmental indicators improved in the experimental group after the intervention, the control group tended to show poorer outcomes.

In sub hypothesis H.5.2. it is stated that in a group of children with none therapeutic session will be a significant present of prevalence of autism than children who participate in integrative – psychodynamic therapeutic sessions. To validity of sub hypothesis H.5.2, was conducted by correlative statistics through the Pearson correlations, in between experimental and control group. The results are presented in Tables 45.

Table 45: Pearson Correlation analysis of prevalence of autism in the group with and without psychotherapuetical intervention

		Control Group	Exp. Second Examination
Control Group	Pearson Correlation	1	-0.48
	Sig. (2-tailed)		0.00
	N	53	52
Exp. Second Examination	Pearson Correlation	-0.48	1
	Sig. (2-tailed)	0.00	
	N	52	52

In the table 45 are present the Pearson correlation between the control group and the second examination of the experimental group. The results reveal a moderate negative correlation ($r = –0.48$), which is statistically significant ($p = 0.00$).

This indicates that observed findings in the experimental group, where are children who participated in integrative–psychodynamic therapy is associated with weaker prevalence in autism compared to the control group where are children who did not receive therapy. The negative correlation reflects an inverse relationship, suggesting that therapeutic intervention contributed to decrease the prevalence of autism outcomes, whereas the control group showed comparatively higher prevalence.

Conclusion H.5.:

Due to finding from H.5.1 and H.5.2., can be conclude that the statistical findings show a significant impact of therapeutical intervention. Related with mental development, integrative–psychodynamic psychotherapy has strong impact on improving mental development and minimizing the delay. In other side, integrative–psychodynamic psychotherapy has moderate impact on decreasing the prevalence of autism. In general, it is possible to conclude that, the integrative–psychodynamic psychotherapy had a measurable positive impact on children's mental development.

4.6. Regressive hypothesis testing result

To evaluate the predictive value of the independent variables on the success of integrative–psychodynamic therapy, a linear regression analysis will conduct. The criterion variable is success of therapy, while autism spectrum prevalence, mental developmental delay, and calendar age are entered as predictor variables. This analysis aim to determine the extent to which these factors account for variance in therapy outcomes as significant predictors.

In the hypothesis H.6. it is stated that the success of integrative - psychodynamic therapy as a criterion variable is predicted by the predictor variables: autism spectrum symptoms, mental developmental delay, and calendar age. The result of linear regression is presented in Tables 46 – 47 – 48.

Table 46: Model Summary of regression

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.94[a]	0.88	0.87	2.85

In the table 46 is presented the regression model conducted a multiple correlation coefficient of 0.94 (R=0.94), indicating a very strong relationship between the set of predictors (autism spectrum symptoms, mental developmental delay, and calendar age) and the criterion variable (integrative – psychodynamic therapy success). The coefficient of determination (R^2) = 0.88 shows that approximately 88% of the variance in therapy success is explained by the predictors included in the model. The adjusted $R^2 = 0.87$ confirms that the explanatory power of the model remains very high even after adjusting for the number of predictors, suggesting excellent model fit and minimal risk of overfitting. The standard error of the estimate (2.85) indicates the average deviation of the observed scores from the regression line. Given the high R^2 value, this error is relatively small and supports the reliability of the predictions made by the model.

Table 47: ANOVA[a] test of the regression model

Model		Sum of Squares	df	Mean Squares	F	Sig.
1	Regression	2825.80	3	941.93	115.58	0.00[b]
	Residual	391.18	48	8.15		

Total	3216. 98	51	

In table 47 is presented the ANOVA results indicate that the overall regression model was statistically significant, $F(3, 48) = 115.58$, $p < 0.001$. This shows that the combination of predictors—autism spectrum prevalence, mental developmental delay, and calendar age are significantly explained variance in the success of integrative – psychodynamic as criterion variable.

The regression sum of squares (SS = 2825.80) compared to the residual sum of squares (SS = 391.18) demonstrates that the majority of variability in therapy success is accounted by the predictors, consistent with the very high R^2 ($R^2 = 0.88$) value that is reported in table 46.

Table 48: Regression model of three predictors of therapy success: autism prevalence, mental developmental delay, and calendric age.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1	B	Std. Error	Beta		
(Constant)	-1.89	1.53		-1.24	0.22
Autism Prevalence	1.85	0.39	0.29	4.78	0.00
Mental Development Delay	2.73	0.34	0.44	8.13	0.00
Calendric Age	1.79	0.16	0.68	11.14	0.00

In the table 48 is presented the regression model examined three predictors of therapy success: autism prevalence, mental developmental delay, and calendric age.

Constant ($B = -1.89$, $p = 0.22$): The intercept is not statistically significant, which is expected, as it only represents the predicted value of the criterion variable when all predictors are equal to zero.

Autism Prevalence ($B = 1.85$, $\beta = 0.29$, $t = 4.78$, $p < 0.001$): Autism prevalence is a significant positive predictor of therapy success. For each unit increase in autism prevalence score, therapy success increases by 1.85 units, controlling for the other variables. The standardized coefficient ($\beta = 0.29$) indicates a moderate contribution relative to the other predictors.

Mental Developmental Delay ($B = 2.73$, $\beta = 0.44$, $t = 8.13$, $p < 0.001$): Mental developmental delay is also a significant positive predictor. Each unit increase in developmental delay is

associated with an increase of 2.73 units in therapy success. With $\beta = 0.44$, it represents a stronger predictor than autism prevalence but weaker than calendric age.

Calendric Age ($B = 1.79$, $\beta = 0.68$, $t = 11.14$, $p < 0.001$): Calendar age emerges as the strongest predictor of therapy success. For each additional year therapy success increases by 1.79 units. The standardized coefficient ($\beta = 0.68$) indicates the largest relative effect among the predictors.

Conclusion H.6:

A multiple regression analysis was conducted to examine whether autism prevalence, mental developmental delay, and calendric age predicted the success of integrative–psychodynamic therapy. The overall model was statistically significant, $F(3, 48) = 115.58$, $p < 0.001$, accounting for 88% of the variance in therapy success ($R = .94$, $R^2 = 0.88$, Adjusted $R^2 = 0.87$). Autism prevalence ($\beta = 0.29$, $p < 0.001$), mental developmental delay ($\beta = 0.44$, $p < 0.001$), and calendric age ($\beta = 0.68$, $p < 0.001$) all emerged as significant positive predictors. Among them, calendric age contributed the most strongly to the model, followed by mental developmental delay and autism prevalence. The constant was not statistically significant ($p = 0.22$), which is consistent with the fact that it has no substantive interpretive value in this context. These findings indicate that integrative – psychodynamic therapy indicated in success score in higher calendric age, greater developmental delay, and higher autism prevalence.

CHAPTER V

5. Discussion

Early childhood development, pervasive developmental disorders, and a range of other developmental difficulties in children has been increasing attention. These trends have brought heightened focus not only to the diagnostic process but also to the consequent therapeutic interventions, both of which are now recognized as critical components in addressing developmental challenges effectively (Zablotsky et al., 2019).

When addressing about mental developmental delay and pervasive developmental disorders, it is essential to first clarify the concepts to which these terms refer.

Developmental delay refers to a condition in which a child does not achieve expected developmental milestones within the normative age range, potentially affecting physical, cognitive, linguistic, social, or emotional domains. These delays may vary in severity and can impact one or multiple areas of functioning, often requiring targeted psychological interventions (Glascoe, 2000). Similarly, Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by a broad range of cognitive, behavioral, and communicative impairments. Due to its complex symptomatology, ASD remains a significant focus of research and clinical interest across disciplines such as psychology, education, and healthcare (Camero, Martinez & Callego, 2020). Thus, in the the DSM-IV (1994) of the American Psychiatric Association classified autism-related conditions within the category of Pervasive Developmental Disorders, which included Childhood Autism, Asperger Syndrome, PDD-Not Otherwise Specified, Rett Syndrome, and Childhood Disintegrative Disorder Kadak & Meral, 2019).

Early childhood development assessment is a critical process that must developed in response to the changing needs of society and environment. Contemporary literature emphasizes the necessity of continuously updating approach with an assessment methods and tools to ensure that they effectively support and reflect children's developmental progress. In this context, it is recommended that assessment practices adopt a holistic approach including standardized instruments, direct observation, and adequate therapy, as well as active involvement of both families and educators. Furthermore, the development and implementation of culturally sensitive tools, supported by validity and reliability studies, are

essential to ensure accurate and meaningful assessments in diverse populations (Tunçeli & Zembat, 2017).

Having in consideration the increasing attention and the need that nowadays are generated by contemporary dynamics, with this study is aimed to provide a useful and practical therapeutical approach that will facilitate both the life children and their parents, at the same time, it will help therapist and educators to benefit from it.

Integrative therapy has income as a valuable approach in addressing the diverse developmental, emotional, and behavioral needs of children. It draws on multiple therapeutic modalities—such as play therapy, art therapy, mindfulness, and psychodynamic principles—to offer a comprehensive and individualized treatment framework. This method recognizes that each child presents with unique challenges and strengths, and thus requires a tailored approach. Integrative - psychodynamic psychotherapy, focuses on understanding underlying emotional processes, behavioral meanings, and coping mechanisms, while emphasizing the therapeutic relationship and the inclusion of parents in the psychoeducational process. The therapeutic process is often semi-structured and responsive to the child's needs for achieving the best version of each. For children with limited verbal communication, play therapy is recommended as a primary mode of expression and therapeutic engagement. Moreover, conducting joint sessions with both the child and parents allows the therapist to better understand the relational dynamics and emotional underpinnings of behavior, thereby fostering more effective interventions (Angold, Costello, & Erkanli, 2000; Hoffman & Rice, 2012; Ozga, 2022).

Intervention strategies for children with developmental delay and pervasive devolopment include a multidisciplinary and individualized framework aimed at promoting optimal developmental outcomes. These strategies often involve early intervention programs, individualized education plans and a combination of specialized therapies, including physical, occupational, speech-language, and behavioral therapies. A critical component of effective intervention lies in adopting a family-centered approach, which ensures the active involvement of caregivers in the therapeutic process and fosters a supportive environment for the child's development. Research emphasizes that early, integrative, and comprehensive interventions are essential for enhancing developmental trajectories and improving long-term functioning (Shonkoff & Fisher, 2013).

The literature reviewed underscores the multidimension of autism care, starting by emphasizing the significance of early diagnosis, personalized education and therapeutic plans, nutrition, family support, and assistive technologies. These key components collectively contribute to a holistic approach on caring the autistic child. By staying informed about

evidence-based practices and drawing from the latest research findings, caregivers, educators, and healthcare professionals can enhance their ability to provide effective support and care to autistic children, ultimately enabling them to thrive and reach their full potential (Marukyan, 2023).

5.1. Findings and theoretical interpretation regarding hypothesis

In this section is going to be present the main findings of the study, interpreted in relation to the research questions and hypotheses. The results are reviewed to determine the effect of integrative psychodynamic therapeutical intervention on developmental aspect in children diagnosed with mental developmental delay and Autism Spectrum Disorder.

In this study, in total participated 105 children, where 52 of them were in the first group, so called experimental group and had intervention and the other group, is control group who had 53 children participant but there were no any of them where in the group without any intervention.

Regarding gender distribution, in the experimental group 34.6% of the participants are girls and 65.4% are boys. Similarly, in the control group 35.8% are girls and 64.2% are boys (refer to Table 1). In both groups male participants are in higher number, representing approximately 64-65% of total participants This distribution raises the question of whether there are gender differences among children diagnosed with mental developmental delay and Autism Spectrum Disorder (ASD). During the literature review, several studies were identified highlighting gender as a potential variable indicated Autism Spectrum Disorder prevalence, with males consistently reporting higher rates compared to females. For example, Fombonne (2005), reported that ASD is approximately four to six times more frequently diagnose among boys than girls. Similarly, Loomes et al. (2017), founded that males are diagnosed with autism up to four times more frequently than females; however, further research is necessary to fully understand the biological factors on contributing to these gender differences. Additionally, Zablotsky et al. (2019), highlight boys as a particularly disadvantaged group, noting their higher rates of diagnosis for mental developmental delay and pervasive developmental disorders.

When participants were categorized based on their place of residence, the results showed a higher percentage of participants from urban areas compared to rural areas.

Specifically, in the experimental group, participants from urban residents accounted for 69.2%, while participants from rural are 30.8%. Similarly, within the control group, the difference between urban and rural participants was less noticed, with 52.8% from urban areas and 47.2% from rural areas (Table 2), demonstrating a more balanced distribution. When we refer to literature, it is possible to see that, a comprehensive study that was conducted by Zablosky et. al. (2019), found a significant difference based on living area, where children in urban area have a higher level of diagnosing with learning disability and pervasive development disorder comparing to those children from rural living area.

The third demographic characteristic considered was the child's birth order. In the experimental group, the higher number of participants were first born children by 61.5%, followed by 21.2% second born, 15.4% third born, and 1.9% fifth born. A similar distribution was observed in the control group, where 66% were first born, 17% second born, 13.2% third born, and 1.9% fourth and fifth born children (refer to Table 3). Overall, in both groups more than 61% of participants were first-born children, indicating that more than half of the first born children included in the study were affected by mental developmental delay and symptoms of autism spectrum disorder. This was followed by second born and respectily third born children, reflecting a consistent pattern across both groups. This finding corresponds with Alfred Adler's theory, which emphasizes the influence of birth order on a developmental process. According to this perspective, first born children often experience increased responsibilities and parental expectations, which may affect child's emotional and psychological development (Horner, Andrade, Delva, Grogan-Kaylor, & Castillo, 2012).

Several studies have examined demographic factors in relation to diagnoses and their impact on autism and mental developmental delays. While certain demographic characteristics may significantly contribute to developmental challenges and autism, no significant evidence has been found indicating that birth order directly affects these conditions (Madan & Tekin, 2015; Öz-Göçer, 2006; Gökçay, et. al., 2000).

In general, six main hypotheses with their respective sub-hypotheses were developed. The findings will therefore be discussed in accordance with these categorical hypotheses.

5.1.1. Findings regarded descriptive hypothesis

The first hypothesis (H.1.) assumed the presence of moderate mental development delay and/or autism disorder in children in both two groups, experimental and control groups.

Descriptive statistics show presence of mental development in both two groups. In the experimental group, children with mild level of mental development delay are 38.5%, in moderate level are 32.7% and in severe level are 11.5%. In other side, children from control group have shown 38.1% of mild level of mental development delay, 22.6% of moderate and 37.7% level of severe mental development delay. While the relatively high number of presences of mental development delay make as curious to compare the presence of mental development delay after therapeutic intervention. In the second test, intervention results in the experimental group showed a decrease in mild delay from 38.5% to 23.1%, moderate delay from 32.7% to 25% and severe delay from 11.5% to 1.9% (refer to Table 13). So, these results highlight the effectiveness of the psychotherapeutic treatment in reducing mental development delay severity, as evidenced to search for further analysis and findings. Mental developmental delay may present with a broader range of characteristics and abilities, depending on its severity of their condition, and the own individual differences (American Academy of Pediatrics, 2020). On this consideration, early identification and intervention are essential, as they provide critical opportunities to support children's developmental potential and significantly improve long-term outcomes (Centers for Disease Control and Prevention, 2020).

At the same time, was analyze the findings of the prevalence of autism disorder for experimental and control groups. Presence of symptoms of autism spectrum disorder in the first examination follows this line: in the first examination low level showed 34.6% and in the second examination 19.2%, moderate level in the first examination showed 23.1% and after the intervention, decreased in 11.5% the severe level in the first examination showed 5.8% while after intervention there was no cases at the severe level. In the control group, the distribution follows trend is in the same way, where low level of prevalence of autism spectrum disorder was 56.6%, the moderate level 22.6% and the high level 1.9% (refer to Table 14). In this context, it became very important to detect, understand implications and to support children with autism spectrum delay, both in therapeutic and educational context (Kozulin, et. al., 2003).

Related with descriptive hypothesis findings we looked up for the presence of the severity of mental delay disorder level will be positively correlated with the severity of autism disorder level in children with autism and mental developmental delay. The descriptive analysis for experimental group showed among children with mild mental development delay 45.0% were in the low autism group, 15.0% in the moderate group, and 40.0% showed no

autism, with none of them in the high category. For moderate mental development delay 35.3% were classified as moderate autism, 5.9% as high autism, and 47.1% had no autism. In the severe mental development delay group 33.3% were in the moderate category, 16.7% in the high category, and 50.0% without autism. Children with not mental development delay were mostly in the low autism group (77.8%), while 11.1% were in both moderate and high categories. At the overall level, 36.5% of children had no autism, 34.6% were in the low group, 23.1% in the moderate group, and 5.8% in the high group (refer to Table 15). These results show that higher levels of mental development delay are more often linked with moderate and high autism prevalence.

For the control group, the same analysis showed that children with mild mental development delay were mostly in the low autism group (64.7%), with 17.6% in the moderate group and 17.3% without autism. In the moderate mental development delay group, 41.7% were low autism, 33.3% moderate, and 25.0% without autism. Severe mental development delay showed the strongest association, with 55.0% low autism, 20.0% moderate, 5.0% high, and 20.0% without autism; importantly, all high-autism cases (100%) were found only in this group. Children without mental development delay (n = 4) were mainly in the low autism group (75.0%) and 25.0% moderate. Overall, 56.6% of the sample were classified as low autism, 22.6% moderate, 18.9% without autism, and 1.9% high autism (refer to Table 16). These findings confirm that greater severity of mental development delay may link with higher prevalence and severity of prevalence of autism spectrum disorder. Studies shows that children with neurodevelopmental diversity, such are mental developmental delay and autism spectrum disorder may follow the typically development on similar areas (way included challenges in similar areas, such social and communication responsiveness (Howe, 2006).

5.1.2. Findings regarded inferential hypothesis

In the inferential hypothesis (H.3.) we were look for the difference in the finding between first and second examination, for the experimental group regarding mental development delay and prevalence of autism. Regarding to the findings (refer to Table 17), experimental group in the first examination had mean of 2.08 (M=2.08, DS=1.10) while in the second examination was 2.79 (M=2.79, DS=1.29). Also, there were difference in control group, while the mean was found as 2.21 (M=2.21, DS=1.29). To verify whether the differences between the two groups are statistically significant, we found the results from the t-test. For

comparing developmental improvements, first found the finding between the experimental group, between the first and second examinations, were found a statistically significant improvement, t(51) = -3.07, p < .001, with a mean difference of -0.71. Secondly, look for the findings between second examination and control group. The comparison between the experimental group at the second examination and the control group was found statistically significant difference, t(51) = 2.37, p = .02 (p < .05), with a mean difference of 0.56 (refer to Table 18). This finding demonstrates that the intervention in the experimental group led to greater developmental outcomes compared to the first examination and control group, confirming the significant effectiveness of the applied integrative psychodynamic therapeutic intervention in improving mental developmental delay.

Literature and research related to the effect of integrative psychodynamic support the findings. According to Angold, Costello & Erkanli, (2000), integrative techniques are effective as evidence-based approach, applicability and personalized for each children mental health. At the same time, this approach addresses range of developmental, emotional, and behavioral concerns (Tattersall, Rolli, Butwell, 2024).

The findings for this hypothesis, are done separately for the difference between each group according to the prevalence of autism. Regarding the findings (refer to Table 19), comparison in the experimental group, in the second examination mean score increased from 2.44 (SD = 1.31) in to 3.19 (SD = 1.25) and the control group present lower mean score of 1.79 (SD = 1.33). These difference in means, in both cases potentiate the effect of intervention. But for the significant findings about the prevalence of autism between the first and second examinations andas between the second examination of the experimental group with the control group were applied paired sample t-test. Findings shows (refer to Table 20), a mean difference of -0.75 (SD = 1.61), with a $t(51) = -3.36$ ($p < .001$) between first second examination. And between second examination and control group, a mean difference of 1.40 (SD = 1.47), with a $t(51) = 6.87$ ($p<.001$). In both cases, were found highly statistically difference of the therapeutical intervention. There are many studies that highlight the relationship between autism and mental development (Happé & Frith, 2009; Dawson, et.al., 2004). Multiple method, and integrative therapeutical approach it is important to use in therapeutical process (Jiban, 2013),

In category of interferential hypothesis there is also hypothesis 4 (H.4) with sub hypothesis (H.4.1 and H.4.2.) and supportive hypothesis (H.4.1.1, H.4.1.2, H.4.1.3; and H.4.2.1, H.4.2.2, H.4.2.3). The analysis showed that H.4 was rejected, as no significant

differences were found across these demographic variables, gender, birth order and residency in the rate of mental dissorder and prevalence of autism. The observed variations in mean values appear to be influenced by other factors rather than by gender, birth order, or residence, indicating that these demographic characteristics do not directly account for differences in developmental delay or autism prevalence.

So, when analyze each demographic variable related with mental development delay and prevalence of autism, we found these results:

Gender difference. Mean values on gender difference related with mental development delay for experimental group for girls (M=2.06, DS=0.99, n=18) and boys (M=2.09, DS=1.16 n=34), (refer to Table 21). The mean values between genders are slightly differ but the obtained values from t-test findings showed no statistically significant difference between gender groups [$t(50) = -0.11$, $p = 0.92$] (Table 22). The similar findings are present for control group; for girls (M=2.05, DS=0.99, n=19) and boys (M=2.29, DS=1.03 n=34), (refer to Table 23). The *t*-test results showed that there is no statistically significant difference between the compared gender groups [($t(51) = -0.85$, $p = 0.40$]. These findings are related with supportive hypothesis H.4.1.1. Similar result found in gender difference related with prevalence of autism. In the experimental group the mean value for girls (M=2.67, DS=2.32, n=18) and for boys (M=2.32, DS=1.30, n=34), (refer to Table 32). Even the mean value of boys is higher than girls, while in the same time there are more boy participant, there were not found a significant difference [$t(50) = 0.90$, $p = 0.37$] between gender related with rate of mental development delay (refer to Table 33). At the same time, in the control group gender values are girls (M=2.16, DS=1.26, n=19) and boys (M=1.65, DS=1.07, n=34) (Table 34). Further on, t-test result shows [$t(32.57) = 1.49$, $p = 0.14$] there is no significant difference in gender groups (refer to Table 35). These findings correspond to the supportive hypothesis H.4.2.1. Overall, these results conclude that the mean difference between gender group do not differ significantly in terms of mental development delay neither in prevalence of autism, but the difference can be related with other factor that may influenced difference in between groups. There are studies who support the gender difference in mental development delay and autism spectrum disorder (Fombonne, 2005). Kahraman, Ceylan & Korkmaz, (2016), in their study found that there are gender differences in mental development delays in disfavor to males, and in the prevalence of autism spectrum disorder (Hull, Mandy & Lai, 2017) but lastly, they found that this disfavor increases up to 80% when these are done with non-standardize

tools, but with standardize tools the developmental delay was only 30%. So, we can conclude that gender is seen as an indicator factor, in disfavor to males but the difference does not directly attribute to mental development delay and autism spectrum disorder but can be influence by other variables.

Birth order. In the study they are present the mean values for birth order in relation to mental developmental delay in the experimental group were first born children have value of M = 2.22, SD = 1.21, n = 32; for second born M = 1.73 (SD = 0.99, n = 34) and the third and fourth born counite with the same mean vale M=2.00 (refer to Table 25). Although the mean values showed slight variation, ANOVA results indicated no statistically significant difference between genders, [$F(3, 48) = 0.55$, $p = 0.65$], (refer to Table 26). In the control group, findings show the third born children (M = 2.29, SD = 1.11, n = 7) have higher mean values compared to second born (M = 2.22, SD = 0.28, n = 9) and first born (M = 2.17, SD = 1.04, n = 35), (refer to Table 27). When is looked up for significancy of difference, ANOVA analysis showed a non-significant result, [$F(4, 48) = 1.18$, p=0.95], (refer to Table 37). This indicates that there are no statistically significant differences in mean scores between children of different birth orders. These findings are linked with supportive hypothesis H.4.1.2.

Similar results are observed for birth order differences in the prevalence of autism. In the experimental group, first born children have values of M = 2.25, SD = 1.32, n = 32; for second born M = 2.54, SD = 1.29, n = 11, and the third born M=3.12, SD=1.25, n=8. (Table 36). Although the mean values showed variation, ANOVA results indicated no statistically significant difference between genders, [$F(3, 48) = 1.02$, $p = 0.39$], (refer to Table 37). For the control group, findings show the third born children (M = 2.00, SD = 1.41, n = 7) have higher mean values compared to second born (M = 1.56, SD = 1.01, n = 9) and first born (M = 1.87, SD = 1.67, n = 35) (Table 38). ANOVA analysis showed that there is a non-significant result, [$F(4, 48) = 0.54$, p=0.71], (refer to Table 39). These findings align with supportive hypothesis H.4.2.2.

The finding results conclude that mean differences between birth orders are not statistically significant neither in mental developmental delay nor in autism prevalence. There might be other affective factors that may impact in observed differences rather than birth order itself. While Adler's theory emphasizes the importance of birth order on a child's (Horner, et. al., 2012), the researches found the birth order did not significantly impact in children's mental develement delay and prevalence of autism (Madan & Tekin, 2015; Öz-Göçer, 2006; Gökçay, Köklük, Kayadibi, Erarslan & Çalışkan, 2000).

Residency. The findings related with the possible impact of residency in the mean values of differences in relation to mental developmental delay in the experimental group are M = 2.19, SD = 1.26, n = 36 for children who lives in urban area and M = 3.00, SD = 1.26, n = 34) for boys (refer to Table 40). Even thought, the mean values found a variation, t-test indicated no statistically significant in difference between birth order, t(50) = -2.12, p = 0.85 (refer to Table 41). These findings are related with supportive hypothesis H.4.1.3. A similar result is found, in observed differences in the prevalence of autism regarded to residency. In the experimental group, the findings of urban residency are M = 2.03, SD = 1.16, n = 36, and for rural residency are M = 2.19, SD = 0.98, n = 18 (refer to Table 29). Despite in the rural residency living children are having a higher mean value, there were found no significant difference between groups, t(50) = -0.51, p = 0.38 (Table 30). In the control group, mean values for urban residency are M = 2.25, SD = 1.04, n = 28; and for rural residency are M = 2.16, SD = 0.94, n = 25 (Table 31). Independent t-test found that there is not any significant difference, t(0.53) = -0.33, p = 0.47 (refer to Table 31). These findings align with supportive hypothesis H.4.2.3.

Lastly, the finding results conclude that mean differences between residency is not statistically significant either in mental developmental delay or in autism prevalence. Any observed differences may therefore be attributed to other influencing factors rather than residency itself. Study that is done by Zablosky et. al. (2019), have found significant impact of residency, specify, children in rural area have higher rate of mental development and pervasive diagnosis compared to children from urban are.

As a conclusion for main hypothesis (H.4.) findings, can be conducted that although gender, birth order and residence, influenced developmental outcomes to a small degree, they were not decisive. These findings correspond with other studies reporting that demographic variables may moderate but do not determine therapeutic effectiveness (Kahraman, Ceylan & Korkmaz, 2016; Madan & Tekin, 2015; Öz-Göçer, 2006; Gökçay, Köklük, Kayadibi, Erarslan & Çalışkan, 2000).

5.1.3. Findings regarded correlative hypothesis

As correlative hypothesis was formulated hypothesis 5 (H.5), examining the relationship between mental development delay and prevalence of autism in group of children who received therapeutic sessions compared to those who did not receive.

During the Pearson correlation analysis between the control group and the second examination of the experimental group. There was found a strong negative correlation ($r = –0.80$, $p = 0.01$), showing a significant inverse relationship between the two groups (refer to Table 44). This indicates that as developmental outcomes improved in the experimental group following the integrative–psychodynamic intervention, the control group demonstrated a decline in outcomes. These findings highlight that participation in therapeutic sessions was associated with better developmental progress compared to the absence of intervention. There are studies that highlight the impact of integrative therapy in addressing developmental, emotional, and behavioral difficulties. It combines evidence-based techniques from psychodynamic psychotherapy, on emphasizing child's needs and abilities. Overall, integrative–psychodynamic approaches provide a comprehensive and individualized framework to support children's mental development (Angold, Costello, & Erkanli, 2000; Hoffman & Rice, 2012; Ozga, 2022). Findings are corresponding with sub hypothesis (H.5.1.). At the same time there were found the result for sub hypothesis (H5.2.), in which search for the impact of the integrative – psychodynamic therapy in prevalence of autism spectrum.

The gained results from the Pearson correlations shows a statistically significant moderate negative correlation between the control group and the second examination of the experimental group, ($r = –0.48$, $p < 0.001$) regarding to prevalence of autism (refer to Table 45). This indicates that children who received integrative–psychodynamic therapy demonstrated reduced prevalence of autism, whereas the control group showed comparatively higher prevalence on autism spectrum. When it comes to treatment process it is important to emphasize that planning for children with autism spectrum disorder should be individualized according to the child's strengths, needs, and developmental level (National Autism Center, 2020). Meanwhile psychodynamic therapy highlights the unique needs of each child's ability (Angold, Costello, & Erkanli, 2000), therefore, the application of integrative–psychodynamic techniques in working with autism spectrum is highly important for the treatment and developing process (Ozga, 2022).

In conclusion, the findings from H.5 indicate that integrative–psychodynamic therapy has a positive impact on children's mental development by reducing developmental delay and decreasing symptoms associated with autism prevalence. Throughout the literature, many studies support and highlight the importance of integrative – psychodynamic in working with children with mental development delay and autism spectrum disorder (Angold, Costello, & Erkanli, 2000; Hoffman & Rice, 2012; National Autism Center, 2020; Ozga, 2022).

5.1.4. Findings regarded regressive hypothesis

Lastly, there were search for the success of integrative - psychodynamic therapy as a criterion variable is predicted by the predictor variables: autism spectrum symptoms, mental developmental delay, and calendar age (H.6.).

Findings after a multiple regression analysis examine a statistically significant, [$F(3, 48) = 115.58$, $p < 0.001$] (refer to Table 47), which accounting for 88% of the variance in therapy success ($R = .94$, $R^2 = 0.88$, Adjusted $R^2 = 0.87$) (Table 46). Autism prevalence ($\beta = 0.29$), mental developmental delay ($\beta = 0.44$), and calendric age ($\beta = 0.68$) all emerged as significant positive predictors (refer to Table 48). Among these findings, calendric age contributed the most strongly to the model, followed by mental developmental delay and autism prevalence. These findings demonstrate that integrative – psychodynamic therapy impact in success score in higher calendric age, greater developmental delay, and higher autism prevalence. While the higher results are related with calendric age can be supported by the theory of Vygotsky; Vygotsky's *Zone of Proximal Development*, is suggesting that therapeutic scaffolding helps children achieve developmental tasks earlier than expected (Bodrova & Leong, 2007). Child development across the ages it is important also according to Erikson's theory. According to Erikson, the child's mental development in which are covered motor, language, social and emotional developments as a whole can increase the possibilities to follow up all the stages in healthy way, in other side any delay across the ages and mental development might increase problematic behaviors and even during phase of *integrity versus despair* (ages 60+) fall into despair due to unsolved conflicts from the previous stages (Gürses & Kilavuz, 2011). The developmental theories, as well as Vygotsky's theory highlight the importance of understanding and supporting children with developmental delay and autism through the early intervention and integrative therapies which can contribute on these areas (Bodrova & Leong, 2007; Kozulin et al., 2003).

5.2. Conclusions

This study represents the unique research that combine the Brunet–Lézine scale and the M-CHAT-R/F with an integrative psychotherapeutic intervention. By employing both an experimental and a control group, the study ensured validity and reliability of the findings. In addition, the longitudinal design, with data collected between 2019 and 2024, provided the opportunity to observe developmental changes over time, offering a better understanding of the intervention's effects.

Previous literature review and research, when is combined with professional competency made possible to choose the integrative–psychodynamic therapy as an interventional approach, while its efficacy has been demonstrated in previous theoretical and empirical studies. Therefore, with this research it is aimed to examine whether such interventions can contribute to meaningful outcomes and support the developmental progress of children with mental developmental delay and autism spectrum disorder.

Several studies highlight the effectiveness of integrative therapy in addressing developmental, emotional, and behavioral difficulties. This approach combines evidence-based techniques from various modalities, with psychodynamic psychotherapy placing emphasis on the child's individual needs and abilities. Overall, integrative–psychodynamic approaches provide a comprehensive and individualized framework to support children's development and well-being (Angold, Costello, & Erkanli, 2000; Hoffman & Rice, 2012; Ozga, 2022).

Throughout the data analysis were conducted in general supportive results of the hypothesis that integrative psychotherapeutic interventions can contribute meaningfully to the developmental progress of children with developmental mental delays and reducing the autism prevalence. When examining demographic variables in relation to the presence of mental developmental delay and prevalence of autism, no significant direct effects were found. However, the differences observed between mean values suggest that they may be influenced by other factors.

Although gender, residence, and birth order influenced developmental outcomes to a small degree, they were not decisive. These findings correspond with other studies reporting that demographic variables may moderate but do not determine therapeutic effectiveness (Gökçay, et. al., 2000; Hull, Mandy & Lai, 2017).

In conclusion, the study demonstrates that integrative - psychodynamic therapy significantly strength mental development and reduces autism symptoms in early childhood. These findings reinforce the importance of early therapeutic intervention, provide support for integrative – psychodynamic approach as an adaptable model, and offer valuable insights for both clinical practice and psychological research.

5.3. Limitations

First, the relatively limited sample size restricts the generalization of the findings to broader populations. Even children took part in therapeutical intervention for at least six months, with greater number of participants we can conduct and generalize more strongly our findings.

Second, in the study there are two groups, experimental group with pre and post examinations, and control group with only examination. There would be great if it was possible to have a second examination with control group. After six months of time period, would be important if there will be a possibility to re-test control group. With this possibility would be more significant to eliminate impact of time in children mental development and prevalence's of autism symptoms.

Third, the confidence on parental reporting for the M-CHAT-R/F introduces the possibility of reporting bias, as parents may either underreport or overreport symptoms based on their perceptions and experiences. Even in the beginning parents were informed about importance of the confidence and importance of right examinations, there may be some exclusions.

Fourth, having sub categories in mental development, more specifically, like cognitive, emotional, behavioral and language with create possibility for broader findings; there will be possible to conduct in which area of mental development the intervention have more effect and in which area will be needed for additional interventions.

5.4. Recommendations

It is important to expand screening studies for identifying children at risk of developmental delay, especially those with developmental delay and autism prevalence in early age. This kind of practices should be done systematically by child development specialists in every health institution. Early developmental evaluations are also very important in terms of qualified mental health services that are provided to the family. At the same time, providing these services during early childhood, which is a very critical period, will stimulate the development of the child and will contribute significantly to minimizing the developmental difference and prevalence of autism between children with developmental delay and their peers (Kahraman, Ceylan & Korkmaz, 2016).

Future studies should include larger and more diverse samples, with long term follow-up to examine whether developmental findings are sustained. Comparative research between integrative – psychodynamic therapy and other therapeutic models, would provide further insights into effectiveness of the approach. Additionally, attention to parents' mental health and family dynamics may offer a deeper understanding of factors influencing child outcomes.

Early applications of integrative – psychodynamic therapy should be considered a part of intervention programs for children with developmental delays and autism. In addition, parents and educators can apply principles of integrative–psychodynamic therapy within daily interactions and intervention processes to better support children's development. Mental health and educational institutions may also benefit from combining psychotherapy with developmental assessments, by creating a more comprehensive framework for early identification and effective intervention.

Providing early intervention services to children who are at developmental risk or have developmental delays will make significant contributions, on each child's life but at the same time, to the parent's well-being in the long term.

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Measurement instruments

Brunet-Lezine Scale

BL-P - Raporti

Emri Femija		Mbiemri	
	Emri	Mosha	Profesioni
Nena			
Babai			
Adresa e banimit			

M.K (Mosha Kalendarike)			
	Viti	Muaji	Dita
Data e vizites			
Data e lindjes			
Mosha			

Arsyeja e vizites dhe Diagnoza

2 Vjeç

Nëse fëmija ka arritur detyrat e moshes 2 vjeç:

- Kullen prej 6 kubav:
- Bënë shkarravitje:
- I vendos tri format gjeometrike:
- I emron ose tregon (me gisht) fotografinë tek foto S_1

2.5 Vjeç

- Arrin me ba urën prej 3 kubave
- Emiton vijen vertikale dhe horizontale
- Pershtat lëvizjen ne drrasen me 3 forma gjeometrike
- Emron 5 ose 7 fotografi

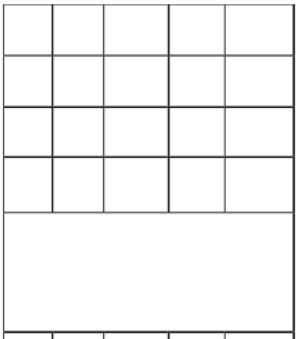
3 vjeç

- Arrin me ba urën prej 5 kubave
- Reprodukimi i rrethit
- Arrin të bashkoj figurën e vajzës në dy pjesë
- Emërton figurat në foton S_2 (spontanisht)

2 v	3v	4v	5v	6v

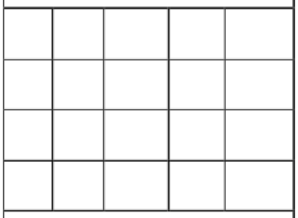
4 vjeç

- Bënë gardhin prej 5 kubave
- Reprodukon katrorin
- Arrin të bashkoj figurën e vajzës në 4 pjesë(pranohet nese arrin sepaku gjysmen e pare)
- Pershkruan ngjarjen ne figuren S_3



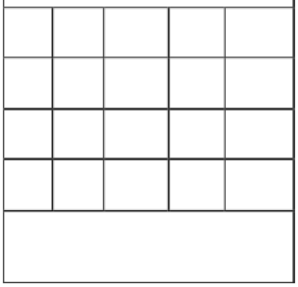
5 vjeç

- Arrin me i ba shkallët me nga 10 kuba (modeli është i demonstrun)
- Reprodukon trekendshin
- Arrin të bashkoj figuren e vajzes ne 4 pjese
- Numron deri 4



6 Vjeç

- Fëmiju arrin të bënë shkallë prej 10 kubave (pas prishjes së modelit)
- Arrin me reproduku rombin
- Arrin te bashkoj manekenin me gjymtyrët në mënyrë të sakt
- Numron deri 13



Vërejtjet:

Përfundimi / Konkludimi:

M-CHAT-R

Ju lutem pergjigjuni pyetjeve te meposhtme mbi femijen tuaj. Ne pergjigjet tuaja kini parasysh si sillet femija zakonisht. Nese ju keni vene re qe femija juaj e manifeston sjelljen rralle (pak raste) por jo zakonisht (pjesen me te madhe te rasteve) atehere pergjigjuni pyetjes **jo**. Ju lutem futni ne rreth **po** ose **jo** per cdo pyetje. Shume falemnderit.

1.	Ne qoftese i tregoni me gisht femijes nje objekt ne anen tjeter te dhomes a e drejton femija veshtrimin tek objekti? **(PER SHEMBULL**, nese i tregoni femijes nje loder apo nje kafshe, duke perdorur gishtin tuaj tregues, a veshtron femija drejt lodres apo kafshes?)	Po	Jo
2.	A keni menduar ndonjehere qe femija juaj mund te jete i shurdhet?	Po	Jo
3.	A luan femija juaj loje me imagjinate, sikur te ishte e vertete? **(PER SHEMBULL**, te beje sikur pi dicka nga nje gote bosh, te beje sikur flet ne telefon ose sikur ushqen nje kukull apo nje loder kafshe prej pelushi?)	Po	Jo
4.	A i pelqen femijes tuaj te kacavirret (t'u ngjitet) gjerave/ objekteve? **(PER SHEMBULL**, mobiljeve, paisjeve ne kendin e londrave, apo shkalleve?)	Po	Jo
5.	A ben femija juaj levizje te pazakonta te gishtave afer syve te tij/saj? **(PER SHEMBULL**, a i perdredh femija gishtat e tij/saj afer syve?)	Po	Jo
6.	A tregon femija juaj me gisht per te kerkuar dicka apo per te kerkuar ndihme? **(PER SHEMBULL**, te treguarit me gisht e nje biskote apo lodre qe ai/ajo nuk e arrin dot?)	Po	Jo
7.	A tregon femija juaj me gisht per t'ju treguar dicka interesante? **(PER SHEMBULL**, t'ju tregoje me gisht nje aroplan ne qiell ose nje kamjon te madh ne rruge)	Po	Jo
8.	A tregon femija juaj interes per femije te tjere? **(PER SHEMBULL**, a ia hedh veshtrimin femija juaj femijeve te tjere, a i buzeqesh apo i afrohet ai/ ajo atyre?)	Po	Jo
9.	A ju tregon juve femija gjera duke i sjelle/ mbajtur gjerat afer jush qe ju t'i shikoni – jo per t'ju kerkuar ndihme, por thjesht qe t'ua tregoje? **(PER SHEMBULL**, t'ju tregoje nje lule, loder pelushi apo nje makine loder?)	Po	Jo
10.	A reagon /pergjigjet femija kur ju i therrisni emrin? **(PER SHEMBULL**, a e drejton femija shikimin drejt jush, a flet ose belbezon, apo ndalon cfare eshte duke bere kur juve i therrisni emrin?)	Po	Jo

Ju Lutem Vazhdoni ne Faqen Tjeter ↪

M-CHAT-R

Ju lutem pergjigjuni pyetjeve te meposhtme mbi femijen tuaj. Ne pergjigjet tuaja kini parasysh si sillet femija zakonisht. Nese ju keni vene re qe femija juaj e manifeston sjelljen rralle (pak raste) por jo zakonisht (pjesen me te madhe te rasteve) atehere pergjigjuni pyetjes me **jo.** Ju lutem futni ne rreth **po** ose **jo** per cdo pyetje. Shume falemnderit.

11. Kur ju i buzeqeshni femijes, a ua kthen ai/ajo buzeqeshjen?	Po	Jo
12. A shqetesohet femija juaj nga zhurma te perditshme? (**PER SHEMBULL**, nga fshesa me korent apo muzike me volum te larte?)	Po	Jo
13. A ecen femija juaj?	Po	Jo
14. A ju shikon femija ne sy kur ju i flisni, kur luani me te apo kur e vishni?	Po	Jo
15. A perpiqet femija juaj te kopjoje ate qe beni juve? (**PER SHEMBULL**, te bej me dore mire u pafshim, te perplasi duart me gezim, ose te beje shaka me tinguj kur te njejten gje beni dhe juve)	Po	Jo
16. Nese ju e ktheni koken per te pare dicka, a veshtron femija juaj perreth qe te shohi dhe ai/ajo ate qe po shikoni juve?	Po	Jo
17. A perpiqet femija juaj qe t'ju terheqe vemendjen ne menyre qe ta veshtroni ate? (**PER SHEMBULL**, a ju shikon femija ne pritje qe te lavderohet, apo a thote femija 'shif' ose 'me shiko')	Po	Jo
18. A ju kupton femija kur ju i kerkoni atij/ asaj te beje dicka? (**PER SHEMBULL**, ne qofte se ju nuk I tregoni me gisht, a e kupton femija shprehjen "vere librin ne karrige" ose "me sill batanijen")	Po	Jo
19. Kur ndodh dicka e re e papritur, a e ndjek femija fytyren tuaj qe te shohi cfare ndjeni juve (si reagoni juve)? (**PER SHEMBULL**, ne qofte se femija degjon nje zhurme te cuditshme, ose shikon nje loder te re a ia hedh femija veshtrimin fytyres tuaj?)	Po	Jo
20. A i perlqejne femijes tuaj aktivitetet fizike? (**PER SHEMBULL**, tundjet apo lekundjet ne prehrin/ gjunjet tuaj)	Po	Jo

Fletë Përgjigja e Intervistës Diagnotikuese M-CHAT-R™

Vini re: Po/Jo janë zëvendësuar me Kalon/Dështon; 7 përgjigjet Kryesore janë brenda kutisë.

1. Ne qoftese i tregoni me gisht femijes nje objekt ne anen tjeter te dhomes a e drejton femija veshtrimin tek objekti? **(PER SHEMBULL**, nese i tregoni femijes nje loder apo nje kafshe, duke perdorur gishtin tuaj tregues, a veshtron femija drejt lodres apo kafshes?)	Kalon/Dështon
2. A keni menduar ndonjehere qe femija juaj mund te jete i shurdhet?	Kalon Dështon
3. A luan femija juaj loje me imagjinate, sikur te ishte e vertete? **(PER SHEMBULL**, te beje sikur pi dicka nga nje gote bosh, te beje sikur flet ne telefon ose sikur ushqen nje kukull apo nje loder kafshe prej pelushi?))	Kalon Dështon
4. A i pelqen femijes tuaj te kacavirret (t'u ngjitet) gjerave/ objekteve? **(PER SHEMBULL**, mobiljeve, paisjeve ne kendin e londrave, apo shkalleve?)	Kalon Dështon
5. A ben femija juaj levizje te pazakonta te gishtave afer syve te tij/saj? **(PER SHEMBULL**, a i perdredh femija gishtat e tij/saj afer syve?)	Kalon Dështon
6. A tregon femija juaj me gisht per te kerkuar dicka apo per te kerkuar ndihme? **(PER SHEMBULL**, te treguarit me gisht e nje biskote apo lodre qe ai/ajo nuk e arrin dot?)	Kalon Dështon
7. A tregon femija juaj me gisht per t'ju treguar dicka interesante? **(PER SHEMBULL**, t'ju tregoje me gisht nje aeroplan ne qiell ose nje kamjon te madh ne rruge)	Kalon Dështon
8. A tregon femija juaj interes per femije te tjere? **(PER SHEMBULL**, a ia hedh veshtrimin femija juaj femijeve te tjere, a i buzeqesh apo i afrohet ai/ ajo atyre?)	Kalon Dështon
9. A ju tregon juve femija gjera duke i sjelle/ mbajtur gjerat afer jush qe ju t'i shikoni – jo per t'ju kerkuar ndihme, por thjesht qe t'ua tregoje? **(PER SHEMBULL**, t'ju tregoje nje lule, loder pelushi apo nje makine loder?)	Kalon Dështon
10. A reagon /pergjigjet femija kur ju i therrisni emrin? **(PER SHEMBULL**, a e drejton femija shikimin drejt jush, a flet ose belbezon, apo ndalon cfare eshte duke bere kur juve i therrisni emrin?)	Kalon Dështon
11. Kur ju i buzeqeshni femijes, a ua kthen ai/ajo buzeqeshjen?	Kalon Dështon
12. A shqetesohet femija juaj nga zhurma te perditshme? **(PER SHEMBULL**, nga fshesa me korent apo muzike me volum te larte?)	Kalon Dështon
13. A ecen femija juaj?	Kalon Dështon
14. A ju shikon femija ne sy kur ju i flisni, kur luani me te apo kur e vishni?	Kalon Dështon
15. A perpiqet femija juaj te kopjoje ate qe beni juve? **(PER SHEMBULL**, te bej me dore mire u pafshim, te perplasi duart me gezim, ose te beje shaka me tinguj kur te njejten gje beni dhe juve)	Kalon Dështon
16. Nese ju e ktheni koken per te pare dicka, a veshtron femija juaj perreth qe te shohi dhe ai/ajo ate qe po shikoni juve?	Kalon Dështon
17. A perpiqet femija juaj qe t'ju terheqe vemendjen ne menyre qe ta veshtroni ate **(PER SHEMBULL**, a ju shikon femija ne pritje qe te lavderohet, apo a thote femija 'shif" ose 'me shiko')	Kalon Dështon
18. A ju kupton femija kur ju i kerkoni atij/ asaj te beje dicka? **(PER SHEMBULL**, ne qofte se ju nuk I tregoni me gisht, a e kupton femija shprehjen "vere librin ne karrige" ose "me sill batanijen")	Kalon Dështon
19. Kur ndodh dicka e re e papritur, a e ndjek femija fytyren tuaj qe te shohi cfare ndjeni juve (si reagoni juve)? **(PER SHEMBULL**, ne qofte se femija degjon nje zhurme te cuditshme, ose shikon nje loder te re a ia hedh femija veshtrimin fytyres tuaj?)	Kalon Dështon
20. A i perlqejne femijes tuaj aktivitetet fizike? **(PER SHEMBULL**, tundjet apo lekundjet ne prehrin/ gjunjet tuaj)	Kalon Dështon

Rezultati për 7 Kryesoret: _____ Rezultati Total: _____

Information letter for participants

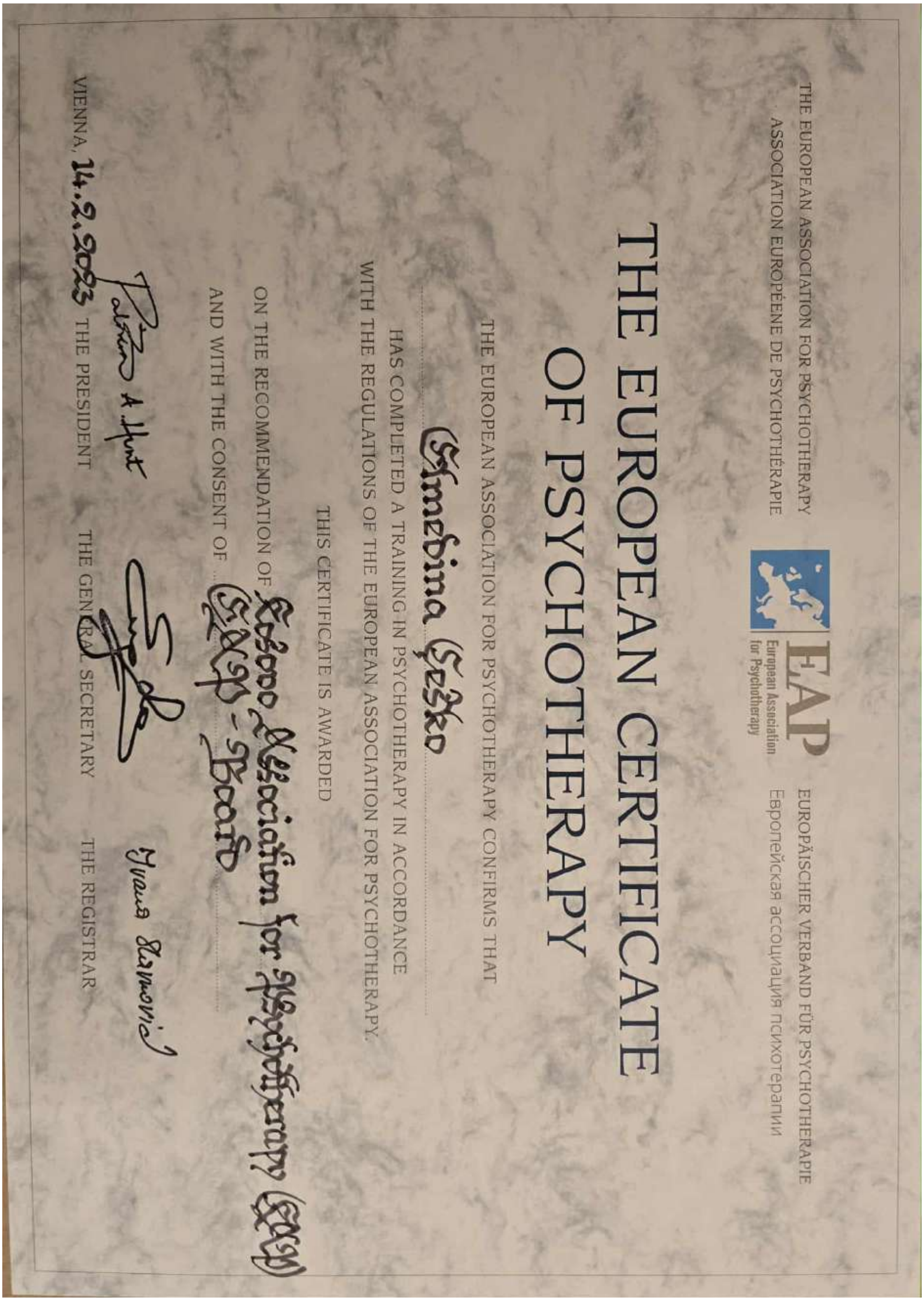
Dear Participant,

The purpose of this process is to provide a comprehensive assessment of your child's mental development and to evaluate the possible presence of autism spectrum disorder. Based on the findings of this examination, an individualized therapeutic plan may be recommended to support your child's developmental needs.

All information collected during the process will be treated with strict confidentiality, in accordance with professional and legal standards.

Following your acceptance, the examination process will begin, and, if indicated, therapeutic work will proceed accordingly.

Certification on Psychotherapy



THE EUROPEAN ASSOCIATION FOR PSYCHOTHERAPY
ASSOCIATION EUROPÉENE DE PSYCHOTHÉRAPIE

EAP
European Association for Psychotherapy

EUROPÄISCHER VERBAND FÜR PSYCHOTHERAPIE
Европейская ассоциация психотерапии

THE EUROPEAN CERTIFICATE OF PSYCHOTHERAPY

THE EUROPEAN ASSOCIATION FOR PSYCHOTHERAPY CONFIRMS THAT

Shmebina Češko

HAS COMPLETED A TRAINING IN PSYCHOTHERAPY IN ACCORDANCE WITH THE REGULATIONS OF THE EUROPEAN ASSOCIATION FOR PSYCHOTHERAPY.

THIS CERTIFICATE IS AWARDED

ON THE RECOMMENDATION OF Kosovo Association for Psychotherapy (KAP)

AND WITH THE CONSENT OF KAP - Board

VIENNA, 14.2.2023

THE PRESIDENT THE GENERAL SECRETARY THE REGISTRAR

Biography

Elmedina Çesko was born in Prizren, Kosovo in 1988. She graduated from the Department of Psychology, Faculty of Philosophy, University of Pristina in 2012. She completed her master's degree in 2015 with a scholarship from the Department of Guidance and Psychology, Institute of Social Sciences, Ege University, Turkey. She is a Certified European Psychotherapist under the European Association for Psychotherapy (EAP). Her professional orientation integrates Body Psychotherapy and Positive and Transcultural Psychotherapy**,** with a particular emphasis on holistic and intercultural approaches to mental health. With nearly fifteen years of clinical experience, she has provided individual and group psychotherapy in private practice, working with diverse populations. In parallel with her clinical work, she has been actively engaged in academic settings, contributing to higher education through teaching, supervision, and research in the field of psychology and psychotherapy.