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# QUALITY OF LIFE IN PEOPLE WITH INTELLECTUAL DISABILITIES INCLUDING AUTISM: ADVANCES IN PRACTICE AND RESEARCH

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TRAVEL & CONGRESSSES



# BOOK OF ABSTRACTS

## Forging national educational policies for the equal access of students with disabilities and/or special educational needs to education: Goals, priorities, challenges

**Athina Anna Christopoulou**, Head of Unit for the Protection of the Rights of Pupils with Disabilities and/or Special Educational Needs, Directorate of Special Education  
Representative of Board/Management Board Member of the European Agency for Special Needs & Inclusive Education.

### Abstract

The development of a high-quality equitable education system has been one of the central missions the Greek State has undertaken throughout the years. This fact is being reflected on a series of measures that have been taken in this direction. However, more recently the recognition of inclusion as the key to achieving the right to education has become even more prominent due to certain reasons. Statistical data indicate a dramatic increase in the number of students with disability as well as students belonging to other socially vulnerable groups that attend mainstream schools (Hellenic Ministry of Education & Religious Affairs, 2022). A number of European and international level recommendations, including the CRPD suggestions (UN, 2006) & the 2030 Agenda for Sustainable Development Goals (UN, 2015), indicate that promoting inclusive education is important for the country's sustainable growth. Empirical and research evidence indicates that despite the steps already taken, there are still various challenges (Zoniou-Sideri et al., 2012). Along with the above considerations, in September 2019 the UN Committee on the Rights of Persons with Disabilities reviewed the educational policy of Greece regarding its compatibility with the Convention of the Rights of Students with Disabilities. Recalling its General Comment No. 4 on the right to inclusive education (UN Committee on the Rights of Persons with Disabilities, 2016), and taking into account Sustainable Development Goal 4, the Committee recommended that Greece increases its efforts to guarantee inclusive education. In the light of the above concerns and recommendations, along with other initiatives, special attention was given on measures promoting the equal access of students with disabilities and/or special educational needs to education. In 2020 the first Strategic Action Plan for the Equal Access of Persons with Disabilities was formulated. The Strategic Action Plan, which was an extension of the National Action Plan for the Rights of Persons with Disabilities, in the field of education, comprises 13 operational objectives, with a clear implementation deadline in key areas of inclusive policy and practice as related. The above Action Plan constitutes a roadmap that provides a clear, coherent and systematic framework for action on issues related to the protection of the rights of people with disabilities. Progress towards achieving the targets of the Strategic Action Plan at a national level will be presented along with challenges met and anticipated in the process of responding to the diverse needs of the students with disabilities.



## Assistive technology and robots for art for people with ASD

**Christine Syriopoulou-Delli**, Associate Professor University of Macedonia, Laboratory of Autism -Developmental Spectrum Disorders and Behavior Difficulties of the Human, Greece

### Abstract

This is a literature review that examines the effectiveness of computer-assisted technology and/or robotics in teaching children with autism spectrum disorder (ASD) about creative art, visual arts, art literacy, which helps their communication, cognitive and emotional development. The search in databases such as Web of Science, Research Gate, Google Scholar, Scopus, Pub Med and Science Direct revealed 448 relevant articles for the period 2005-2021.

Of these, 21 articles were used. Research has shown that children with autism show interest in using a laptop to make creative art and at the same time, their communication, cognitive and emotional development can be improved. Robotics can also provide support in social mediation to present and achieve the teaching objective. However, the lack of properly trained staff is one of the biggest challenges for implementing programs for children with autism in learning art using technology media.

Educational strategies using assistive technology in various skills can be introduced through seminars, workshops and practical activities to teachers and parents with children with autism spectrum disorder. Teachers, parents, psychologists, social workers, doctors, specialist scientific staff and therapists of other specialties can improve communication, language, cognitive, psychosocial and creative skills in people with autism through art therapy such as Neuro-Art, Bio-Art, Tactile-Art and Sensory-Art.

*Keywords: technology, computer, robotics, art, visual arts, sensory sensitivities, structured learning, children with autism*

## A systemic behavior-analytic parent training intervention to improve the quality of life of families with children with autism spectrum disorder

**Angeliki Gena**, Professor, National and Kapodistrian University of Athens, Greece

### Abstract

For over 70 years, health scientists are well aware of the diagnostic entity currently referred to as Autism Spectrum Disorder and have identified the numerous challenges associated with this disorder. Nevertheless, a great number of questions continue to be reinstated, especially those addressing the achievement of optimal therapeutic outcomes in relation to the quality of life of the entire family.

The purpose of this presentation is to address the question of effective practices from both an epistemological and a therapeutic perspective and to suggest the importance of a synthesis of two paradigms – Behavior Analysis and General Systems Theory – as a means of optimizing our assessment of the needs and the services provided to people with ASD and their families.



The science of the Experimental Analysis of Behavior has provided us with both a solid epistemology and a rich technology that constitute a sound basis that has undoubtedly led to most effective and efficient therapeutic and pedagogical practices that aim to ameliorate the wide spectrum of difficulties associated with ASD.

A question that remains under-researched, however, has to do with the effort expected from the part of the child and his/her family and whether this effort can be somehow lessened without compromising therapeutic benefits.

The answer to that question led to investigating the properties of another epistemological paradigm – General Systems Theory – its merits, its compatibility, and its complementarity to the discipline of Behavior Analysis. This presentation aims to demonstrate that the two paradigms are compatible and complementary and that their combination may lead to optimizing the therapeutic and pedagogical outcomes of Behavior Analytic practices, especially in the context of systematic parent-training practices.

## Stress and neurodevelopmental disorders

**Panagiota Pervanidou**, Professor of Developmental and Behavioral Pediatrics, Head of the Unit of Developmental and Behavioral Pediatrics, First Department of Pediatrics, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece. President of the Hellenic Society of Developmental Pediatricians

### Abstract

Stress is defined as the state of threatened homeostasis. Experimental and clinical studies have shown that early life stress, particularly prenatal and early childhood stress (e.g., psychological stress and trauma, physical illness, etc.) may have pervasive and persistent effects on frontal cortical- hypothalamic, and mesolimbic circuits, including the amygdala, the hippocampus and the reward system. These structural and functional alterations during brain development may be associated with later neurodevelopmental and neurobehavioral symptoms and disorders.

In addition, the stress system serves as a major adaptive physiological mechanism in living organisms. Recent studies have focused on the function of the stress system in children and adults with neurodevelopmental disorders [e.g., Autism, and Attention Deficit Hyperactivity Disorder (ADHD)] or traits related to altered neurodevelopment (e.g., deficits in attention or cognition). Individuals with Neurodevelopmental Disorders may exhibit non-typical function of the Stress System during the presence of social and/or other environmental stressors, and, they may appear with a greater percentage of stress related mental and physical co-morbidities.



## Educators apply new teaching strategies despite initial attributions of autistic students' controllability of their behaviors

**Jonathan Panganiban**, PhD, Research fellow and **Connie Kasari**, PhD, Professor University California Los Angeles

### Abstract

Autistic children are less likely to be jointly engaged with a play partner than non-autistic children, negatively impacting social communication development. Promoting joint engagement during play can be an important target for educators of autistic students, but educator perceptions of autistic students may affect their interactions with students. This secondary data analysis investigated educator perceptions of the behaviors of their autistic students, their relationship on educator behavior, and their relationship on the implementation of an intervention promoting joint engagement. Participants included 66 autistic preschool students, and twelve educators from six preschools. Schools were randomized to educator training or a waitlist. Before training, educators rated their students' controllability over autism related behaviors. To observe educator behavior, they were filmed playing for ten minutes with students, before and after receiving training. Findings show that educator ratings of controllability predicted joint engagement strategies used by educators during play. Educators tended to use strategies promoting joint engagement for students perceived as more able to control their ASD behavior. Among educators that received JASPER training, ratings of controllability did not predict changes in strategy scores after training. Educators were able to learn and implement new joint engagement strategies despite their initial perceptions.

*Keywords: autism; Attribution Theory; educator training; JASPER; joint engagement; preschool*

## Are there sex differences in the prevalence and severity of early-stage trauma-related stress in mildly impaired autistic children and adolescents?

**Vicki Bitsika**<sup>1</sup>, **Christopher F. Sharpley**<sup>1,2</sup>

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<sup>2</sup>Corresponding author: School of Science & Technology, University of New England, Armidale, New South Wales, Australia

### Abstract

**Background:** Post-Traumatic Stress Disorder (PTSD) occurs more frequently in autistic youth than in their non-autistic peers, and females are reported to suffer from PTSD more often than males in the wider community. However, relatively little has been reported of the comparative occurrence and severity of PTSD in male versus female autistic youth.

**Methods:** A sample of 32 autistic males and 32 autistic females aged between 6yr and 18yr, plus one of their parents, participated in a survey study using the PTSD-related items from the Child and Adolescent Symptom Inventory (4th ed.) (CASI-4). Autistic males and females were matched on age, IQ and ASD severity.



**Results:** Although the autistic children rated their PTSD as more severe than their parents did, neither of these sources of information showed any significant sex differences in the total score or diagnostic frequency for PTSD, either at the total sample level, or when subdivided into younger and older youth. There were no significant correlations between age, IQ, or autism severity and PTSD scores for either the autistic males or females.

**Conclusion:** These results challenge the prevalence of sex differences in PTSD reported in the wider community, arguing for equal clinical attention to this comorbidity in autistic youth.

**Keywords:** *autism, child, carer, anxiety, depression*

## **Sedentary behavior and quality of life in children with autism: Insights from Romania and Greece**

**Ruxandra Folostina<sup>1</sup>, Claudia Luliana Iacob<sup>1</sup>, Christine K. Syriopoulou-Delli<sup>2</sup>**

<sup>1</sup>Faculty of Psychology and Educational Sciences, University of Bucharest, Romania

<sup>2</sup>School of Social Sciences, Humanities, and Arts, University of Macedonia, Greece

### **Abstract**

**Background:** The COVID-19 pandemic has accentuated sedentarism in children, including those with autism. Given the importance of the topic for long-term health, this study aimed to investigate the relationship between physical activity, sedentary behaviours, socio demographic characteristics and quality of life (QOL) in autistic children from Romania and Greece.

**Methods:** An online questionnaire collected information regarding physical activity levels in children and their caregivers, children's sedentary behaviours and QOL from 83 Romanian caregivers ( $m_{1age} = 40.1$ ;  $sd_{1age} = 6.37$ ) and 42 Greek caregivers ( $m_{2age} = 39.5$ ;  $sd_{2age} = 5.45$ ) between March and July 2022.

**Results:** Most Greek children (95%) had 2 or 3 weekly hours of physical education at school/kindergarten, while only 64% of Romanian children had the same level of physical education. About half of the children have structured physical activities after school. Sedentary behaviour time was significantly higher in Greek than Romanian children during working days and the weekends. Also, Romanian parents reported being more active ( $\chi^2_{weekdays} = 33.7$ ,  $df = 3$ ,  $p < .001$ ;  $\chi^2_{leisure} = 41.8$ ,  $df = 2$ ,  $p < .001$ ) than the Greek counterparts. Child age did not correlate with sedentary behaviour, but sedentary behaviour during weekdays predicted their QOL.

**Conclusions:** This exploratory study offers insight into Romanian and Greek children's patterns of physical and sedentary activities. Most findings were consistent with previous research, showing that children with autism engage in high levels of sedentary behaviours. Since sedentary activities predicted their QOL, it is recommended to embed in those activities a dynamic component.

**Keywords:** *sedentary behavior; physical activity; autism; quality of life; screen time; family caregiving*



## Maturing alongside my son Manoli and the spectrum of autism

### Evdoksia Akrivou

Educator in an Elementary School, Vice- President of The Parental Association, M.A.m.AVeria (The welfare for People with Autism). Mother of a 17-year-old adolescent in the spectrum of Autism

### Abstract

My name is Evdoksia Akrivou, my studies are in the field of Elementary Education. I live and work in the city of Veria (Northern Greece).

I am an educator in an Elementary School in the city of Veria and the mother of a 17-year-old adolescent in the Spectrum of Autism. As a one parent family for many years now I feel that I also have matured alongside Manoli.

When I use the term “matured”, I do not mean only chronologically, I mean that my values, my way of thinking about people and events in my life, my dreams, and my hopes for tomorrow have “matured”.

I truly believe that through Manoli and Autism I have become a better and wiser person. Having the responsibility of advocating for the rights for Manoli to be integrated in society, and to have the quality of life he rightly deserves, as well as all the people with autism, has truly brought light to my life.

## Executive functions and academic achievement in children with ADHD

### Krystallenia Fiorentzi<sup>1</sup>, Alexandros-Stamatios Antoniou<sup>2</sup>

<sup>1</sup>PhD candidate NKUA

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### Abstract

ADHD is related to deficits in academic achievement. There has been an effort to delve into the reasons why those deficits emerge in ADHD so that appropriate interventions are designed. This needs to find proper interventions motivated the present literature review. It seems that ADHD symptoms and executive function (EF) deficits exert a negative influence on learning outcomes in children and adolescents with ADHD. Academic deficits are evident even from pre-school years. School-aged children encounter various problems regarding both the academic and the educational field (e.g., likelihood of being placed in special education classes, use of remedial academic services and behavioral problems). As for academic skills, spelling, reading, writing and mathematical skills are affected. With regards to EFs, Working Memory and response inhibition deficits arise in a lot of studies, with additional difficulties having been traced in flexibility, planning and fluency among others. It is claimed that both symptoms of ADHD and EF deficits predict academic difficulties. However, there is not a definite conclusion as to whether symptoms of ADHD uniquely predict academic achievement or if and how symptoms interact with EFs. These are important issues in research and which the present review attempted to address.

Keywords: *executive functions, academic achievement, deficits, ADHD*



## STE(A)M and educational robotics for inclusive education.

**Paraskevi Foti<sup>1</sup>**

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Educational robotics is introduced in different dimensions of education, but mostly it is used as part of an educational process in nonformal educational activities, and in initiatives introduced by some projects where different aspects of educational robotics are tested in activities with students who have diverse special needs. Robotics has mostly been associated with the field of Science, Technology, Engineering, and Mathematics, and outcomes of educational robotics are measured through the prism of improved knowledge in STEM subjects. In this paper, the role of educational robotics and smart robots in the field of inclusive education is reviewed, as well as other basic theoretical approaches and research in these fields.

*Keywords: educational robotics, smart robots, STEAM, inclusive education.*

## Robot programming for a child with autism spectrum disorders: A case study

**Eleni Gkiolnta<sup>1</sup>, Maria Zygotoulou, MSc, Teacher, Christine Syriopoulou- Delli, Associate Professor<sup>2</sup>**

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<sup>2</sup>Associate Professor (Laboratory of Autism -Developmental Spectrum Disorders and Behavior Difficulties of the Human) University of Macedonia

### Abstract

Children with autism spectrum disorder (ASD) show great interest in technological devices, and especially in robots. Several studies in the field have suggested that socially assistive robotics (SARs) can help children with ASD in the enhancement of their social skills and communication, and in the reduction of their stereotypical behaviors. Few published research results are available regarding robot programming or coding in the context of STEM education (Science, Technology, Engineering and Mathematics) for these children. In this pilot study, the authors designed and implemented educational activities with the robot "Codey Rocky", a ready-to-use robot designed for code learning and programming by primary school children. In this pilot study, the participation of two eight-year-old schoolchildren, a girl with ASD and intellectual deficit (ID) and a boy of typical development (TD) in triadic interactions with the robot, led to the enhancement of the social and communication skills of the girl with ASD. A decrease in her challenging behaviors was also observed although she manifested repetitive and stereotyped behaviors throughout the educational sessions. The benefits, risks, and implications of the use of SARs for children with ASD are discussed.

*Keywords: robot; programming; STEM; autism spectrum disorder; children, interaction*





## Application of eye-tracking technology and machine learning in autism detection: The case of high-functioning adults

**Konstantinos-Filippos Kollias<sup>1, \*</sup>, Christine K. Syriopoulou-Delli<sup>2</sup>, Panagiotis Sarigiannidis<sup>3</sup>, George F. Fragulis<sup>1</sup>**

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### Abstract

Autism Spectrum Disorder (ASD) is a heterogeneous neurodevelopmental disorder concerning mainly social communication/interaction difficulties and repetitive behaviors/interests. Early ASD detection is of crucial importance and usually employs behavioral instruments relying on subjective rather than objective criteria. ASD is significantly difficult to be detected in cases of high-functioning ASD adults compared to young ASD individuals with severe symptoms. Interdisciplinarity in autism research has provided autism assessment research with advanced methods such as eye-tracking technology, machine learning and other tools, as well. The current article is based on an eye-tracking dataset collected in a previous ASD detection study in which high-functioning ASD adults participated in tasks related to web browsing. We utilized this dataset and examined the contribution of Decision Trees, Logistic Regression and Transfer Learning to high-functioning ASD detection. Our results showed a higher classification accuracy compared to the results of the earlier study and indicated the significance of our method concerning ASD detection. Limitations and suggestions for future research are included, as well.

*Keywords: High-Functioning adults, Autism detection, eye-tracking, machine learning, transfer learning*

## Assessing educational programs for intellectually disabled students in special primary schools

**Petros Stagiopoulos**, PhD in Special Education, Supervisor in 1<sup>st</sup> KEDASY of East Thessaloniki

### Abstract

The prevalence of the “policy of inclusion” in Greece promoted the inclusion of intellectually disabled students into mainstream settings with consequent marginalization of the public special school.

Intellectually disabled students face cognitive and learning limitations which do not enable them to respond to the objectives of the mainstream curriculum. At the same time, the social characteristics of intellectual disability that concern social relationships, stigmatization and self-determination, highlight two critical issues. Firstly, the autonomy-independence-self-determination issue and secondly, the issue of social relationships. Both these issues are critical for the quality of the intellectually disabled student’s life and for their entity as social beings.

A large number of these students attend special schools of primary education, in which there is no common curriculum. This fact gives rise to the need for a type of education that would support the real needs of the intellectually disabled



students and would guarantee the fulfillment of these needs as far as possible through the design and the implementation of functional curricula, directed towards the development of the ability for independent and autonomous living. The convergence of functional curricula that would promote quality of life, self-determination, autonomy, independence and social abilities could meet not only the present needs of the students but also their future needs as adults with intellectual disabilities.

**Keywords:** *intellectual disability, special primary schools, student's assessment, self-determination, independent living, social relations, functional curriculum.*

## **Narrative skills in children with ADHD or Autism Spectrum Disorders: A systematic review of the literature**

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<sup>2</sup>Associate Professor, Department of Economics and Sustainable Development, Harokopio University of Athens, Greece

### **Abstract**

The purpose of the present study is to review empirical data on the narrative performance of children with *Attention Deficit Hyperactivity Disorder (ADHD)* or Autism Spectrum Disorders (ASD) in the areas of microstructure, macrostructure and internal state language. Twenty-two studies published between 2000 and 2020 from Sweden, USA, Israel, Spain, Germany, Australia, Netherlands and Greece, which met the pre-defined inclusion criteria and focused on the narrative fluency, production and coherence of children with ADHD or ASD, were reviewed. The results summarized the similarities and differences in narrative production between the two groups of children. More similarities in the microstructure of the narratives (small volume of discourses, speech difficulties, use of ambiguities, inclusion of trivial information, repetition of words, inability to sequence events), and fewer in the macrostructure (problems in reporting the basic elements of the story and locating the causes between the events) were identified. Differences in the macrostructure of a story included the use of adjectives, the evaluation of the story, retrieval of story information, and misinterpretation of facts, while microstructure differences included complex syntax and language stereotypes, with ADHD children outperforming ASD children. Although, the difficulty in referring to the psychological and mental states of the heroes of a story emerges as a common feature in both groups of children, this particular narrative competence is examined more often with ASD children, probably due to their limitations in Theory of Mind. The results of the present systematic review are useful for educators, psychologists and parents and have important implications for the support of ASD and ADHD children.

**Keywords:** *narrative skills, storytelling, narrative production, ADHD, Autism Spectrum Disorders*



## Aspects of social skills in high-functioning individuals with autism spectrum disorders: Related or separable?

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<sup>2</sup>Postgraduate student, Democritus University of Thrace

### Abstract

The present study investigates different aspects of social skills in high-functioning individuals with autism spectrum disorders (ASD) and detects whether these skills are related or separable. Previous studies have found that individuals with ASD have deficits in their social skills due to multiple deficits in cognitive processes. An open question is whether these skills are disentangled or interrelated. Twenty-eight Greek-speaking individuals participated (14 high-functioning individuals with ASD, 12-13 years old, henceforth ASD group; and 14 age-matched typically developing individuals, henceforth TD group). Social skills were tested by means of a subtest of the Diagnostic Evaluation of Language Variation (DELV), which included sections on communicative role-taking skills, narrative skills and question asking skills. The results have shown that TD group scored higher than ASD group in all social skills. Correlations conducted for each group separately exhibited that communicative role-taking skills and question asking skills strongly correlate, while a moderate correlation was attested between communicative role-taking skills and narrative skills, albeit only for the TD group. Our findings suggest that social skills may interrelate in healthy individuals, but in individuals with ASD seem to be divergent and subjected to different mechanisms; therefore, they seem to be more separable. The present outcomes can be leveraged by speech and language pathologists so as to plan effective intervention programs in order to help and further improve the quality of life of individuals with ASD.

## Greek dictionary weighting and use of assistive technology to enhance it communication of children with Autism Spectrum Disorder

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### Abstract

Autism Spectrum Disorders (ASDs) belong to the broader category of neurodevelopmental disorders (Syriopoulou-Dellis, 2020). Children with ASD exhibit difficulties in several areas of development, specifically social skills and communication, and exhibit repetitive and stereotyped behaviors (APA, 2013). In the area of communication, deficits occur in both verbal and non-verbal communication (Lal, 2010). The deficits in pragmatics are very important, i.e., in "the adoption of language as a social communication system" (Eigsti et al., 2007).

Children with ASD also show other types of language disorders, e.g., in semantics (Coderre et al., 2017) and learning grammatical rules (Wittke et al., 2017).



About 30% of people with ASD have incomplete or no speech (Kasari et al., 2013). Other researchers estimate that 25-50% of these individuals never achieve functional communication, however early intervention can help reduce this rate (Brignell et al., 2016; Castelli, 2001; Mazza et al., 2017; Ramdosset al., 2010). In addition, deficient combined visual attention in children with autism (Ogletree, 2008) has been directly linked to the resulting problems in language and communication development (Bottema-Beutel, 2016). In recent years, various methods have been developed to enhance communication between adults and children with ASD. These methods are defined as "Augmentative and Alternative Communication" (AAC) and include the tools and strategies that a person with communication disorders and deficits can use to supplement or even replace their speech (Brignell et al., 2016; ISAAC, 2018). Some typical examples of AAC methods and tools are sign language, the MAKATON language system, the PECS image exchange system and Speech-Generating Devices-SGDs. Speech production devices are a technological means that can be adapted to the needs of the user, offering many advantages over other methods.

Some of the systems mentioned above are also used in Greece (in adapted versions in Greek). However, until now no dictionary has been considered for the creation of a speech production device exclusively in Greek. In this thesis, the assessment of the language and vocabulary of school-age children with ASD and the categorization of the resulting concepts into groups to be integrated into a portable electronic speech production device are presented. The goal is to create a Greek "dictionary" and to strengthen the communication of this group of children through technology.

## Enhancing independent living skills and professional integration of young people and adolescents with Autism Spectrum Disorder through the use of assistive technology

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### Abstract

The smooth transition of people with Autism Spectrum Disorders (ASD) - especially teenagers and young people - from the school environment to society and independent living is considered very important. Skills such as academic, vocational, social, nutritional and daily living skills are essential for a successful transition. All are considered equally important for people's independent living. In particular, people with ASD are likely to face difficulties in mastering these and therefore in their integration into society and the labor market. In Greece, there is insufficient educational, pre-professional and professional training for people with ASD. More specifically, in our country it is observed that the secondary education of adolescents with ASD is not promoted to a large extent, as well as tertiary education, lifelong education, their social integration and their professional rehabilitation. In recent decades, an effort has been made to educate people with ASD according to their abilities, desires, knowledge and skills and using the appropriate educational method. In the context of finding and applying the appropriate method, it is observed that support technology is also used. Bearing in mind the skills necessary for the independent living of people with ASD, and the contribution of assistive technology to their acquisition and strengthening, a survey was carried out with a sample of teachers/employees in schools/structures that host people with ASD. The purpose of this research was to find the structural elements necessary



for the creation of a program/guide for the acquisition and strengthening of independent living skills on the part of teenagers and young people with ASD. The aim was to highlight those skills that are qualified as the most necessary for people with ASD to smoothly integrate into the labor market and the wider society, as well as which means of assistive technology are qualified by the participants in the research. In addition, the aim was to make suggestions for the creation of a guide that would focus on the above skills for the education of teenagers and young people with ASD.

The research focused on the views of teachers/employees in schools/structures that host people with ASD regarding the independent living skills considered necessary to achieve this.

## Aligning quality of life and guidelines for off-label psychotropic drugs in adults with intellectual disabilities and challenging behavior

**Pauline Laermans<sup>1</sup>, Filip Morisse<sup>2</sup>, Marco Lombardi<sup>1</sup>, Sylvie Gerard<sup>6</sup>, Stijn Vandeveld<sup>5</sup>, Gerda de Kuijper<sup>3</sup>, Kurt Audenaert<sup>2</sup>, Claudia Claes<sup>4</sup>**

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### Abstract

**Introduction:** Adults with intellectual disabilities have an increased vulnerability to mental health problems and challenging behaviour. In addition to psychotherapeutic or psychoeducational methods, off-label pharmacotherapy, is a commonly used treatment modality.

**Objective:** The aim of this study was to establish evidence-based guidelines and principles for the responsible prescription of off-label psychotropic drugs, in relation to Quality of Life, for adults with intellectual disabilities and challenging behaviour.

**Method:** A list of guidelines was selected, and principles were established based on international literature, guideline review and expert evaluation from the Quality-of-Life perspective. The Delphi method was used to achieve consensus about guideline recommendations and principles among a 58-member international multidisciplinary expert Delphi panel. Thirty-three statements were rated on a 5-point Likert-scale, ranging from totally disagree to totally agree, in consecutive Delphi rounds. When at least 70% of the participants agreed (score equal or higher than 4), there was an agreement about a statement. Statements without a consensus were adjusted between consecutive Delphi rounds based on feedback from the Delphi panel.

**Results:** Consensus was reached on 4 general themes related to the importance of non-pharmaceutical treatments, comprehensive diagnostics and multidisciplinary treatment. Consensus was reached in 4 rounds on 29 statements. No



consensus was reached on 4 statements concerning: freedom-restricting measures, the treatment plan, the evaluation of the treatment plan, and the informed consent.

Conclusion: The study led to recommendations and principles for the responsible prescription – aligned with the QoL perspective – of off-label psychotropic drugs for adults with intellectual disabilities and challenging behaviour. Extensive discussion is needed regarding the issues on which there was no consensus, which may be helpful in furthering the ongoing development of this guideline.

Keywords: *quality of life, psychotropic drugs, intellectual disability, off-label use, guidelines, challenging behaviour, delphi study*

## To Tell or not to Tell – Disclosure of autism in the workplace.

Dita Nīmante, Dr., Professor, University of Latvia

### Abstract

Autism, sometimes called an “invisible disability”, can lead to different difficulties for young adults entering the workplace as well as maintaining the job. One of the questions young adults with autism face: should he/she/they disclose the information about their autism to the employer? This current study aims to fill a gap in research on the young adult population with autism in the workplace, particularly within the Latvian context. Four young adults (aged 18-26) living and working in Latvia, who have identified themselves as having autism, job seekers and employees with strong language and intellectual abilities, and their mothers participated in this study. Qualitative semi-structured interviews were conducted to gather in-depth data from participants; after that, an inductive content analysis was made. The results reveal that young adults do not disclose that they have autism to neither co-workers nor employers, yet at the same time, they are ready to disclose it to close friends outside of the workplace. Four main reasons for not disclosing their status on the autism spectrum emerged. To begin with, young adults did not want to be treated differently; they wanted to be perceived as “normal”. Second, they feared social stigma. Third, they did not feel there could be any benefits by disclosing their autism to their employer. Finally, it is much more important to explain to their employer what the often-unique limitations of each specific young person with Autism are and how to overcome them than to just inform only of their Autistic status.

Keywords: *Young adults; autism; disclosure; workplace; Latvia; autism spectrum disorder*



## Comorbidity of mental health and Autism Spectrum Disorder (ASD): Perception of practitioners in management of their challenging behavior.

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### Abstract

The Relationship between mental health problems, Autism Spectrum Disorder (ASD) and challenging behaviour among children and adolescents is complex and multifaceted. The study investigated practitioners' perception of comorbidity of mental health and ASD in the management of challenging behaviours among children and adolescents in Kenya. Target population was 3490 practitioners. Sample size was 1047, comprising of 38 assessment staff, 27 mental health workers 548 regular teachers, 294 teachers from special schools, and 140 teachers from special units for children with ASD. Stratified and purposive sampling techniques were used. Interviews, structured questionnaires were used. Test- Retest yielded a coefficient of 0.78 while Cronbachs' reliability coefficient was 0.830. There was a positive significant correlation between perception of challenging behaviours and mental health problems ( $r=.415, p=.000$ ). Challenging behaviour perceptions have a negative significant effect on behaviour management strategies, ( $\beta=-.163, p=.000$ ) implying that the choice of management strategies is dependent on the perceptions. Challenging behaviours accounts for 2.7% variance in the choice of the management strategies,  $R^2=.027, F(1,1045)=28.471, p=.000$ . The practitioners' perception of mental health and comorbidity with ASD showed that children with ASD 'become so mad' that they break when upset. There is need for multidisciplinary synergy in developing effective challenging behaviour programmes for children and adolescents with ASD.

**Keywords:** *ASD; Challenging Behaviour; Comorbidity; Mental Health, Practitioners*

## Knowledge with kindness is power! Knowledge about autism and kindness relate to better attitude towards persons with Autism Spectrum Disorder

**Jesus Alfonso D. Datu, Dr.,** The Education University of Hong Kong

### Abstract

Prior studies have shown inconclusive evidence on how knowledge predicts attitude towards individuals with autism spectrum disorders (ASD) in diverse cultural contexts. There is also dearth of research on psychological resources that facilitate inclusive attitude towards students with ASD. This study examines the links of kindness and knowledge about autism to attitude towards ASD among Filipino high school students. An online survey with items measuring kindness and knowledge about autism as well as a vignette-based measure of attitude towards ASD was administered to participants. Results showed that knowledge about autism and kindness positively predicted attitude towards ASD when controlling for



age, gender, and previous contact with students with ASD. This research suggests that integrating ASD awareness with kindness education can bolster positive attitude towards persons with autism and other developmental disabilities.

Keywords: *Filipino students; kindness; inclusive attitude; knowledge about autism; special education*

## **Sensory profiles, behavioral problems and auditory findings in children with Autism Spectrum Disorder**

**Ummugulsum Gundogdu**, Dr, Marmara University, Turkey

### **Abstract**

**Objective:** This study examined the relationship between sensory processing (SP) problems and behavioral problems in children with autism spectrum disorder (ASD). We also investigated whether audiological test results could objectively detect auditory processing problems.

**Method:** Forty-six children with ASD, ages 3-9 years, were enrolled in the study. Problematic behaviors and sensory processing of children were assessed using scales. The otolaryngologist performed a detailed head, and neck examination, and a formal audiological examination was performed by an audiologist.

**Results:** Stereotypy, hyperactivity, and irritability were related to sensation seeking. Stereotypy was also associated with visual processing. Touch processing problem was related to irritability and inappropriate speech. Lethargy was associated with auditory processing. There were no differences in SP and behavior problems in the children whose audiological profiles could be measured between those who passed or failed the test.

**Conclusion:** There was an association between SP and behavioral problems in children with ASD, supporting previous studies. Audiological test results did not reveal the SP problems documented in the parent forms.

Keywords: *Autism Spectrum Disorder; Sensory Profiles; Behavioral Problems; Auditory Profiles; Children*

## **Towards inclusive distance learning for people with Autism Spectrum Disorders**

**Elpis Papaefstathiou<sup>1</sup>, Kyriaki Sarri<sup>1</sup>, Areti-Eirini Filiou<sup>1</sup>, Christine Syriopoulou- Delli<sup>2</sup>,**

<sup>1</sup>PhD candidate,

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### **Abstract**

The outbreak of the COVID-19 pandemic affected every aspect of human life worldwide, including education. As distance learning can bridge the “separation” between students and educators, technology was the main tool-solution for most cases. Certainly, an inclusive approach to teaching in Distance Learning is crucial for students with ASD, in order to have





equal chances for participation in the educational process. However, this attempt was very challenging for all those who contributed to this process. The purpose of this study is to elaborate on the way and the approach that distance learning was applied in schools in Greece. Specifically, the study will focus on the principles, methods, and tools that were used in typical and special education schools that students with ASD attended. Furthermore, the advantages and the risks of distance learning for these students will be referred to. Finally, some suggestions about future approaches to distance learning will be made.

Keywords: *autism; ASD; students; distance learning; inclusion*

## Logometro: Assessing language development in young children.

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<sup>3</sup>Associate Professor, Psychology Department, National and Kapodistrian University of Athens

### Abstract

The aim of the presentation is to describe Logometro®, a Greek innovative norm-referenced digital language assessment tool for 4-7 years old children, and its psychometric characteristics. Logometro® has been designed to: (a) map individual language development paths as well as difficulties, (b) provide a descriptive profile of children's oral language and emergent literacy skills, and (c) assist in the identification of children who are at risk for Developmental Language Disorder (DLD) or Specific Learning Disabilities (SLD). It evaluates an array of a child's oral language skills across language domains (phonological awareness, listening comprehension, vocabulary knowledge, narrative speech, morphological awareness, letter recognition, pragmatics), as well as emergent literacy skills.

Logometro® is also very child friendly as it is administered through an Android application for mobile devices (tablets) differing from most screening batteries or clinical assessments that are lengthy and time-consuming requiring highly trained examiners. Touchscreens enable direct recording of children's oral responses and capturing of manual responses (child choices and writing samples).

The psychometric validation of the assessment was based on a diverse sample of 926 children. 800 participants were typically developing children and 126 children with Special Educational Needs. Validity (construct, criterion, convergent, discriminant and predictive) and internal consistency were assessed. Results indicated that Logometro® has good psychometric properties validating it as a cost-effective assessment tool with high predictive validity that can be used easily and efficiently to inform professionals and researchers about children's language strengths and weaknesses for planning early interventions.

Keywords: *Language, Assessment, Early Intervention, Validity, Reliability.*



## Investigating the effectiveness of ayres sensory integration intervention in Autism Spectrum Disorders

**Elizabeth Maglari, Dr.,** OTD, OT/L, BCP, Board Certified in Pediatric Occupational Therapy, Pediatric Institute, Athens, Greece

### Abstract

Autism is a lifelong neurodevelopmental condition associated with all aspects of daily life from early childhood through adulthood. Occupational therapists are health care professionals qualified to support productive and meaningful participation for individuals with autism and their families in community activities focusing on the quality of life. One key role for occupational therapists is the evaluation and remediation of sensory processing difficulties (SPD) that hinder occupational performance.

According to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-V) SPD, specifically over- or under-responsiveness to sensory stimuli, has been identified as a diagnostic criterion of ASD. It is estimated that approximately 96% of children with ASD demonstrate SPD in their daily routines. The inability to accurately process sensory information impacts all areas of child development and continues to impact functional skills in later life. This is the reason why sensory integration intervention (SII) is the third most commonly requested intervention requested by caregivers.

Ayres Sensory Integration Intervention® (ASII) is a clinical procedure grounded in sensory integration theory. The intervention focuses on aiding clients to register, process, integrate, and adequately respond to internal and external sensations that occur within the client's daily life, contexts, and relationships.

Although ASII is one of the most frequently used interventions in autism, there has been controversy regarding its evidence base. This presentation will focus on the investigation of the effectiveness of this popular occupational therapy intervention approach.

## Co-educational teacher program-aspects-perspectives

**Nikos Papadopoulos,** Special Education teacher, MEd, MSc, Head of 1<sup>st</sup> Center for Interdisciplinary Assessment, Counseling and Support of Piraeus, Greek Ministry of Education and Religious Affairs.

### Abstract

- The pedagogy of integrating students with disabilities or special educational needs into the mainstream school collides with the rigid organization, structure and operation of the modern school which fails to respond to the different needs of the students. The school focuses on the provision of knowledge through a strict division of academic subjects, with the main aim of theoretical knowledge and the connection of the school with the admission into higher education.
- The practice of inclusion of students with disabilities in mainstream classes, who may hinder to a small or large extent the successful participation in the usual learning process, brings back to the fore with greater intensity, the issues of



difference and differentiation in typical school classes. The education of students with disabilities in a mainstream class requires a differentiated organization of the learning process.

- Evaluation of the Parallel Support program (co-educational teacher)
- The way of applying the Parallel Support program (co-educational teacher), the teachers' perception of the effectiveness of the P.S., the organization of the P.S. and the roles of co-teachers: conclusions, perspectives.
- Need to reframe P.S. (co-education teacher)
- From the student to the group.
- The teacher of P.S. (co-education) as an equal teacher,
- Forms of co-teaching
- Co-teaching planning
- Implementation of co-teaching
- Differentiation of teaching according to the characteristics of students
- Formation of an optimal climate in the school classroom
- Objective: the flexibility in the student's studies based on the effective and holistic-interdisciplinary approach and dealing with the educational and psychosocial needs of the students, in combination with the framework of promoting inclusive education, based on the evolving picture of a student.

## Virtual reality on increasing vocational skills of people with Autism Spectrum Disorder

**Kyriaki Sarri, Eleni Gkiolnta, Christine Syriopoulou- Delli**

University of Macedonia, Department of Educational and Social Policy, Laboratory of Autism -Developmental Spectrum Disorders and Behavior Difficulties of the Human

### Abstract

One of the cornerstones of the internal and social balance of man, as well as a means of determining identity, is the right to work. This is not only a source of income, but also an opportunity for social interaction and contribution where the lack of it is a major issue. For people with ASD, their integration into the production process is their main steppingstone in the struggle for independence and inclusion. However, it is often observed that many students with ASD leave school without having mastered the independent living skills necessary for adulthood and therefore experience poor outcomes in areas such as vocational rehabilitation, social interaction, and independent living. However, research has shown that people with ASD possess skills suited to specific jobs and when employed and supported properly, appear to be able to live independently. In this study, the authors are going to discuss methods and approaches that use new technologies with the aim of improving social, communication, academic, daily living, and professional skills. The contribution of new technologies and more specifically the application of virtual reality to the educational program for adolescents and young adults with ASD are going to be discussed.

*Keywords: ASD; adolescents; young adults; vocational skills; new technologies; virtual reality*



## Quality of life of people with autism and intellectual disabilities at two sustainable communities

Brian Valentini, Assistant Professor of Special Education at St Cloud State University.

### Abstract

Currently, outcomes for people with autism and intellectual disabilities are poor; leaving those with autism in need of optimal life-long services. Many recommendations have been made for postsecondary residential options. Little is known regarding the services provided at sustainable communities. The purpose of this study is exploratory in nature; to explore the make-up of sustainable communities, those participating in them, and the services provided. One survey, containing demographic, descriptive and QoL questions was sent to sustainable communities. Survey results revealed two communities offer similar services, employ similar staff and have a common central theme throughout their community. Yet, the two communities carry out services in very different ways. Quantitative results demonstrate participants achieving statistically similar mean QoL scores. A correlation indicates, as the frequency of services increase, so does QoL. This research suggests these two communities deliver services in a manner leading to higher levels of QoL. Results may guide those considering sustainable communities as a service provider.

Keywords: *Quality of Life, Autism, Intellectual Disability, sustainable communities*

## Quality of life in parents of children with Autism Spectrum Disorder: Emphasizing challenges in the Indian context

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### Abstract

**Purpose:** Research has raised concerns about the quality of life (QOL) of parents of children with Autism Spectrum Disorder (ASD). Parents in different cultures show different psychological functioning when caring for a child with ASD. Hence, we examined QOL in parents of children with ASD in India and its relationship with sociodemographic factors. **Materials and methods:** We used a self-reported questionnaire and WHOQOL-BREF instrument to collect data on socio-demographic details and QOL respectively. Data were collected from two groups of participants – parents of children with ASD and parents of typically developing children (N=60). **Results:** Results revealed significant differences in QOL between the two groups.

Further, we found a positive correlation between socio-demographic variables and QOL in parents of children with ASD. **Conclusions:** Findings emphasize the need for intervention approaches aimed at family functioning, improving support services, and assisting parents to develop healthy coping strategies.

Keywords: *quality of life; autism spectrum disorder; parents; India*



## Promoting learning and social experiences of people with autism spectrum disorders in the museums.

**Charikleia Kanari**, Assistant Professor, School of Early Childhood Education, Aristotle University of Thessaloniki, Greece

### Abstract

Museums all over the world recently celebrated their new definition that reflects their role and dynamics as agents for equity, social inclusion and cohesive societies in the 21<sup>st</sup> century. As “public institutions, accessible and inclusive that foster diversity and sustainability” museums constitute a valuable resource with specific qualitative characteristics that provide unique learning and social opportunities to all people including those with autism spectrum disorders. Despite the worldwide efforts of museums for access and inclusion there are still many barriers for people with disabilities. The present study focuses on the case of people with autism spectrum disorders and examines challenges and perspectives for inclusive and meaningful learning experiences in museums based on the interactive nature of museum experience and learning in conjunction with the diverse cognitive, social and learning characteristics of people with autism spectrum disorders. Issues of inclusive policies both in formal education and in cultural institutions, design principles for accessible activities and material and the need for collaborations among institutions and associations are discussed with the aim to promote people with autism spectrum disorders right for access and participation in various learning and cultural environments and promote the quality of their life.

## Early intervention program for toddlers with ASD, Parents and Professionals

**Elpis Papaefstathiou<sup>1</sup>, Areti-Eirini Filiou<sup>1</sup>, Eleni Gkiolnta<sup>1</sup>, Kyriaki Sarri<sup>1</sup>, Christine Syriopoulou- Delli<sup>2</sup>**

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### Abstract

According to research, early intervention in ASD (Autism Spectrum Disorder) has significant and long-lasting effects on children's symptoms and later skills. The growing research interest in early childhood and its impact on later child development has led to the creation of many early intervention programs for children with ASD in several developed countries. After all, early intervention is the key to a good prognostic developmental pathway and to the social inclusion of people with ASD. However, in our country, no such programs have been developed or adapted so far. DAPHNE (Δ.Α.Φ.ΝΗ) (Autism Spectrum's Skills for Toddlers) was developed to cover the lack of early intervention programs in our country, Greece. This program helps young children with ASD or those, who are at risk for ASD to acquire the developmental skills that are typically acquired from the early stages of life in typically developed children effortlessly. In the presentation that will follow, a brief description of the innovative and pioneering program will be given. In particular, information will be included regarding to: whom it is addressed, the purpose and the goal of the program, the focus development areas, the methodology that was used in order to be developed, the results of a pilot study, as well as the material included in the program's kit. Finally, the advantages of the program's implementation will be presented.

**Keywords:** *Early Intervention, parents, professionals, developmental areas, skills*



## Teaching social skills in small groups of children and young adults with developmental disabilities: An intervention program

**Christina Lappa** Post Doc, PhD, MSc, Adjunct Lecturer at Hellenic Open University Patra, Greece

### Abstract

Sixteen participants with Developmental Disabilities (Intellectual Disability, Autism Spectrum Disorder with Intellectual Disability, Down syndrome and Cerebral Palsy) were selected to be taught social skills. Eight of the participants were children, 9 to 16 years of age, while the remaining eight participants were young adults, 22 to 36 years of age. The aim of this qualitative study was to provide training with regard to communication skills and more specifically conversational skills to the sixteen participants in order to allow them to engage in conversational exchanges with their peers. Participants were evaluated for their mental capacity and assigned to six groups according to their ability. The intervention combined a table game (puzzle pairs), small-group teaching of structured questions with their answers, modeling, error correction, social praise and tangible reinforcement. A within-subject withdrawal design was used to show the acquisition of the ability to converse through conditions of baseline, teaching, probes and generalization measures. All participants learned to engage in structured conversations. This knowledge generalized and maintained to different settings after 3 and 7 months. A social validity measure affirmed these improvements in their ability to converse. Another important finding was the development of glancing at a listener. As the frequency of speaking to a peer increased, so did the frequency of the socially appropriate behavior of looking at person, when speaking to him or her.

**Keywords:** *social skills, glancing, children and young adults, Developmental Disabilities, teaching in groups, generalization*

## Vocational and social training program, transition to labor market and open society for adolescents and young adults with ASD

**Kyriaki Sarri<sup>1</sup>, Areti- Eirini Filiou<sup>1</sup>, Elpis Papaefstathiou<sup>1</sup>, Eleni Gkiolnta<sup>1</sup>, Christine Syriopoulou-Delli<sup>2</sup>**

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### Abstract

The ultimate target for people with ASD is vocational rehabilitation and social inclusion, after the provision of a supported education program. Despite improved educational facilities, young adults with ASD are less likely to be employed after graduation from high school than their peers with other disabilities. The authorities in many countries have now realized that they need to help people with ASD, as when provided with appropriate support and services, many have the potential for working and living independently, like their peers without disabilities. In Greece, there is a lack of programs and guides regarding the acquisition of vocational skills for adolescents and young adults with ASD. The program D.E.K.A. was created to cover this lack. It is a complete guide to Vocational Training for people with ASD aged 15 to 25 years old. It is addressed to a) parents and family members of people with ASD and b) educators and professionals dealing with people with ASD. The purpose of the program is to give directions and guide parents, teachers, and professionals to a) focus on important skills, the mastery of which is necessary for smooth integration into society, b) support the vocational education



and the training of young people with ASD, c) strengthen the social skills of young people with ASD, d) emphasize the strengths of young people with ASD and empower them. D.E.K.A. program allows parents, educators, and professionals to practice the skills of adolescents and young adults with ASD in three areas that are directly related to vocational education and training: a) Pre-vocational Skills, b) Communication-Social Skills, and c) Vocational skills.

Keywords: *ASD, adolescents, young adults, vocational skills, D.E.K.A. program*