

**‘Specialization in ICTs and Special Education: Psychopedagogy  
of Integration’ Postgraduate Program**  
**DEMOCRITUS UNIVERSITY OF THRACE Department of Greek  
Philology in collaboration with**  
**NCSR DEMOKRITOS Informatics and Telecommunications  
Institute**

**Behavior problems in children with autism spectrum disorder**

AKRIVOPOULOU ANTIGONI

POSTGRADUATE  
THESIS

Athens  
2020

## **ABSTRACT**

Behavioral problems, such as stereotypy, aggression, and self-injury, are often observed in children with autism spectrum disorder (ASD). These behaviors cause stress to caregivers in terms of their management, while at the same time comprise an obstacle to the social life of this population. This paper is a literature review based primarily on articles in scientific journals to investigate the above three types of behavior problems in children with ASD, the risk factors of atypical behaviors generally, and the types of intervention that can address them. The results showed that a large percentage of children with ASD, exceeding even 50%, exhibit stereotypy, aggression or self-injury. The manifestation of atypical behaviors depends on various factors, the main of which are sleep problems, language deficits, mental disability and stress. However, interventions based on mindfulness, physical exercise and social robots can deal with them effectively. From the above mentioned, we concluded that being aware of the risk factors of challenging behaviors the manifestation of them can be prevented and finally implementing innovative intervention programs the frequency of them can be reduced, while these children can be taught social skills as well.

**KEYWORDS:** autism spectrum disorder, children, behavior problems, stereotypy, aggression, self-injury, risk factors, intervention programs, mindfulness, physical exercise, social robots.

## References

- Albo-Canals, J., Martelo, A. B., Relkin, E., Hannon, D., Heerink, M., Heinemann, M., et. al. (2018). A pilot study of the KIBO robot in children with severe ASD. *International Journal of Social Robotics, 10*(3), 371-383.
- Aman, M. G. (2012). Aberrant Behavior Checklist: Current identity and future developments. *Clin Exp Pharmacol, 2*(3), e114.
- Ambler, P. G., Eidels, A., & Gregory, C. (2015). Anxiety and aggression in adolescents with autism spectrum disorders attending mainstream schools. *Research in Autism Spectrum Disorders, 18*, 97-109.
- Andy, C. Y. (2020). Brief report: Impact of a physical exercise intervention on emotion regulation and behavioral functioning in children with autism spectrum disorder. *Journal of autism and developmental disorders, 50*(11), 4191-4198.
- Arnott, B., McConachie, H., Meins, E., Fernyhough, C., Le Couteur, A., Turner, M., et. al. (2010). The frequency of restricted and repetitive behaviors in a community sample of 15-month-old infants. *Journal of Developmental & Behavioral Pediatrics, 31*(3), 223-229.
- Baker, B. L., & Blacher, J. (2015). Disruptive behavior disorders in adolescents with ASD: Comparisons to youth with intellectual disability or typical cognitive development. *Journal of Mental Health Research in Intellectual Disabilities, 8*(2), 98-116.
- Baker, J. K., Fenning, R. M., Howland, M. A., & Huynh, D. (2019). Parental criticism and

behavior problems in children with autism spectrum disorder. *Autism*, 23(5), 1249-1261.

Berkovits, L., Eisenhower, A., & Blacher, J. (2017). Emotion regulation in young children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 47(1), 68-79.

Bhat, S., Acharya, U., R., Adeli, H., Bairy, G., M., & Adeli, A. (2014), Autism: cause factors, early diagnosis and therapies, *Review in Neuroscience*, 25(6): 841–850.

Bons, D., van den Broek, E., Scheepers, F., Herpers, P., Rommelse, N., & Buitelaar, J. K. (2013). Motor, emotional, and cognitive empathy in children and adolescents with autism spectrum disorder and conduct disorder. *Journal of abnormal child psychology*, 41(3), 425-443.

Boonen, H., Maljaars, J., Lambrechts, G., Zink, I., Van Leeuwen, K., & Noens, I. (2014). Behavior problems among school-aged children with autism spectrum disorder: Associations with children's communication difficulties and parenting behaviors. *Research in Autism Spectrum Disorders*, 8(6), 716-725.

Bowler, D. M., Gaigg, S. B. & Lind, S. E. (2011). Memory in autism: binding, self and brain. In I. Roth & P. Rezaie (Eds.), *Researching the autism spectrum: contemporary perspectives*. (pp. 316-346). Cambridge: Cambridge University Press.

Bronsard, G., Botbol, M., & Tordjman, S. (2010). Aggression in low functioning children and adolescents with autistic disorder. *PloS one*, 5(12), e14358.

- Cabibihan, J., J., Javed, H., Ang Jr., M., & Aljunied, S., M., (2013), *International Journal of Social Robotics*, 5(4), 593-618.
- Chung, E. Y. H. (2019). Robotic intervention program for enhancement of social engagement among children with autism spectrum disorder. *Journal of Developmental and Physical Disabilities*, 31(4), 419-434.
- Chung, E. Y. H. (2020). Robot-Mediated Social Skill Intervention Programme for Children with Autism Spectrum Disorder: An ABA Time-Series Study. *International Journal of Social Robotics*, 1-13.
- Costescu, C. A., Vanderborght, B., & David, D. O. (2017). Robot-enhanced CBT for dysfunctional emotions in social situations for children with ASD. *Journal of Evidence-Based Psychotherapies*, 17(2).
- Crocker, A. G., Mercier, C., Lachapelle, Y., Brunet, A., Morin, D., & Roy, M. E. (2006). Prevalence and types of aggressive behaviour among adults with intellectual disabilities. *Journal of intellectual disability research*, 50(9), 652-661.
- De Giacomo, A., Craig, F., Terenzio, V., Coppola, A., Campa, M. G., & Passeri, G. (2016). Aggressive behaviors and verbal communication skills in autism spectrum disorders. *Global pediatric health*, 3 (1-5).
- Deb, S., Thomas, M., & Bright, C. (2001). Mental disorder in adults with intellectual disability. 2: The rate of behaviour disorders among a community-based population aged between 16 and 64 years. *Journal of Intellectual Disability Research*, 45(6), 506-514.

Desideri, L., Negrini, M., Malavasi, M., Tanzini, D., Rouame, A., Cutrone, M. C., et. al. (2018). Using a humanoid robot as a complement to interventions for children with autism spectrum disorder: a pilot study. *Advances in Neurodevelopmental Disorders, 2*(3), 273-285.

Di Tore, P., A., De Giuseppe, T., & Corona, F., (2017), Autism Spectrum as an Empathy Disorder, *Autism Open Access, 06*(06):3, 198

Dominick, K. C., Davis, N. O., Lainhart, J., Tager-Flusberg, H., & Folstein, S. (2007). Atypical behaviors in children with autism and children with a history of language impairment. *Research in developmental disabilities, 28*(2), 145-162.

Dordevic, M. V., Glumbic, N. P., Brojcin, B. B., & Jojic, M. P. (2020). Predictors of aggressive behaviour in children with autism spectrum disorder. *Journal for ReAttach Therapy and Developmental Diversities, 2*(2), 70-81.

Emerson, E. (2001). *Challenging behaviour: Analysis and intervention in people with severe intellectual disabilities*. New York: Cambridge University Press.

Farmer, C. A., & Aman, M. G. (2011). Aggressive behavior in a sample of children with autism spectrum disorders. *Research in Autism Spectrum Disorders, 5*(1), 317-323.

Farmer, C.A. (2008). *Factor structure and psychometric properties of the Children's Scale for Hostility and Aggression: Reactive/Proactive (C-SHARP)*. Unpublished Master's Thesis, The Ohio State University.

Farrugia, S., & Hudson, J. (2006). Anxiety in adolescents with Asperger syndrome: Negative thoughts, behavioral problems, and life interference. *Focus on Autism and Other Developmental Disabilities, 21*(1), 25-35.

Goldman, S., Wang, C., Salgado, M. W., Greene, P. E., Kim, M., & Rapin, I. (2009). Motor stereotypies in children with autism and other developmental disorders. *Developmental Medicine & Child Neurology, 51*(1), 30-38.

Goodman, R., & Scott, S. (1999). Comparing the Strengths and Difficulties Questionnaire and the Child Behavior Checklist: is small beautiful?. *Journal of abnormal child psychology, 27*(1), 17-24.

Haddock, J. N., & Hagopian, L. P., (2020). Self-Injurious Behavior in Individuals With Autism Spectrum Disorder. In *The Oxford Handbook of Autism and Co-Occurring Psychiatric Conditions* (pp. 327-348). New York: Oxford University Press.

Hale, C. M., & Tager-Flusberg, H. (2005). Brief report: The relationship between discourse deficits and autism symptomatology. *Journal of Autism and Developmental Disorders, 35*(4), 519-524.

Harmsen, I. E. (2019). Empathy in autism spectrum disorder. *Journal of autism and developmental disorders, 49*(10), 3939-3955.

Harrop, C., McConachie, H., Emsley, R., Leadbitter, K., Green, J., & Pact Consortium. (2014). Restricted and repetitive behaviors in autism spectrum disorders and typical development: Cross-sectional and longitudinal comparisons. *Journal of*

*autism and developmental disorders*, 44(5), 1207-1219.

Jang, J., Dixon, D. R., Tarbox, J., & Granpeesheh, D. (2011). Symptom severity and challenging behavior in children with ASD. *Research in Autism Spectrum Disorders*, 5(3), 1028-1032.

Jaworski, J. L. B., & Eigsti, I. M. (2017). Low-level visual attention and its relation to joint attention in autism spectrum disorder. *Child Neuropsychology*, 23(3), 316-331.

Joyce, C., Honey, E., Leekam, S. R., Barrett, S. L., & Rodgers, J. (2017). Anxiety, intolerance of uncertainty and restricted and repetitive behaviour: Insights directly from young people with ASD. *Journal of Autism and Developmental Disorders*, 47(12), 3789-3802.

Kanne, S. M., & Mazurek, M. O. (2011). Aggression in children and adolescents with ASD: Prevalence and risk factors. *Journal of autism and developmental disorders*, 41(7), 926-937.

Kim, I., Ekas, N. V., & Hock, R. (2016). Associations between child behavior problems, family management, and depressive symptoms for mothers of children with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 26, 80-90.

Kulage, K. M., Smaldone, A. M., & Cohn, E. G. (2014). How will DSM-5 affect autism diagnosis? A systematic literature review and meta-analysis. *Journal of autism and developmental disorders*, 44(8), 1918-1932.

Kuusikko, S., Pollock-Wurman, R., Jussila, K., Carter, A. S., Mattila, M. L., Ebeling, H., et.



al. (2008). Social anxiety in high-functioning children and adolescents with autism and Asperger syndrome. *Journal of autism and developmental disorders*, 38(9), 1697-1709.

Leader, G., & Mannion, A. (2016). Challenging behaviors. In J. L., Matson, *Handbook of assessment and diagnosis of autism spectrum disorder*, (pp. 209-232). Switzerland: Springer International Publishing.

Levinson, L. J., & Reid, G. (1993). The effects of exercise intensity on the stereotypic behaviors of individuals with autism. *Adapted Physical Activity Quarterly*, 10(3), 255-268.

Li, B., Bos, M. G., Stockmann, L., & Rieffe, C. (2020). Emotional functioning and the development of internalizing and externalizing problems in young boys with and without autism spectrum disorder. *Autism*, 24(1), 200-210.

Liu, T., Fedak, A. T., & Hamilton, M. (2016). Effect of physical activity on the stereotypic behaviors of children with autism spectrum disorder. *Int J School Health*, 3(1), 17-22.

Lovaas, O. I., Koegel, R. L., & Schreibman, L. (1979). Stimulus overselectivity in autism: a review of research. *Psychological bulletin*, 86(6), 1236.

MacDonald, R., Green, G., Mansfield, R., Geckeler, A., Gardenier, N., Anderson, J., et. al. (2007). Stereotypy in young children with autism and typically developing children. *Research in Developmental Disabilities*, 28(3), 266-277.

- Maljaars, J., Boonen, H., Lambrechts, G., Van Leeuwen, K., & Noens, I. (2014). Maternal parenting behavior and child behavior problems in families of children and adolescents with autism spectrum disorder. *Journal of autism and developmental disorders, 44*(3), 501-512.
- Manohari, S. M., Raman, V., & Ashok, M. V. (2013). Use of Vineland Adaptive Behavior Scales-II in Children with Autism--An Indian Experience. *Journal of Indian Association for Child and Adolescent Mental Health, 9*(1), 5-12.
- Matson, J. L., Boisjoli, J., Rojahn, J., & Hess, J. (2009). A factor analysis of challenging behaviors assessed with the Baby and Infant Screen for Children with aUtism Traits (BISCUIT-Part 3). *Research in Autism Spectrum Disorders, 3*(3), 714-722.
- Mazurek, M. O., & Sohl, K. (2016). Sleep and behavioral problems in children with autism spectrum disorder. *Journal of autism and developmental disorders, 46*(6), 1906-1915.
- McTiernan, A., Leader, G., Healy, O., & Mannion, A. (2011). Analysis of risk factors and early predictors of challenging behavior for children with autism spectrum disorder. *Research in Autism Spectrum Disorders, 5*(3), 1215-1222.
- Medeiros, K., Rojahn, J., Moore, L. L., & Van Ingen, D. J. (2014). Functional properties of behaviour problems depending on level of intellectual disability. *Journal of Intellectual Disability Research, 58*(2), 151-161.
- Militerni, R., Bravaccio, C., Falco, C., Fico, C., & Palermo, M. T. (2002). Repetitive behaviors in autistic disorder. *European Child & Adolescent Psychiatry, 11*(5), 210-218.

- Militerni, R., Bravaccio, C., Falco, C., Puglisi-Allegra, S., Pascucci, T., & Fico, C. (2000). Pain reactivity in children with autistic disorder. *The Journal of Headache and Pain*, 1(1), 53-56.
- Miller, M. J. (2014). Understanding and Enhancing Empathy in Autism Spectrum Disorder. Unpublished master's thesis, Indiana University Southeast, New Albany, Ohio, USA.
- Minshawi, N. F., Hurwitz, S., Fodstad, J. C., Biebl, S., Morriss, D. H., & McDougle, C. J. (2014). The association between self-injurious behaviors and autism spectrum disorders. *Psychology research and behavior management*, 7, 125.
- Mirenda, P., Smith, I. M., Vaillancourt, T., Georgiades, S., Duku, E., Szatmari, P., et. al. (2010). Validating the repetitive behavior scale-revised in young children with autism spectrum disorder. *Journal of autism and developmental disorders*, 40(12), 1521-1530.
- Moss, J., Oliver, C., Arron, K., Burbidge, C., & Berg, K. (2009). The prevalence and phenomenology of repetitive behavior in genetic syndromes. *Journal of autism and developmental disorders*, 39(4), 572-588.
- Mundy, P., Gwaltney, M., & Henderson, H. (2010). Self-referenced processing, neurodevelopment and joint attention in autism. *Autism*, 14(5), 408-429.
- Murphy, O., Healy, O., & Leader, G. (2009). Risk factors for challenging behaviors among 157 children with autism spectrum disorder in Ireland. *Research in Autism*

*Spectrum Disorders*, 3(2), 474-482.

Nader, R., Oberlander, T. F., Chambers, C. T., & Craig, K. D. (2004). Expression of pain in children with autism. *The Clinical journal of pain*, 20(2), 88-97.

Nazemzadegan, G., Babadi, A., Zeinali, Z., & Kakavandi, K. (2016). Effectiveness of ball exercises on reduction of stereotypic behavior of children with autism spectrum disorder with high performance. *Iranian Rehabilitation Journal*, 14(2), 121-126.

Nock, M. K. (2010). Self-injury. *Annual review of clinical psychology*, 6, 339-363.

Pleshkova, L. N., Tatarenko, O. V., & Sevryugin, D. V. (2020). Behavioral Problems and Mother-Child Interaction in Children With Autism Spectrum Disorder. *European Proceedings of Social and Behavioural Sciences EpSBS*, 91 (12), 89-96.

Poirier, M., Martin, J. S., Gaigg, S. B., & Bowler, D. M. (2011). Short-term memory in autism spectrum disorder. *Journal of abnormal psychology*, 120(1), 247.

Πολυχρονοπούλου, Σ., (2012), *Παιδιά και έφηβοι με ειδικές ανάγκες και δυνατότητες*, Αθήνα: ιδιωτική έκδοση.

Poljac, E., & Bekkering, H. (2012). A review of intentional and cognitive control in autism. *Frontiers in psychology*, 3, 436.

Pugliese, C. E., White, B. A., White, S. W., & Ollendick, T. H. (2013). Social anxiety predicts aggression in children with ASD: clinical comparisons with socially anxious and oppositional youth. *Journal of Autism and Developmental*

*Disorders*, 43(5), 1205-1213.

Ramirez, J. M. (2010). The usefulness of distinguishing types of aggression by function. *International social science journal*, 61(200-201), 263-272.

Ratajczak, V., H. (2011), Theoretical aspects of autism: Causes— A review, *Journal of Immunotoxicology*, 8(1): 68–79.

Reed, F. D. D., Hirst, J. M., & Hyman, S. R. (2012). Assessment and treatment of stereotypic behavior in children with autism and other developmental disabilities: A thirty year review. *Research in Autism Spectrum Disorders*, 6(1), 422-430.

Richards, C., Moss, J., Nelson, L., & Oliver, C. (2016). Persistence of self-injurious behaviour in autism spectrum disorder over 3 years: a prospective cohort study of risk markers. *Journal of neurodevelopmental disorders*, 8(1), 1-12.

Richards, C., Oliver, C., Nelson, L., & Moss, J. (2012). Self-injurious behaviour in individuals with autism spectrum disorder and intellectual disability. *Journal of Intellectual Disability Research*, 56(5), 476-489.

Richman, D. M., Barnard-Brak, L., Bosch, A., Thompson, S., Grubb, L., & Abby, L. (2013). Predictors of self-injurious behaviour exhibited by individuals with autism spectrum disorder. *Journal of Intellectual Disability Research*, 57(5), 429-439.

Rojahn, J., Matlock, S. T., & Tassé, M. J. (2000). The stereotyped behavior scale: Psychometric properties and norms. *Research in Developmental*

*Disabilities, 21(6), 437-454.*

Rojahn, J., Matson, J. L., Lott, D., Esbensen, A. J., & Smalls, Y. (2001). The Behavior Problems Inventory: An instrument for the assessment of self-injury, stereotyped behavior, and aggression/destruction in individuals with developmental disabilities. *Journal of autism and developmental disorders, 31(6), 577-588.*

Ros, R., & Graziano, P. A. (2019). Group PCIT for preschoolers with autism spectrum disorder and externalizing behavior problems. *Journal of Child and Family Studies, 28(5), 1294-1303.*

Rylaarsdam, L., Guemez-Gamboa, A., (2019), Genetic Causes and Modifiers of Autism Spectrum Disorder, *Frontiers in Cellular Neuroscience, 13, 385.*

Samson, A. C., Hardan, A. Y., Lee, I. A., Phillips, J. M., & Gross, J. J. (2015). Maladaptive behavior in autism spectrum disorder: The role of emotion experience and emotion regulation. *Journal of Autism and Developmental Disorders, 45(11), 3424-3432.*

Sannar, E. M., Palka, T., Beresford, C., Peura, C., Kaplan, D., Verdi, M., et. al. (2018). Sleep problems and their relationship to maladaptive behavior severity in psychiatrically hospitalized children with autism spectrum disorder (ASD). *Journal of autism and developmental disorders, 48(11), 3720-3726.*

Scassellati, B., Boccanfuso, L., Huang, C. M., Mademtzi, M., Qin, M., Salomons, N., et. al. (2018). Improving social skills in children with ASD using a long-term, in-home social robot. *Science Robotics, 3(21).*

- Singh, N. N., Lancioni, G. E., Karazsia, B. T., Myers, R. E., Kim, E., Chan, et. al. (2019). Surfing the urge: An informal mindfulness practice for the self-management of aggression by adolescents with autism spectrum disorder. *Journal of Contextual Behavioral Science*, 12, 170-177.
- Singh, N. N., Lancioni, G. E., Manikam, R., Winton, A. S., Singh, A. N., Singh, et. al. (2011). A mindfulness-based strategy for self-management of aggressive behavior in adolescents with autism. *Research in Autism Spectrum Disorders*, 5(3), 1153-1158.
- Singh, N. N., Lancioni, G. E., Winton, A. S., Fisher, B. C., Wahler, R. G., Mcaleavey, K., et. al. (2006). Mindful parenting decreases aggression, noncompliance, and self-injury in children with autism. *Journal of Emotional and Behavioral Disorders*, 14(3), 169-177.
- Singh, N. N., Lancioni, G. E., Winton, A. S., Karazsia, B. T., Myers, R. E., Latham, L. L., et. al. (2014). Mindfulness-based positive behavior support (MBPBS) for mothers of adolescents with autism spectrum disorder: Effects on adolescents' behavior and parental stress. *Mindfulness*, 5(6), 646-657.
- Singh, N. N., Lancioni, G. E., Winton, A. S., Singh, J., Curtis, W. J., Wahler, R. G., et. al. (2007). Mindful parenting decreases aggression and increases social behavior in children with developmental disabilities. *Behavior modification*, 31(6), 749-771.
- Smithson, P. E., Kenworthy, L., Wills, M. C., Jarrett, M., Atmore, K., & Yerys, B. E. (2013). Real world executive control impairments in preschoolers with autism spectrum disorders. *Journal of autism and developmental disorders*, 43(8), 1967-1975.

South, M., Ozonoff, S., & McMahon, W. M. (2005). Repetitive behavior profiles in Asperger syndrome and high-functioning autism. *Journal of autism and developmental disorders, 35*(2), 145-158.

Spek, A. A., Van Ham, N. C., & Nyklíček, I. (2013). Mindfulness-based therapy in adults with an autism spectrum disorder: a randomized controlled trial. *Research in developmental disabilities, 34*(1), 246-253.

Summers, J., Shahrami, A., Cali, S., D'Mello, C., Kako, M., Palikucin-Reljin, A., et. al. (2017). Self-injury in autism spectrum disorder and intellectual disability: Exploring the role of reactivity to pain and sensory input. *Brain sciences, 7*(11), 140.

Syriopoulou-Delli, C. K., & Gkiolnta, E. (2020). Review of assistive technology in the training of children with autism spectrum disorders. *International Journal of Developmental Disabilities, 1*-13.

Syriopoulou-Delli, C. K., Polychronopoulou, S. A., Kolaitis, G. A., & Antoniou, A. S. G. (2019). Parents' Perceptions on Anxiety Symptoms in Children With Autism Spectrum Disorder. *Journal of Educational and Developmental Psychology, 9*(2), 104-104.

Syriopoulou-Delli, C. K., Simos, G., & Grigoriadis, A. (2017). Sleep Problems in Children with Autism Spectrum Disorders. *Journal of Educational and Developmental Psychology, 7*(1), 1-1.



- Taheri, A., Meghdari, A., Alemi, M., & Pouretamad, H. (2019). Teaching music to children with autism: a social robotics challenge. *Scientia Iranica*, 26 (Special Issue on: Socio-Cognitive Engineering), 40-58.
- Taheri, A., Perry, A., & Factor, D. C. (2014). BRIEF REPORT: A Further Examination of the DSM. 5 Autism Spectrum Disorder Criteria in Practice. *Journal on Developmental Disabilities*, 20(1), 116.
- Tomeny, T. S., Barry, T. D., & Bader, S. H. (2014). Birth order rank as a moderator of the relation between behavior problems among children with an autism spectrum disorder and their siblings. *Autism*, 18(2), 199-202.
- Tordjman, S., Anderson, G. M., Botbol, M., Brailly-Tabard, S., Perez-Diaz, F., Gaignic, R., et. al. (2009). Pain reactivity and plasma  $\beta$ -endorphin in children and adolescents with autistic disorder. *PLoS One*, 4(8), e5289.
- Van den Boogert, F., Sizoo, B., Spaan, P., Tolstra, S., Bouman, Y. H., Hoogendijk, W. J., et. al. (2021). Sensory Processing and Aggressive Behavior in Adults with Autism Spectrum Disorder. *Brain Sciences*, 11(1), 95.
- Walenski, M., Tager-Flusberg, H., Ullman, M. T. (2006). Language in Autism. Στο Steven O. Moldin and John L.R. Rubenstein (eds), *Understanding Autism: From Basic Neuroscience to Treatment* (pp 175-204). Boca Raton, FL: CRC Press.
- White, S. W., Kreiser, N. L., Pugliese, C., & Scarpa, A. (2012). Social anxiety mediates the effect of autism spectrum disorder characteristics on hostility in young adults. *Autism*, 16(5), 453-464.

Wiggs, L., & Stores, G. (2004). Sleep patterns and sleep disorders in children with autistic spectrum disorders: insights using parent report and actigraphy. *Developmental Medicine & Child Neurology*, 46(6), 372-380.

Williams, D. L., Goldstein, G., Carpenter, P. A., & Minshew, N. J. (2005). Verbal and spatial working memory in autism. *Journal of autism and developmental disorders*, 35(6), 747.

Wilmshurst, L. (2011). *Εξελικτική Ψυχοπαθολογία. Μια αναπτυξιακή προσέγγιση*. Μετάφραση: Κουλεντιανού, Μ. Αθήνα: Gutenberg.

Worley, J. A., & Matson, J. L. (2012). Comparing symptoms of autism spectrum disorders using the current DSM-IV-TR diagnostic criteria and the proposed DSM-V diagnostic criteria. *Research in Autism Spectrum Disorders*, 6(2), 965-970.

Yaylaci, F., & Miral, S. (2017). A comparison of DSM-IV-TR and DSM-5 diagnostic classifications in the clinical diagnosis of autistic spectrum disorder. *Journal of autism and developmental disorders*, 47(1), 101-109.

Zaidman-Zait, A., Mirenda, P., Duku, E., Szatmari, P., Georgiades, S., Volden, J., et. al. (2014). Examination of bidirectional relationships between parent stress and two types of problem behavior in children with autism spectrum disorder. *Journal of autism and developmental disorders*, 44(8), 1908-1917.