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**THERAPEUTICAL INTERVENTION WITH DOG ASSISTED THERAPY IN
PEOPLE WITH NEURODEVELOPMENTAL DISORDERS: LITERATURE
REVIEW**

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ABSTRACT

Neurodevelopmental Disorders consist of sub-disorders, Autism Spectrum Disorder (ASD), Intellectual Disability, Attention Deficit Hyperactivity Disorder (ADHD) and Movement Disorder. Dog therapy can therefore have positive effects on the sociability, communication and stress of people with Neurodevelopmental Disorders. This study aims to present the recent literature on dog-assisted interventions in people with Neurodevelopmental Disorders. Initially, the paper presents the historical background of the term "Animal Assisted Therapy", and its development over the years. The following are the different interventions that animals can use to improve the functions of the individual. The research methodology is to search the recent literature in the PubMed and ScienceDirect databases. Next, the we present the Neurodevelopmental Disorders, and these are examined separately and in parallel with the research on the dog assisted intervention. In summary, dog therapy in people with Neurodevelopmental Disorders has shown positive results on their socialization and communication. This intervention could be used with the traditional interventions, in order to bring better results. However, further studies are required on the field of motor disorders, as current studies exhibit a small sample size the available tools are not standardized. It is necessary to further investigate the dog assisted therapy.

Key words: Neurodevelopmental Disorders, Intellectual Disability, Attention Deficit Hyperactivity Disorder, ADHD, Movement Disorders, Tourette Syndrome, Autism Spectrum Disorder, ASD, autism, canine assisted therapy, dog assisted therapy, animal assisted therapy

References

- Αντωνίου, Α. (2016). Η Διαταραχή Ελλειμματικής Προσοχής-Υπερκινητικότητα στους μαθητές, Αιτιολογικοί Παράγοντες και Θεραπευτικές Παρεμβάσεις. Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης. 2014. 623. 10.12681/edusc.408. DOI: 10.12681/edusc.408
- Αντωνίου, Α. ΣΤ., (2007-2008). Αξιολόγηση και Παρέμβαση σε Παιδιά με Νοητική Στέρηση Εκπαίδευση & Επιστήμη 1, (4ο). Ανακτήθηκε από: <https://eclass.uoa.gr/modules/document/file.php/PRIMEDU310/%CE%91%CE%BE%CE%B9%CE%BF%CE%BB%CF%8C%CE%B3%CE%B7%CF%83%CE%B7%20%CE%BA%CE%B1%CE%B9%20%CF%80%CE%B1%CF%81%CE%AD%CE%BC%CE%B2%CE%B1%CF%83%CE%B7%20%CF%83%CE%B5%20%CF%80%CE%B1%CE%B9%CE%B4%CE%B9%CE%AC%20%CE%BC%CE%B5%20%CE%9D%CE%BF%CE%B7%CF%84%CE%B9%CE%BA%CE%AE%20%CE%A3%CF%84%CE%AD%CF%81%CE%B7%CF%83%CE%B7.pdf>
- Κουρμπέτης, Β., Χατζοπούλου, Μ., Σαβαλίδου, Φ. & Σιμψά, Θ. (2007). Διαναπηρικός Οδηγός Επιμόρφωσης. Αθήνα: Πάντειο Πανεπιστήμιο Κοινωνικών και Πολιτικών Επιστημών.
- Altschiller, D. (2011). Animal-assisted therapy. Santa Barbara, Calif.: Greenwood. American Psychiatric Association. (2013). Διαγνωστικά Κριτήρια από DSM-5. (Κ. Γκοτζαμάνης, μετ.) Αθήνα: Ιατρικές Εκδόσεις Λίτσας.
- Anderson, D., & Brown, S. (2021). The effect of animal-assisted therapy on nursing student anxiety: A randomized control study. Nurse education in practice, 52, 103042. <https://doi.org/10.1016/j.nepr.2021.103042>
- Cole, M., & Howard, M. (2013). Animal-Assisted Therapy: Benefits and Challenges. Biotherapy - History, Principles and Practice, 233–253. doi:10.1007/978-94-007-6585-6_9
- De Morton, N. A. (2009). The PEDro scale is a valid measure of the methodological quality of clinical trials: a demographic study. Australian Journal of Physiotherapy, 55(2), 129–133. doi:10.1016/s0004-9514(09)70043-1
- Dimolareva, M., & Dunn, T. J. (2021). Animal-Assisted Interventions for School-Aged Children with Autism Spectrum Disorder: A Meta-Analysis. Journal of autism and developmental disorders, 51(7), 2436–2449. <https://doi.org/10.1007/s10803-020-04715-w>
- Doernberg, E., & Hollander, E. (2016). Neurodevelopmental Disorders (ASD and ADHD): DSM-5, ICD-10, and ICD-11. CNS spectrums, 21(4), 295–299. <https://doi.org/10.1017/S1092852916000262>

European Society of Animal Assisted Therapy, Animal Assisted Therapy. Διαθέσιμο στο δικτυακό τόπο: <https://www.en.esaat.org/definition-tiergestuetztertherapie/Qualitätsentwicklung und Qualitätssicherung in der Praxis tiergestützter Interventionen>>> Dr. Rainer Wohlfarth und Prof. (em.) Dr. Erhard Olbrich

Fine, A. (2010). Handbook on Animal-Assisted Therapy Foundations and Guidelines for Animal-Assisted Interventions. (4η έκδ.) USA: Elsevier.

Germone, M. M., Gabriels, R. L., Guérin, N. A., Pan, Z., Banks, T., & O'Haire, M. E. (2019). Animal-assisted activity improves social behaviors in psychiatrically hospitalized youth with autism. *Autism: the international journal of research and practice*, 23(7), 1740–1751. <https://doi.org/10.1177/1362361319827411>

Γενά, Α., & Μακρυγιάννη, Μ. (2017). Διάγνωση της Διαταραχής Αυτιστικού Φάσματος. Στην Α. Γενά (Επιμ. έκδ.), Συστημική, Συμπεριφορική-Αναλυτική Προσέγγιση. Αξιολόγηση, διάγνωση, εκπαίδευση, θεραπευτικές παρεμβάσεις και ένταξη παιδιών με Νευρο-Αναπτυξιακές Διαταραχές με έμφαση στη Διαταραχή Αυτιστικού Φάσματος (σελ. 40-114). Αθήνα: Gutenberg

Hardy, K. K., & Weston, R. N. (2019). Canine-Assisted Therapy for Children with Autism Spectrum Disorder: a Systematic Review. *Review Journal of Autism and Developmental Disorders*. DOI:10.1007/s40489-019-00188-5

Healy, S., Nacario, A., Braithwaite, R. E., & Hopper, C. (2018). The effect of physical activity interventions on youth with autism spectrum disorder: A meta-analysis. *Autism Research*, 11(6), 818–833. Doi:10.1002/aur.1955

Hill, J., Ziviani, J., Driscoll, C., Teoh, A. L., Chua, J. M., & Cawdell-Smith, J. (2020). Canine Assisted Occupational Therapy for Children on the Autism Spectrum: A Pilot Randomised Control Trial. *Journal of autism and developmental disorders*, 50(11), 4106–4120. <https://doi.org/10.1007/s10803-020-04483-7>

Hill, J., Ziviani, J., Driscoll, C., & Cawdell-Smith, J. (2018). Can Canine-Assisted Interventions Affect the Social Behaviours of Children on the Autism Spectrum? A Systematic Review. *Review Journal of Autism and Developmental Disorders*. DOI:10.1007/s40489-018-0151-7

Lauritsen, M. B. (2013). Autism spectrum disorders. *European Child & Adolescent Psychiatry*, 22(S1), 37–42. doi:10.1007/s00787-012-0359-5

Maber-Aleksandrowicz, S., Avent, C., & Hassiotis, A. (2016). A Systematic Review of Animal-Assisted Therapy on Psychosocial Outcomes in People with Intellectual Disability. *Research in developmental disabilities*, 49-50, 322–338.

<https://doi.org/10.1016/j.ridd.2015.12.005>

Μπαμπάτσικου, Γ. (2021). Γιατί η ζωοθεραπεία θεωρείται μία αποτελεσματική μέθοδος για παιδιά που αντιμετωπίζουν κάποιας μορφής αναπηρία, για να επιλύσουν ή να αποτρέψουν ψυχοκοινωνικές προκλήσεις;. Αδημοσίευτη Μεταπτυχιακή Διατριβή, Πανεπιστήμιο Αιγαίου, Ρόδος, Ελλάδα.

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O'Haire, M. E. (2013). Animal-assisted intervention for autism spectrum disorder: a systematic literature review. *Journal of autism and developmental disorders*, 43(7), 1606–1622. <https://doi.org/10.1007/s10803-012-1707-5>

Papazoglou, A., Jacobson, L. A., McCabe, M., Kaufmann, W., & Zabel, T. A. (2014). To ID or not to ID? Changes in classification rates of intellectual disability using DSM-5. *Intellectual and developmental disabilities*, 52(3), 165–174.

<https://doi.org/10.1352/1934-9556-52.3.165>

Πιαστόπουλος, Ε., Κατικαρίδης, Ε. & Ρίζος, Στ. (2019). Παρουσίαση του δομημένου εκπαιδευτικού προγράμματος TEACCH στη Μονάδα Αυτιστικού Ατόμου “Ελπίδα”: Ένα επιτυχημένο πείραμα.. Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης. 1. DOI: 1098. 10.12681/edusc.1782.

Prior, M., Roberts, J., Rodger, S., Williams, K., & Sutherland, R. (2011). A review of the research to identify the most effective models of practice in early intervention of children with autism spectrum disorders. Australian Government Department of Families, Community Services and Indigenous Affairs. DOI: 10.1037/e536872012-001

Rashikj Canevska, Olivera. (2020). Animal assisted therapy in children with disabilities. *The Annual of the Faculty of Philosophy in Skopje*. 73. 439-448. 10.37510/godzbo2073439rc. Ανακτήθηκε από: <http://hdl.handle.net/20.500.12188/9818>

Scorzato, I., Zaninotto, L., Romano, M., Menardi, C., Cavedon, L., Pegoraro, A., Socche, L., Zanetti, P., & Coppiello, D. (2017). Effects of Dog-Assisted Therapy on Communication and Basic Social Skills of Adults With Intellectual Disabilities: A Pilot Study. *Intellectual and developmental disabilities*, 55(3), 125–139. <https://doi.org/10.1352/1934-9556-55.3.125>

Schuck, S. E., Emmerson, N. A., Fine, A. H., & Lakes, K. D. (2015). Canine-assisted therapy for children with ADHD: preliminary findings from the positive assertive cooperative kids study. *Journal of attention disorders*, 19(2), 125–137. <https://doi.org/10.1177/1087054713502080>

Schuck, S.E., Johnson, H. L., Abdullah, M. M., Stehli, A., Fine, A. H., & Lakes, K. D. (2018). The Role of Animal Assisted Intervention on Improving Self-Esteem in Children With Attention Deficit/Hyperactivity Disorder. *Frontiers in pediatrics*, 6, 300. <https://doi.org/10.3389/fped.2018.00300>

Serpell, J. A. (2010). Animal-assisted interventions in historical perspective. *Handbook on Animal-Assisted Therapy*, 17–32. doi:10.1016/b978-0-12-381453-1.10002-9

Tanguay, P. E. (2011). Autism in DSM-5. *The American journal of psychiatry*, 168(11), 1142–1144. <https://doi.org/10.1176/appi.ajp.2011.11071024>

Wijker, C., Leontjevas, R., Spek, A., & Enders-Slegers, M. J. (2020). Effects of Dog Assisted Therapy for Adults with Autism Spectrum Disorder: An Exploratory Randomized Controlled Trial. *Journal of autism and developmental disorders*, 50(6), 2153–2163. <https://doi.org/10.1007/s10803-019-03971-9>

Wolan-Nieroda, A., Dudziak, J., Družbicki, M., Pniak, B., & Guzik, A. (2020). Effect of Dog-Assisted Therapy on Psychomotor Development of Children with Intellectual Disability. *Children (Basel, Switzerland)*, 8(1), 13. <https://doi.org/10.3390/children8010013>

Wohlfarth, R. & Olbrich, E. (2014). *Qualitätsentwicklung und Qualitätssicherung in der Praxis tiergestützter Interventionen*. Zürich: ESAAT und ISAAT.

Wolan-Nieroda, A., Dudziak, J., Družbicki, M., Pniak, B., & Guzik, A. (2020). Effect of Dog-Assisted Therapy on Psychomotor Development of Children with Intellectual Disability. *Children*, 8(1), 13. doi:10.3390/children8010013