

Πρόγραμμα Μεταπτυχιακών Σπουδών Εξειδίκευσης
του Τμήματος Ελληνικής Φιλολογίας του Δημοκριτείου Πανεπιστημίου Θράκης
σε συνεργασία με το
ΕΚΕΦΕ Δημόκριτος – Ινστιτούτο Πληροφορικής και Τηλεπικοινωνιών
με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της ένταξης»

**ΠΡΩΙΜΗ ΠΑΡΕΜΒΑΣΗ ΣΕ ΠΑΙΔΙΑ ΠΡΟΣΧΟΛΙΚΗΣ ΚΑΙ ΠΡΩΤΟΣΧΟΛΙΚΗΣ
ΗΛΙΚΙΑΣ (3 ΕΩΣ 7 ΕΤΩΝ) ΜΕ ΣΥΝΔΡΟΜΟ ΤΟΥ ΕΥΘΡΑΥΣΤΟΥ
ΧΡΩΜΟΣΩΜΑΤΟΣ X: ΜΙΑ ΒΙΒΛΙΟΓΡΑΦΙΚΗ ΑΝΑΣΚΟΠΗΣΗ ΤΟΥ ΠΕΔΙΟΥ**

**EARLY INTERVENTION IN PRESCHOOL AND PRIMARY SCHOOL CHILDREN (3 TO 7 YEARS OLD)
WITH FRAGILE X CHROMOSOME SYNDROME: A BIBLIOGRAPHY OVERVIEW**

Της Τρόκας Θεοδώρας

Μεταπτυχιακή διατριβή που υποβάλλεται
Στην τριμελή επιτροπή για την απόκτηση του μεταπτυχιακού τίτλου του
Προγράμματος Μεταπτυχιακών Σπουδών Εξειδίκευσης
Του Τ.Ε.Φ. – Δ.Π.Θ. σε συνεργασία με το Ε.Κ.Ε.Φ.Ε. Δημόκριτος – Ινστιτούτο
Πληροφορικής και Τηλεπικοινωνιών
Με τίτλο: «Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της Ένταξης»

Εγκεκριμένο από την τριμελή επιτροπή:

1^{ος} Επιβλέπων: ΑΛΕΥΡΙΑΔΟΥ ΑΝΑΣΤΑΣΙΑ, ΑΝΑΠΛΗΡΩΤΡΙΑ ΚΑΘΗΓΗΤΡΙΑ ΠΑΝΕΠΙΣΤΗΜΙΟ ΔΥΤΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ

2^{ος} Επιβλέπων: ΚΑΡΑΜΠΑΤΖΑΚΗ ΖΩΗ, ΣΥΝΕΡΓΑΖΟΜΕΝΗ ΕΡΕΥΝΗΤΡΙΑ Ι.Π.Τ.Ε.Κ.Ε.Φ.Ε. “ΔΗΜΟΚΡΙΤΟΣ”

3^{ος} Επιβλέπων: ΣΤΑΘΟΠΟΥΛΟΥ ΑΓΑΘΗ, ΣΥΝΕΡΓΑΤΙΔΑ ΕΡΕΥΝΗΤΡΙΑ Ι.Π.Τ.Ε.Κ.Ε.Φ.Ε. “ΔΗΜΟΚΡΙΤΟΣ”

Κομοτηνή/Αθήνα 2022

ΠΕΡΙΛΗΨΗ

Σκοπός της παρούσας εργασίας είναι η πραγματοποίηση μιας οριοθετημένης ανασκόπησης άρθρων, κύριο θέμα των οποίων είναι η πρώιμη παρέμβαση και η αξία που έχει αυτή στην εκπαιδευτική, και όχι μόνο, διαδικασία σε παιδιά προσχολικής και πρωτοσχολικής ηλικίας (3 έως 7 ετών) με σύνδρομο του εύθραυστου X χρωμοσώματος (FXS). Το FXS σχετίζεται με ένα ευρύ φάσμα γνωστικών, συναισθηματικών και συμπεριφορών δυσκολιών. Πραγματοποιήθηκε συστηματική ανασκόπηση της βιβλιογραφίας για τον εντοπισμό άρθρων που παρουσιάζουν δεδομένα σχετικά με την πρώιμη παρέμβαση σε παιδιά προσχολικής και πρωτοσχολικής ηλικίας (3 έως 7 ετών) με FXS μεταξύ των ετών 2000 και 2021. Η αναζήτηση έγινε στις ηλεκτρονικές βάσεις δεδομένων: JSTOR, PubMed, SCOPUS, PsycINFO & Education Resources Information Center (ERIC). Για την επιλογή των κατάλληλων κειμένων έγινε χρήση του εργαλείου Mendeley. Τα αποτελέσματα που παρουσιάζονται στην παρούσα εργασία είναι απόρροια μελέτης συνολικά 13 ερευνών. Οι παρεμβάσεις πραγματοποιήθηκαν κυρίως σε αγόρια, λόγω της συχνότητας που έχει το εν λόγω σύνδρομο ειδικά στους άρρενες και λιγότερο στα θήλεα. Στόχος των παρεμβάσεων ήταν η βελτίωση των γνωστικών και κοινωνικών ελλειμμάτων που εμφανίζουν οι συμμετέχοντες. Η πλειοψηφία των παρεμβάσεων έλαβαν χώρα στην οικία των συμμετεχόντων και, ως επί το πλείστων, αυτές υλοποιούνταν από τους γονείς των παιδιών. Οι περισσότερες παρεμβάσεις είχαν θετικά αποτελέσματα, κυρίως σε ό,τι αφορά τον κοινωνικό και τον συμπεριφορικό τομέα. Ένα βασικό, ίσως, συμπέρασμα που προέκυψε από τη συστηματική βιβλιογραφική ανασκόπηση είναι ότι τα άτομα με FXS παρουσιάζουν σημαντικές βελτιώσεις, όταν υπάρχει κάποια τροποποίηση στο περιβάλλον στο οποίο δραστηριοποιούνται.

ΛΕΞΕΙΣ - ΚΛΕΙΔΙΑ

Σύνδρομο Ευθραύστου Χρωμοσώματος X, Πρώιμη Παρέμβαση, Βιβλιογραφική Ανασκόπηση, Mendeley

ΒΙΒΛΙΟΓΡΑΦΙΑ

- Abbeduto, L., & Hagerman, R. J. (1997). Language and communication in fragile X syndrome. *Mental Retardation and Developmental Disabilities Research Reviews*, 3(4), 313-322.
- Adams, D., & Oliver, C. (2011). The expression and assessment of emotions and internal states in individuals with severe or profound intellectual disabilities. *Clinical Psychology Review*, 31(3), 293-306.
- Αλενριάδου Α. & Γκιαούρη Σ., (2009). *Γενετικά σύνδρομα νοητικής καθυστέρησης: Αναπτυξιακή και εκπαιδευτική προσέγγιση*. Θεσσαλονίκη: University Studio Press.
- American Association on Intellectual and Developmental Disabilities. (2002). *Mental Retardation: Definition, Classification and Systems of Supports*. Washington DC: American Association on Intellectual and Developmental Disabilities.
- American Association on Mental Retardation (AAMR) (2000). Ανακτήθηκε από: <http://www.AAMR.org>.
- American College of Medical Genetics (ACMG) (2016). Ανακτήθηκε από: <https://web.archive.org/web/20161012163824/>.
- American Psychiatric Association (APA) (1994). *Diagnostic and Statistical Manual of Mental Disorders, Fourth edition (DSMIV)*. Washington DC: American Psychiatric Association.
- Anastopoulos, A. D., Shelton, T. L., DuPaul, G. J., & Guevremont, D. C. (1993). Parent training for attention-deficit hyperactivity disorder: Its impact on parent functioning. *Journal of Abnormal Child Psychology*, 21(5), 581-596.
- Apa.org. (2021, Μάιος 15). Ανακτήθηκε από: <https://www.apa.org/about>.
- Arndt, R.E., MacLean, W.E., & Baumeister, A.A., (1988). Critique of sensory integration therapy and its application in mental retardation. *American Journal on Mental Retardation*, 92, 401-411.
- Badano, J.L., Mitsuma, N., Beales, P.L., Katsanis, N. (2006). The ciliopathies : An emerging class of human genetic disorders. *Annual Review of Genomics and Human Genetics*, 7, 125-148.

Bagni, C., Tassone, F., Neri, G., & Hagerman, R. (2012). Fragile X syndrome: Causes, diagnosis, mechanisms, and therapeutics. *The Journal of Clinical Investigation*, 122(12), 4314-4322.

Bailey Jr, D. B. (2004). Newborn screening for fragile X syndrome. *Mental Retardation and Developmental Disabilities Research Reviews*, 10(1), 3-10.

Bailey Jr, D. B., Sideris, J., Roberts, J., & Hatton, D. (2008). Child and genetic variables associated with maternal adaptation to fragile X syndrome: A multidimensional analysis. *American Journal of Medical Genetics Part A*, 146(6), 720-729.

Baraitser, M. & Winter, R.M. (1996). *London Dysmorphology Database*. New York: Oxford University Press.

Βάρβογλη Λ. (2005). *Tι συμβαίνει στο παιδί;* Νευροεξελικτικές διαταραχές της παιδικής και της εφηβικής ηλικίας. Αθήνα: Καστανιώτης.

Baroff, G.S. (1991). *Developmental Disabilities: Psychological Aspects*. Austin, Texas: Pro-Ed.

Batshaw, M.L. & Perret, Y.M. (1992). *Children with Disabilities: A Medical Primer* (3rd ed.). Baltimore: Brookes Publishing

Belmonte, M. K., & Bourgeron, T. (2006). Fragile X syndrome and autism at the intersection of genetic and neural networks. *Nature Neuroscience*, 9(10), 1221-1225.

Berry-Kravis, E., Raspa, M., Loggin-Hester, L., Bishop, E., Holiday, D., & Bailey Jr, D. B. (2010). Seizures in fragile X syndrome: characteristics and comorbid diagnoses. *American Journal on Intellectual and Developmental Disabilities*, 115(6), 461-472.

Bijou, S. W., & Werner, H. (1945). Language analysis in brain-injured and non-brain-injured mentally deficient children. *The Pedagogical Seminary and Journal of Genetic Psychology*, 66(2), 239-254.

Bhowmick, T., Mirrett, S., Reller, L. B., Price, C., Qi, C., Weinstein, M. P., & Kirn, T. J. (2013). Controlled multicenter evaluation of a bacteriophage-based method for rapid detection of staphylococcus aureus in positive blood cultures. *Journal of Clinical Microbiology*, 51(4), 1226-1230.

Braden, M. (2004). The effects of fragile X syndrome on learning. *Educating Children with Fragile X Syndrome*, 1, 55- 59.

Bregman, J. D. (1991). Current developments in the understanding of mental retardation. Part II: Psychopathology. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 861-872.

Brown, W.T., Jenkins, E.C., Cohen, I.L., Fisch, G. S., Wolf-Schein, E.G., Gross, A., Waterhouse, L., Fein, D., Mason-Brothers, A., Ritvo, E., Ruttenberg, B.A., Bentley, W., & Castells, S. (1986). Fragile X and autism. *American Journal on Medical Genetics*, 23, 341-352.

Budimirovic, D. B., & Kaufmann, W. E. (2011). What can we learn about autism from studying fragile X syndrome? *Developmental Neuroscience*, 33(5), 379–394.

Campbell, J. M., Ferguson, J. E., Herzinger, C. V., Jackson, J. N., & Marino, C. A. (2004). Combined descriptive and explanatory information improves peers' perceptions of autism. *Research in Developmental Disabilities*, 25(4), 321-339.

Centers for Disease Control and Prevention (2018). *Data and Statistics on Fragile X Syndrome*. Ανακτήθηκε από: <https://www.cdc.gov/ncbddd/FXS/data.html>.

Centers for Disease Control and Prevention (2017). *What is Fragile X Syndrome?* Ανακτήθηκε από: <https://www.cdc.gov/ncbddd/FXS/facts.html>.

Cogmed, J. M. (2015). D Cogmed Working Memory Training. *Behavioural Interventions to Remediate Learning Disorders: A Technical Report*, 20, 20–28.

Cohen, I.L., Fisch, G., Sudhalter, V., Wolf-Schein, Hanson, D., Hagerman, R., Jenkins, E.C., & Brown, W.T. (1988). Social gaze, social avoidance, and repetitive behavior in fragile X males: A controlled study. *American Journal of Mental Retardation*, 92, 436-446.

Cornish, K. M., Kogan, C. S., Li, L., Turk, J., Jacquemont, S., & Hagerman, R. J. (2009). Lifespan changes in working memory in fragile X premutation males. *Brain and Cognition*, 69(3), 551–558.

Cornish, K., Burack, J. A., Rahman, A., Munir, F., Russo, N., & Grant, C. (2005). Theory of mind deficits in children with fragile X syndrome. *Journal of Intellectual Disability Research*, 49(5), 372-378.

- Crawford, D. C., Acuna, J. M., & Sherman, S. L. (2001). FMR1 and the fragile X syndrome: Human genome epidemiology review. *Genetics in Medicine*, 3(5), 359–371.
- Croen, L.A., Grether, J.K., & Selvin, S. (2001). The epidemiology of mental retardation of unknown cause. *Pediatrics*, 107(6), 1-5.
- Crocker, J. (1997). The metabolic and molecular bases of inherited disease. *Molecular Pathology*, 50(5), 279.
- Daily, D.K., Ardinger, H.H., & Holmes, G.E. (2000). Identification and evaluation of mental retardation. *American Family Physician*, 61(4), 1059-1067.
- Danforth, J. S. (2000). The outcome of parent training using the behavior management flow chart with a mother and her twin boys with oppositional defiant disorder and attention-deficit hyperactivity disorder. *Child & Family Behavior Therapy*, 21(4), 59-80.
- Delange, F. (1994). The disorders induced by iodine deficiency. *Thyroid*, 4(1), 107-128.
- Dew-Hughes, D. (2003). Educational placement and provision. *Educating Children with Fragile X Syndrome*, 1, 13-20.
- Díez-Juan, M., Schneider, A., Phillips, T., Lozano, R., Tassone, F., Solomon, M., & Hagerman, R. J. (2014). Parent-delivered touchscreen intervention for children with fragile X syndrome. *Intractable & Rare Diseases Research*, 3(4), 166-177.
- Dimauro S, Moraes CT. (1993). Mitochondrial encephalomyopathies. *Archives of Neurology*, 50, 1197-1208.
- Dunlap, G., Carr, E. G., Homer, R. H., Koegel, R. L., Sailor, W., Clarke, S., et al. (2010). A descriptive, multiyear examination of positive behavior support. *Behavioral Disorders*, 35(4), 259–279.
- Durkin, M.S., Khan, N.Z., Davidson, L.L., Huq, S., Munir, S., Rasul, E., & Zaman, S.S. (2000). Prenatal and postnatal risk factors for mental retardation among children in Bangladesh. *American Journal of Epidemiology*, 152(11), 1024-1033.
- Dykens, E. M. (2000). Annotation: Psychopathology in children with intellectual disability. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 41(4), 407-417.

Dykens, E., Leckman, J., Paul, R., & Watson, M. (1988). Cognitive, behavioral and adaptive functioning in fragile X and non-fragile X retarded men. *Journal of Autism and Developmental Disorders*, 18, 41-52.

Elsevier.com (2021, Μάιος 10). Ανακτήθηκε από τον ιστότοπο:
<https://www.elsevier.com/solutions/scopus>.

Eric.ed.gov (2021, Μάιος 15). Ανακτήθηκε από τον ιστότοπο: <https://eric.ed.gov/?faq>.

Feldman, M. A., & Werner, S. E. (2002). Collateral effects of behavioral parent training on families of children with developmental disabilities and behavior disorders. *Behavioral Interventions: Theory & Practice in Residential & Community-Based Clinical Programs*, 17(2), 75-83.

Field, S., Martin, J., Miller, R., Ward, M., & Wehmeyer, M. (1998). Self-determination for persons with disabilities: A position statement of the division on career development and transition. *Career Development for Exceptional Individuals*, 21(2), 113-128.

Frankenburg, W.K., & Dodds, J.B. (1967). The Denver developmental screening test. *Journal of Pediatrics*, 71, 181- 191.

Frankenburg, W. K., Dodds, J., Archer, P., Shapiro, H., & Bresnick, B. (1992). The Denver II: A major revision and restandardization of the Denver developmental screening test. *Journal of Pediatrics*, 89(1), 91-97.

Frankenburg, W.K., Fandal, A.W., Sciarillo, W., & Burgess, D. (1981). The newly abbreviated and revised Denver developmental screening test. *Journal of Pediatrics*, 99, 995- 999.

Fryns, J.P., Jacobs, J., Kleczowska, A., & Van Den Berghe, H. (1984). The psychological profile of the fragile X syndrome. *Clinical Genetics*, 25, 131-134.

Gaitan, E., & Dunn, J.T. (1992). Epidemiology of iodine deficiency. *Trends in Endocrinology and Metabolism*, 3(5), 170-175.

Garber, K. B., Visootsak, J., & Warren, S. T. (2008). Fragile X syndrome. *European Journal of Human Genetics*, 16(6), 666-672.

Goldstein, S. R., & Cecil R. (1999). *Handbook of Neurodevelopmental and Genetic Disorders in Children*. New York: Guilford Press.

Gross, D., Fogg, L., & Tucker, S. (1995). The efficacy of parent training for promoting positive parent—toddler relationships. *Research in Nursing & Health*, 18(6), 489-499.

Hagerman, R. (2003). Physical and behavioural characteristics of fragile X syndrome. In *Educating Children with Fragile X Syndrome* (pp. 21-26).

Hagerman, R. J., & Hagerman, P. J. (2002). *Fragile X Syndrome: Diagnosis, Treatment, and Research*. Oxfordshire: Taylor & Francis.

Hagerman, R.J., Smith, A.C.M., & Mariner, R. (1983). Clinical features of the fragile X syndrome. *The fragile X Syndrome: Diagnosis, Biochemistry, and Intervention* (pp. 17-53).

Hall, S. S., Burns, D. D., Lightbody, A. A., & Reiss, A. L. (2008). Longitudinal changes in intellectual development in children with Fragile X syndrome. *Journal of Abnormal Child Psychology*, 36(6), 927-939.

Harris, J. C. (2006). Intellectual disability: Understanding its development, causes, classification, evaluation, and treatment. *Oxford University Press*.

Harper, P.S. (1993). *Practical Genetic Counselling*. Oxford: Butterwoth Heinemann.

Hauser, C. T., Kover, S. T., & Abbeduto, L. (2014). Maternal well-being and child behavior in families with fragile X syndrome. *Research in Developmental Disabilities*, 35(10), 2477-2486.

Hessl, D., Glaser, B., Dyer-Friedman, J., & Reiss, A. L. (2006). Social behavior and cortisol reactivity in children with fragile X syndrome. *Journal of Child Psychology and Psychiatry*, 47(6), 602-610.

Holmes, D.S. (1994). *Abnormal Psychology*. New York: Harper Collins.

Holmes, G.E., & Hassanein, R.S. (1988). Significance of minor abnormalities in children. *American Family Physician*, 38(3), 185-189.

Holsen, L. M., Dalton, K. M., Johnstone, T., & Davidson, R. J. (2008). Prefrontal social cognition network dysfunction underlying face encoding and social anxiety in fragile X syndrome. *NeuroImage*, 43(3), 592–604.

Kaufmann, W. (2008). Fragile X syndrome: Awareness coming of age. *Pediatric News*, 42(5), 32-33.

King, L. (1995). *Methods for reducing hypersensitivity to sensory stimulation in autistic individuals*. [CD-ROM] Denver: National Fragile X Foundation.

Kolevzon, A., Gross, R., & Reichenberg, A. (2007). Prenatal and prenatal risk factors for autism: A review and integration of findings. *Archives of Pediatric and Adolescent Medicine*, 161(4), 326-333.

Kreimeyer, K., Antia, S., Coyner, L., Eldredge, N., & Gupta, A. (1991). *Social Interaction Observation System: Project Interact*. Tucson: University of Arizona

Kronk, R., Dahl, R., & Noll, R. (2009). Caregiver reports of sleep problems on a convenience sample of children with fragile X syndrome. *American Journal on Intellectual and Developmental Disabilities*, 114(6), 383-392.

Kwok, H. W., Cui, Y., & Li, J. (2011). Perspectives of intellectual disability in the people's republic of China: Epidemiology, policy, services for children and adults. *Current Opinion in Psychiatry*, 24(5), 408-412.

Lamella, L., & Tincani, M. (2012). Brief wait time to increase response opportunity and correct responding of children with autism spectrum disorder who display challenging behavior. *Journal of Developmental & Physical Disabilities*, 24(6), 559–573.

Lau, C., Higgins, K., Gelfer, J., Hong, E., & Miller, S. (2005). The effects of teacher facilitation on the social interactions of young children during computer activities. *Topics in Early Childhood Special Education*, 25(4), 208–217.

Lee, A. W., Ventola, P., Budimirovic, D., Berry-Kravis, E., & Visootsak, J. (2018). Clinical development of targeted fragile X syndrome treatments: an industry perspective. *Brain Sciences*, 8(12), 214.

Leonard, H., & Xingyan Wen, X. (2002). The epidemiology of mental retardation: Challenges and opportunities in the new millennium. *Mental Retardation and Developmental Disabilities Research Reviews*, 8(3), 117-134.

Levitas, A. (1995). *Behavioral characteristics of the fragile X syndrome*. [CDROM] Denver: National Fragile X Foundation.

Μαλεγιανάκη, Α., Μεσσήνης, Λ., & Παπαθανασόπουλος, Π. (2012). *Κλινική παιδονευροψυχολογία*. Αθήνα: Gotsis.

Matson, J.L., & Sevin, J.A. (1994). Theories of dual diagnosis in mental retardation. *Journal of Consulting and Clinical Psychology*, 62(1), 6-16.

Mattei, J.F., Mattei, M.G., Aumeras, C., Auger, M., & Giraud, F. (1981). X-linked mental retardation with the fragile X: A study of 15 families. *Human Genetics*, 59, 281- 289.

Maulik, P. K., Mascarenhas, M. N., Mathers, C. D., Dua, T., & Saxena, S. (2011). Prevalence of intellectual disability: A meta-analysis of population-based studies. *Research in Developmental Disabilities*, 32(2), 419-436.

McKusick, V.A. (1994). *Mendelian Inheritance in Man. Catalogs of Human Genes and Genetic Disorders*. Baltimore: Johns Hopkins University Press.

McLennan, Y., Polussa, J., Tassone, F., & Hagerman, R. (2011). Fragile x syndrome. *Current Genomics*, 12(3), 216–224. <https://doi.org/10.2174/138920211795677886>.

McManus, M., Derby, K. M., & McLaughlin, T. F. (2003). An evaluation of an in-school and home based toilet training program for a child with fragile X syndrome. *International Journal of Special Education*, 18(1), 73–79.

McNeil, D.G. (2006). In raising the world's I.Q., the secret's in the salt. *New York Times*. Ανακτήθηκε από <https://www.nytimes.com>

Moser, H. G. (1995). A role for gene therapy in mental retardation. *Mental Retardation and Developmental Disabilities Research Reviews: Gene Therapy*, 1, 4-6.

Newell, K., Sanborn, B., & Hagerman, R. J. (1983). Speech and language dysfunction in the fragile X syndrome. *The Fragile X Syndrome: Diagnosis, Biochemistry, and Intervention*, 4(2), 175-200.

O'Gorman Hughes, C. A., & Carter, M. (2002). Toys and materials as setting events for the social interaction of preschool children with special needs. *Educational Psychology*, 22(4), 429–444.

Palmer, F.B., & Capute, A.J. (1994). Mental retardation. *Pediatric Review*, 15, 473-479.

Pampanos, A., Volaki, K., Kanavakis, E., Papandreou, O., Youroukos, S., Thomaidis, L., ... & Kitsiou-Tzeli, S. (2009). A substitution involving the NLGN4 gene associated with autistic behavior in the Greek population. *Genetic Testing and Molecular Biomarkers*, 13(5), 611-615.

Πανεπιστήμιο Κρήτης (2020). *Συνοπτικός Οδηγός Συγγραφής Συστηματικής Ανασκόπησης*.
Ανακτήθηκε από:

http://www.psychology.uoc.gr/wp-content/uploads/2020/09/odigos_systimaticon_anaskopiseon.pdf.

Peprah E. (2012). Fragile X syndrome: The FMR1 CGG repeat distribution among world populations. *Annals of Human Genetics*, 76(2), 178–191.

Piecuch, R.E., Leonard, C.H., Cooper, B.A. & Sehring, S.A. (1997). Outcome of extremely low birth weight infants (500 to 999 grams) over a 12-year period. *Pediatrics*, 100, 633-639.

Πολυχρονοπούλου, Σ. (2001). *Παιδιά και έφηβοι με ειδικές ανάγκες και δυνατότητες: Νοητική υστέρηση: Ψυχολογική, Κοινωνιολογική και παιδαγωγική προσέγγιση*. Αθήνα: Ατραπός.

Price, M. (2013). Defining mental disability. *The Disability Studies Reader*, 4, 292-299.

Raspa, M., Wheeler, A. C., & Riley, C. (2017). Public health literature review of fragile X syndrome. *Pediatrics*, 3, 153–171.

Reiss, S. (1994). *Handbook of Challenging Behavior: Mental Health Aspects of Mental Retardation*. Worthington, OH: IDS Publishing Corporation.

Roberts, J. E., Weisenfeld, L. A. H., Hatton, D. D., Heath, M., & Kaufmann, W. E. (2007). Social approach and autistic behavior in children with fragile X syndrome. *Journal of Autism and Developmental Disorders*, 37(9), 1748-1760.

Roberts, J., Martin, G. E., Moskowitz, L., Harris, A. A., Foreman, J., & Nelson, L. (2007). Discourse skills of boys with fragile X syndrome in comparison to boys with Down syndrome. *Journal of Speech, Language, and Hearing Research*, 50(2), 475-492.

Roizen, N. J., & Patterson, D. (2003). Down's syndrome. *The Lancet*, 361(9365), 1281-1289.

Rousseau, F., Rouillard, P., Morel, M. L., Khandjian, E. W., & Morgan, K. (1995). Prevalence of

carriers of premutation-size alleles of the FMR1 gene--and implications for the population genetics of the fragile X syndrome. *American Journal of Human Genetics*, 57(5), 1006- 1018.

Santoro, M.R., Bray, S.M. & Warren, S.T. (2012). Molecular mechanisms of fragile X syndrome: A twenty-year perspective. *Annual Review of Pathology*. 7(1), 219–245.

Σαϊπά, Π., Καραμπάτσου, Γ., Μπαλογιάννη, Θ., & Σκορδιαλός, Ε. (2020). Η χρήση της υποστηρικτικής τεχνολογίας σε άτομα με κινητικές αναπηρίες. *Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης*, 8, 925-936.

Schielitz, K. M., Wacker, D. P., Harding, J. W., Berg, W. K., Lee, J. F., Padilla Dalmau, Y. C., et al. (2011). Indirect effects of functional communication training on non-targeted disruptive behavior. *Journal of Behavioral Education*, 20(1), 15–32.

Schopmeyer, B. B., & Lowe, F. (1992). *The Fragile X Child*. San Diego, CA.: Singular Genomics.

Sherman, S. L., & Hunter, J. E. (2017). Epidemiology of fragile X syndrome: A systematic review and meta-analysis. *American Journal of Medical Genetics*, 164(7), 57-76.

Sherman, S. L., Curnow, E. C., Easley, C. A., Jin, P., Hukema, R. K., Tejada, M. I., Willemse, R., & Usdin, K. (2014). Use of model systems to understand the etiology of fragile X-associated primary ovarian insufficiency (FXPOI). *Journal of Neurodevelopmental Disorders*, 6(1), 26. <https://doi.org/10.1186/1866-1955-6-26>.

Smeltzer, S., Graff, R. B., Ahearn, W. H., & Libby, M. E. (2009). Effect of choice of task sequence on responding. *Research in Autism Spectrum Disorders*, 3(3), 734–742.

Spridigliozi, G.A. (1995). *Potential needs of school-aged children with fragile X syndrome* [CD-ROM]. Denver: National Fragile X Foundation.

Στασινός Δ. (2013). *Η ειδική εκπαίδευση: Για μια συμπεριληπτική ή ολική εκπαίδευση στο νέο-ψηφιακό σχολείο με ψηφιακούς πρωταθλητές*. 2020. Αθήνα: Παπαζήση.

Strømme, P., & Hagberg, G. (2007). Etiology in severe and mild mental retardation: A population-based study of Norwegian children. *Developmental Medicine & Child Neurology*, 42(2), 76-86.

Sudhalter V., Cohen, I.L., Silverman, W., & Wolf-Schein, E.,G. (1990). Conversational analyses of males with fragile X, Down syndrome, and autism: Comparison of the emergence of deviant

language. *American Journal of Mental Retardation*, 94, 431-441.

Sultana S.A.G., Lam-Po-Tang, T.R.L., Wright, F., Linderman, R., Purvis-Smith, S. (1995). Fragile X mental retardation in an Indonesian family. *Medical Journal of Indonesia*, 4, 17-19.

Symons, F.J., Byiers, B.J., Raspa, M., Bishop, E., & Bailey, D.B. Jr. (2010). Self-injurious behavior and fragile X syndrome: Findings from the national fragile X survey. *American Journal on Intellectual and Developmental Disabilities*, 115, 473-481.

Tincello, D. G., Owen, R. K., Slack, M. C., & Abrams, K. R. (2013). Validation of the Patient Global Impression scales for use in detrusor overactivity: Secondary analysis of the relax study. *An International Journal of Obstetrics & Gynaecology*, 120(2), 212-216.

Tonnsen, B. L., Grefer, M. L., Hatton, D. D., & Roberts, J. E. (2015). Developmental trajectories of attentional control in preschool males with fragile X syndrome. *Research in Developmental Disabilities*, 36, 62-71.

Tranfaglia, M. R. (2011). The psychiatric presentation of fragile x: Evolution of the diagnosis and treatment of the psychiatric comorbidities of fragile X syndrome. *Developmental Neuroscience*, 33(5), 337-348.

Turk, J. (2003). *Educating children with fragile X syndrome: A multi-professional view*. United Kingdom: Taylor & Francis.

Turner, G., Brookwell, R., Daniew, A., Selikowitz, M., & Zilibowitz, M. (1980). Heterozygous expression of X-linked mental retardation and the marker X: fra(X) (q27). *New England Journal of Medicine*, 303(12), 662-664.

Turner, G., Webb, T., Wake, S., & Robinson, H. (1996). Prevalence of fragile X syndrome. *American Journal of Medical Genetics*, 64(1), 196-197.

Valencia-Naranjo, N., & Robles-Bello, M. A. (2017). Learning potential and cognitive abilities in preschool boys with fragile X and Down syndrome. *Research in Developmental Disabilities*, 60, 153-161.

Vos, T., Barber, R. M., Bell, B., Bertozzi-Villa, A., Biryukov, S., Bolliger, I., ... & Brugha, T. S. (2015). Global, regional, and national incidence, prevalence, and years lived with disability for 301

acute and chronic diseases and injuries in 188 countries, 1990–2013: A systematic analysis for the global burden of disease study 2013. *The Lancet*, 386(9995), 743-800.

Wacker, D. P., Harding, J. W., & Berg, W. K. (2008). Evaluation of mand-reinforcer relations following long-term functional communication training. *Journal of Speech-Language Pathology & Applied Behavior Analysis*, 2(4), 25–35.

Weiskop, S., Richdale, A., & Matthews, J. (2005). Behavioural treatment to reduce sleep problems in children with autism or fragile X syndrome. *Developmental Medicine and Child Neurology*, 47(2), 94–104.

Wilder, D. A., Zonneveld, K., Harris, C., Marcus, A., & Reagan, R. (2007). Further analysis of antecedent interventions on preschoolers' compliance. *Journal of Applied Behavior Analysis*, 40(3), 535–539.

Will, E. A., Bishop, S. L., & Roberts, J. E. (2019). Developmental divergence: Motor trajectories in children with fragile X syndrome with and without co-occurring autism. *Journal of Neurodevelopmental Disorders*, 11(1), 1-10.

Wilson, P., Stackhouse, T., O'Connor, R., Scharfenaker, S., & Hagerman, R. (1994). *Issues and Strategies for Educating Children with Fragile X Syndrome*. Dillon, CO: Spectra.

Wolff, P.H., Gardner, J., Paccia, J., & Lappen, J. (1989). The greeting behavior of fragile X males. *American Journal on Mental Retardation*, 93, 406-411.

Wolf-Schein, E.G., Sudhalter, V., Cohen, I.L., Fisch, G.S., Hanson, D., Pfadt, A.G., Hagerman, R.J., Jenkins, E.C., & Brown, W.T. (1987). Speech-language and the fragile X syndrome: Initial findings. *Journal of the American Speech and Hearing Association*, 29, 35-38.

Zigler, E. & Hodapp, R. (1991). Behavioral functioning in individuals with mental retardation. *Annual Review of Psychology*, 42, 29-50.

Zigler, E. (1987). The definition and classification of mental retardation. *Upsala Journal of Medical Sciences*, 44, 9-18.

