'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

THE SYMBOLIC AND DIDACTIC PLAY OF CHILDREN IN THE AUTISM SPECTRUM

KIOUSI CHRISTINA

POSTGRADUATE THESIS

SUPERVISORY COMMITTEE

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2. ΖΩΗ ΚΑΡΑΜΠΑΤΖΑΚΗ

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3. ΑΘΑΝΑΣΙΟΣ ΒΕΡΔΗΣ

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Abstract

Play constitutes a distinctive feature of childhood. Its contribution to the different areas of a child's development is crucial. In children with Autism Spectrum Disorder (ASD), a neurodevelopmental disorder primarily characterized by deficits in social interaction, restricted interests and repeated behaviors, deficits regarding play skills are apparent. Their greatest deficit concerns symbolic or pretend play skills. The aims of the present review are the collection and critical analysis, first, of empirical studies aiming at improving symbolic play skills and, second, of interventions incorporating symbolic-didactic play to teach skills positively associated with symbolic play. The research question concerns whether positive changes in the deficits of children with autism can be achieved, through early interventions, in preschool or school settings. After systematic research, via the electronic search engine Google Scholar, empirical studies, from 2010 onwards, published in scientific peer-reviewed journals, were collected. The empirical studies were critically analyzed based on the quality indicators concerning sample characteristics, research design and intervention features, so that their effectiveness and the feasibility of their application can be determined. The studies that were finally collected only concern the application of interventions targeting the improvement of symbolic play skills. No studies were found, however, concerning the application of symbolic-didactic play as the sole independent variable for the instruction of other skills. Most interventions were applied on preschool children in special education settings. All studies report positive results on the increase of symbolic play. The critical analysis of their characteristics reveals certain limitations whatsoever. Nevertheless, the effort of applying interventions in natural settings with the involvement of the school staff is important. In the present review, reaching general conclusions is difficult owing to the limited number of studies. Despite the specific limitation, its contribution to highlighting the importance of conducting more research with more rigid methodological criteria and quality indicators is important, so that the application of related interventions in natural (pre)school settings could increase in number.

Keywords: autism, symbolic play, pretend play, interventions, (pre)school setting

REFERENCES

- American Psychiatric Association (APA). (1994). *Diagnostic and statistical manual of mental disorders*, (4th ed). Washington, DC: American Psychiatric Association.
- American Psychiatric Association (APA). (2013). *Diagnostic and statistical manual of mental disorders*, (5th ed). Arlington, VA: American Psychiatric Publishing.
- Anderson, B. M., Schnetz-Boutaud, N. C., Bartlett, J., Wotawa, A. M., Wright, H. H., Abramson, R. K.,...Haines, J. L. (2009). Examination of association of genes in the serotonin system to autism. *Neurogenetics*, *10*(3), 209-216. doi: 10.1007/s10048-009-0171-7
- Ashiabi, G. (2007). Play in the preschool classroom: Its socioemotional significance and the teacher's role in play. *Early Childhood Education Journal*, *35*(2), 199–207. doi: 10.1007/s10643-007-0165-8
- Barber, A. B., Saffo, R. W., Gilpin, A. T., Craft, L. D., & Goldstein, H. (2016). Peers as clinicians: Examining the impact of Stay Play Talk on social communication in young preschoolers with autism. *Journal of Communication Disorders*, *59*, 1-15. doi: 10.1016/j.jcomdis.2015.06.009
- Barnett, J. H. (2018). Three evidence-based strategies that support social skills and play among young children with autism spectrum disorders. *Early Childhood Education Journal*, *46*, 665-672.doi: 10.1007/s10643-018-0911-0
- Baron-Cohen, S. (1987). Autism and symbolic play. *British Journal of Developmental Psychology*, 5, 139-148.
- Baron-Cohen, S., Lombardo, M.V., Auyeung, B., Ashwin, E, Chakrabarti, B., & Knickmeyer, R. (2011). Why are autism spectrum conditions more prevalent in males? *PLoS Biology*, 9(6), e1001081. doi: 10.1371/journal.pbio.1001081
- Barton, E. E. (2015). Teaching generalized pretend play and related behaviors to young children with disabilities. *Exceptional Children*, *81*(4), 489–506.doi: 10.1177/0014402914563694
- Barton, E. E., & Wolery, M. (2008). Teaching pretend play to children with disabilities: A review of the literature. *Topics in Early Child Education*, *28*, 109–125. doi:10.1177/0271121408318799
- Barton, E. E., & Wolery, M. (2010). Training teachers to promote pretend play in young children with diasabilities. *Exceptional Children*, *77*(1), 85-106.
- Bernard-Opitz, V., Ing, S., & Kong, T. Y. (2004). Comparison of behavioral and natural play interventions for young children with autism. *Autism*, *8*(3), 319-333.
- Beyer, J., & Gammeltoft, L. (2000). Autism and play. London: Jessica Kingsley Publishers.

- Bozena, M. (2007). Exploratory play and cognitive activity. Scientific reflections for practitioners. In T. Jambor & J. Van Gills (eds), *Several perspectives on child's play* (pp. 79-103). Belgium, The Netherlands, U.S.A., England: Garant.
- Bratton, S. C., Ray, D., Rhine, T., & Jones, L. (2005). The efficacy of play therapy with children: A meta-analytic review of treatment outcomes. *Professional Psychology: Research and Practice*, *36*(4), 376-390.doi: 10.1037/0735-7028.36.4376
- Brownell, C. A., Ramani, G. B., & Zerwas, S. (2006). Becoming a social partner with peers: Cooperation and social understanding in one- and two-year-olds. *Child Development*, *77*(4), 803-821. doi: 10.1111/j.1467-8624.2006.00904.x
- Bruce, T. (1997). Adults and children developing play together. *European Early Childhood Education Research Journal*, *5*(1), 89-99.doi: 10.1080/135002939785208021
- Bruner, J. (1986). Play, thought, and language. *Prospects: Quarterly Review of Education* 16, 77–83.
- Buron, K. D., & Wolfberg, P. J. (2008). *Learners on the autism spectrum: Preparing highly qualified educators*. Shawnee, Kansas: Autism Asperger Publishing Company.
- Carpenter, M., Nagell, K., Tomasello, M., Moore, C., & Butterworth, G. (1998). *Social cognition, joint attention, and communicative competence from* 9 to 15 months of age. Chicago, IL: University of Chicago Press.
- Cattanach, A. (1994). *Play therapy: Where the sky meets the underworld*. London, England: Jessica Kingsley Publishers.
- Charman, T., & Baron-Cohen, S. (1997). Brief report: Prompted pretend play in autism. *Journal of Autism and Developmental Disorders*, *27*(3), 325-332.
- Charman, T., Swettenham, J., Baron-Cohen, S., Cox, A., Baird, G., & Drew, A. (1998). An experimental investigation of social-cognitive abilities in infants with autism: Clinical implications. *Infant Mental Health Journal*, *19*(2), 260–275.
- Children's Play Information Service. (2002). What is play? Ανακτήθηκε από: http://www.ncb.org.uk/ media /12482 4/no.3_what_is_play.pdf.
- Christie, J.F., & Roskos, K.A. (2006). Standards, Science, and the Role of Play in Early Literacy Education. In D.G. Singer, R.M. Golinkoff and K. Hirsh-Pasek (Eds.), *Play = Learning*. Oxford: Oxford University Press.
- Cohen, D. (1993). The development of play (2nd ed.). London, New York: Routledge.
- Colozzi, G. A., Ward, L. W., & Crotty, K. E. (2008). Comparison of simultaneous prompting procedure in 1:1 and small group instruction to teach play skills to preschool students with pervasive developmental disorder and developmental disabilities. *Education and Training in Developmental Disabilities*, 43(2), 226–248.

- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed). Upper Saddle River, N. J.: Pearson/Merrill-Prentice Hall.
- Copple, C., & Bredekamp, S. (2009). *Developmentally appropriate practice in early childhood programs: Serving children from birth though age 8.* Washington, DC: National Association for the Education of Young Children (NAEYC).
- Cunningham, H. (2005). *Children and childhood in western society since 1500*. Pearson Education.
- Denham, S. A., & Weissberg, R. P. (2004). Social emotional learning in early childhood: What we know and where to go from here. In M. Bloom & T. P. Gullotta (Eds.), *A blueprint for the promotion of prosocial behavior in early childhood* (pp. 13-50). New York, NY: Kluwer Academic.
- DeVries, R. (2006). Games with rules. In D.P. Fromberg and D. Bergen (Eds.), *Play from birth to twelve* (2nd ed.). Abingdon, Oxon: Routledge.
- Dykstra, J. R., Boyd, B. A., Watson, L. R., Crais, E. R., & Baranek, G. T. (2012). The impact of the Advancing Social-Communication and Play (ASAP) intervention on preschoolers with autism spectrum disorder. *Autism*, *16*(1), 27-44.
- English, K., Goldstein, H., Kaczmarek, L., & Shafer, K. (1996). "Buddy skills" for preschoolers. *Teaching Exceptional Children*, *28*(3), 62–66.doi: 10.1177/004005999602800313
- Erikson, E. H. (1963). *Childhood and Society* (2nd ed.). New York: Norton.
- Fein, D., Pennington, B., Markowitz, P., Braverman, M., & Waterhouse, L. (1986). Toward a neuropsychological model of infantile autism: Are the social defects primary? *Journal of American Academy of Child Psychiatry*, 25(2), 198-212.
- Fixsen, D. L., Blase, K. A., Duda, M. A., Naoom, S. F., & Van Dyke, M. (2010). Implementation of evidence-based treatments for children and adolescents: Research findings and their implications for the future. In J. R. Weisz & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 435-450). New York, NY, US: The Guilford Press.
- Fjortoft, I. (2004). Landscape as playscape: The effects of natural environments on children's play and motor development. *Children*, *Youth and Environments*, *14*(2), 21-44.
- Fletcher-Watson, S. (2014). A targeted review of computer-assisted learning for people with autism spectrum disorder: Towards a consistent methodology. *Reviewed Journal of Autism and Developmental Disorders*, *1*(2), 87-100.
- Fountain, C., Winter, A. S., & Bearman, P. S. (2012). Six developmental trajectories characterize children with autism. *Pediatrics*, *129*(5), e1112-e1120. doi: <u>10.1542/peds.2011-1601</u>
- Freud, A. (2003). Εισαγωγή στην τεχνική της ανάλυσης του παιδιού. (Γ. Ιωαννίδης, Μετάφρ.). Αθήνα: Ροές.
- Freud, S. (2005). Τέχνη και Ψυχανάλυση. (Κ. Μηλτιάδης, Μετάφρ.). Κοροντζής: Αθήνα.

- Frey, J. R., & Kaiser, A. P. (2011). The use of play expansions to increase the diversity and complexity of object play in young children with disabilities. *Topics in Early Childhood Special Education*, *31*(2), 99–111.doi: 10.1177/0271121410378758
- Ginsburg, K. R. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*, *119*(1), 182–191.doi: 10.1542/ peds.2006-2697.
- Golden, M. (1993). Children and childhood in classical Athens. JHU Press.
- Goodman, G., Reed, P., & Athey-Lloyd, L. (2015). Mentalization and play therapy processes between two therapists and a child with asperger's disorder. *International Journal of Play Therapy*, *24*(1), 13–29.doi:10.1037/a0038660
- Goods, K. S., Ishijima, E., Chang, Y-C., & Kasari, C. (2013). Preschool-based JASPER intervention in minimally verbal children with autism: Pilot RCT. *Journal of Autism and Developmental Disorders*, *43*(5), 1050-1056.doi: 10.1007/s10803-012-1644-3
- Gould, J. (1986). The Lowe and Costello Symbolic Play Test in socially impaired children. *Journal of Autism and Developmental Disorders*, *16*(2), 199–213.
- Gresham, F. M. (1984). Social skills and self-efficacy for exceptional children. *Exceptional Children*, *51*(3), 253–261.
- Groos, K. (1898). The Play of animals: A study of animal life and instinct. New York: Appleton.
- Guerney, B.G. & Stover, L. (1971). *Filial therapy: Final report on MH 18254-01*. University Park: Pennsylvania State University.
- Guerney, B.G., Jr. (1964). Filial therapy: Description and rationale. *Journal of Consulting Psychology*, 28(4), 303-310.
- Guralnick, M. J., Hammond, M. A., & Connor, R. T. (2006). Nonsocial play patterns of young children with communication disorders: Implications for behavioral adaptation. *Early Education and Development*, *17*(2), 204-228.
- Guralnick, M. J., Hammond, M. A., Connor, R. T., & Neville, B. (2006). Stability, change and correlates of the peer relationships of young children with mild developmental delays. *Child Development*, *77*(2), 312-324.doi: 10.1111/j.1467-8624.2006.00872.x
- Gutek, G. (1997). *Philosophical and ideological perspectives on education*. London: Allyn and Bacon.
- Hambidge, G., Jr. (1955). Therapeutic play techniques: Structured play therapy. *American Journal of Orthopsychiatry*, *25*(3), 601–617.doi: 10.1111/j.1939-0025.1955.tb00156.x
- Hatton, D. D., Sideris, J., Skinner, M., Mankowski, J., Bailey Jr, D. B., Roberts, J., & Mirrett, P. (2006). Autistic behavior in children with fragile X syndrome: Prevalence, stability, and the impact of FMRP. *American journal of medical genetics Part A*, *140*(17), 1804-1813.

- Hewes, J. (2007). The value of play in early learning: Towards a pedagogy. In T. Jambor & J. Van Gills (eds), *Several perspectives on child's play* (pp. 119-132). Belgium, The Netherlands, U.S.A., England: Garant.
- Hobson, R. P. (1991). What is autism? Psychiatric Clinics of North America, 14, 1-17
- Hoekstra, R. A, Happe, F., Baron-Cohen, S., & Ronald, A. (2010). Limited genetic covariance between autistic traits and intelligence: Findings from a longitudinal twin study. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, 153B(5), 994-1007. doi: 10.1002/ajmg.b.31066
- Horner, R. D. & Baer, D. M. (1978). Multiple-probe technique: A variation of the multiple baseline. *Journal of Applied Behavior Analysis*, *11*(1), 189-196. doi:10.1901/jaba.1978.11-189.
- Howlin, P., Magiati, I., & Charman, T. (2009). Systematic review of early intensive behavioral interventions with autism. *American Journal on Intellectual and Developmental Disabilities*, *114*(1), 23-41. doi: 10.1352/2009.114:23;nd41.
- Hu, X., Zheng, Q., & Lee, G. T. (2018). Using peer-mediated LEGO play intervention to improve social interactions for Chinese children with autism in an inclusive setting. *Journal of Autism and Developmental Disorders*, 48, 2444-2457. doi: 10.1007/s10803-018-3502-4
- Hundert, J., & Haughton, A. (1992). Promoting social interaction of children with disabilities in integrated preschools: A failure to generalize. *Exceptional Children*, 58, 311–320.
- Hyder, T. (2004). War, Conflict and Play. UK: The McGraw-Hill Companies.
- Jamison, K. R., Forston, L. D., & Stanton-Chapman, T. L. (2012). Encouraging social skill development through play in early childhood special education classrooms. *Young Exceptional Children*, *15*(2), 3-19.doi: 10.1177/1096250611435422
- Jarrold, C., Boucher, J., & Smith, P. (1993). Symbolic play in autism: A review. *Journal of Autism and Developmental Disorders*, 23(2), 281-307.
- Jarvis, P. (2010). 'Born to play': The biocultural roots of rough and tumble play, and its impact upon young children's learning and development. In P. Broadhead, J. Howard and E. Wood (Eds.), *Play and learning in the early years*. London: Sage.
- Jolley, R. P. (2010). Children and pictures. Chichester, UK: Wiley-Blackwell.
- Jung, S., & Sainato, D. M. (2013). Teaching play skills to young children with autism. *Journal of Intellectual & Developmental Disability*, *38*(1), 74–90. doi:10.3109/13668250.2012.732220.
- Kasari, C, & Lawton, K. (2010). New directions in behavioral treatment of autism spectrum disorders. *Current Opinion in Neurology*, *23*(2), 137-143. doi: 10.1097/WCO.0b013e32833775cd.
- Kasari, C., Gulsrud, A., Freeman, S., Paparella, T., Hellemann, G. (2012a). Longitudinal follow-up of children with autism receiving targeted interventions on joint attention and play. *Journal of*

- the American Academy of Child and Adolescent Psychiatry 51(5), 487–495. doi: 10.1016/j.jaac.2012.02.019
- Kasari, C., Paparella, T., Freeman, S., & Jahromi, L.B. (2008). Language outcome in autism: Randomized comparison of joint attention and play interventions. *Journal of Consulting and Clinical Psychology*, *76*(1), 125–137.doi: 10.1037/0022-006X.76.1.125.
- Kasari, C., Rotheram-Fuller, E., Locke, J., & Gulsrud, A. (2012b). Making the connection: Randomized controlled trial of social skills at school for children with autism spectrum disorders. *Journal of Child Psychology and Psychiatry*, *53*(4), 431-439. doi:10.1111/j.1469-7610.2011.02493.x.
- Kestly, T. A. (2014). *The interpersonal neurobiology of play: Brain-building interventions for emotional well-being*. New York, NY: Norton.
- Klein, Μ. (1977). Η ψυχανάλυση των παιδιών (Μ. Λώμη, Μετάφρ.). Αθήνα: Πύλη. (Το πρωτότυπο έργο εκδόθηκε το 1932).
- Kocovska, E., Fernell, E., Billstedt, E., Minnis, H., and Gillberg, C. (2012). Vitamin D and autism: Clinical review. *Research in Developmental Disabilities*, 33 (5), 1541-1550.
- Koegel, R. L., Werner, G. A., Vismara, L. A., & Koegel, L. K. (2005). The effectiveness of contextually supported play date interactions between children with autism and typically developing peers. *Research and Practice for Persons with Severe Disabilities*, *30*(2), 93–102. doi:10.2511/rpsd.30.2.93.
- Kossyvaki, L. & Papoudi, D. (2016). A Review of Play Interventions for Children with Autism at School. *International Journal of Disability, Development and Education*, *63*(1), 45-63. doi: 10.1080/1034912X.2015.1111303
- Krasnor, L. R., & Pepler, D. J. (1980). The study of children's play: Some suggested future directions. In K. H. Rubin (Ed.), *Children's play: New directions for child development* (pp. 85–95). San Francisco, CA: Jossey-Bass.
- Landreth, G. (2002). *Play therapy: The art of the relationship*. (2nd ed.). New York: Brunner-Routledge.
- Langer, S. K. (1942). *Philosophy in a new key: A study in the symbolism of reason, rite and art.* Cambridge, MA: Harvard University Press.
- Laushey, K. M., & Heflin, L. J. (2000). Enhancing social skills of kindergarten children with autism through the training of multiple peers as tutors. *Journal of Autism and Developmental Disorders*, 30(3), 183-193.doi: 10.1023/A:1005558101038
- Lazarus, M. (1883). *About the Attraction of Play.* Berlin: F. Dummler.
- Leslie, A. M. (1987). Pretense and representation: The origins of "theory of mind". *Psychological Review*, 94(4), 412-426.doi: 10.1037/0033-295X.94.4.412

- Levy, D. (1939). Trends in therapy. III: Release therapy. *American Journal of Orthopsychiatry*, 9(4), 713–736.
- Lewis, V., & Boucher, J. (1988). Spontaneous, instructed and elicited play in relatively able autistic children. *British Journal of Developmental Psychology*, *6*(4), 325–339.doi: 10.1111/j.2044-835X.1988.tb01105.x
- Lewis, V, & Boucher, J. (1995). Generativity in the play of young people with autism. *Journal of Autism and Developmental Disorders*, *25*(2), 105-121.doi: 10.1007/BF021178499
- Libby, S., Powell, S., Messer, D., & Jordan, R. (1998). Spontaneous play in children with autism: A reappraisal. *Journal of Autism and Developmental Disorders*, *28*(6), 487-497. doi:10.1023/A:1026095910558
- Lord, C., & Jones, R. M. (2012). Annual research review: Re-thinking the classification of autism spectrum disorders. *Journal of Child Psychology and Psychiatry*, *53*(5), 490–509. doi: 10.1111/j.1469-7610.2012.02547.x.
- Maurice, C. (Ed.). (1996). Behavioral interventions for young children with autism: A manual for parents and professionals. Austin, TX: Pro-Ed.
- McConnell, S. R. (2002). Interventions to facilitate social interaction for young children with autism: Review of available research and recommendations for educational intervention and future research. *Journal of Autism and Developmental Disorders*, 32(5), 351–372. doi:10.1023/A:1020537805154.
- Mcnamara, C. G., Tejero-Cantero, A, Trouche, S., Campo-Urriza, N., & Dupret, D. (2014). Dopaminergic neurons promote hippocampal reactivation and spatial memory persistence. *Nature Neuroscience*, *17*(12), 1658-1660. doi:10.1038/nn.3843
- Meire, J. (2007). Qualitative research on children's play: A review of recent literature. In T. Jambor & J. Van Gills (eds), *Several perspectives on child's play* (pp. 29-77). Belgium, The Netherlands, U.S.A., England: Garant.
- Meng-Chuan, L., Lombardo, M. V., & Baron-Cohen, S. (2014). Autism. *The Lancet*, 9920, 896–910.
- Miodovnik, A. (2011). Environmental neurotoxicants and developing brain. *Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine*, *78*(1), 58-77.
- Mitchell, R. W. (1991). Bateson's concept of "metacommunication" in play. *New Ideas in Psychology*, 9(1), 73-87.doi:10.1016/0732-118X(91)90042-K
- Montessori, M. (2000). *The Secret of Childhood*. (M. J. Costelloe, Trans.). New York: Random House USA Inc.
- Moore, C. (2007). Show me the theory! *British Journal of Developmental Psychology*, *25*(1), 39-43.doi: 10.1348/026151006X136946

- Movahedazarhouligh, S. (2018). Teaching play skills to children with disabilities: Research-based interventions and practices. *Early Childhood Education Journal*, *46*, 587-599.doi: 10.1007/s10643-018-0917-7
- Mundy, P., Sigman, M., Ungerer, J., & Sherman, T. (1987). Nonverbal communication and play correlates of language development in autistic children. *Journal of Autism and Developmental Disorders*, *17*(3), 349–364.doi: 10.1007/BF01487065
- Murdoch, J. D., & State, M. W. (2013). Recent developments in the genetics of autism spectrum disorders. *Current Opinion in Genetics and Development*, 23(3), 310–15. doi: 10.1016/j.gde.2013.02.003
- Nelson, C., McDonnell, A. P., Johnston, S. S., Crompton, A., & Nelson, A. R. (2007). Keys to play: A strategy to increase the social interactions of young children with autism and their typically developing peers. *Education and Training in Developmental Disabilities*, *42*(2), 165–181.
- Nelson, E. E. (2017). Learning through the ages: How the brain adapts to the social world across development. *Cognitive Development*, *42*, 84-94.doi:10.1016/j.cogdev.2017.02.01
- Neville, M., & Bachor, D. G. (2002). A script based symbolic play intervention for children with developmental delay. *Developmental Disabilities Bulletin*, *30*(2), 140–172.
- Nichols, S., & Stich, S. (2000). A cognitive theory of pretense. *Cognition*, *74*(2), 115–147.doi: 10.1016/S0010-0277(99)00070-0
- O'Connor, C., & Stagnitti, K. (2011). Play, behaviour, language and social skills: The comparison of a play and a non-play intervention within a specialist school setting. *Research in Developmental Disabilities*, 32, 1205-1211. doi:10.1016/j.ridd.2010.12.037
- Odom, S. L., & Strain, P. S. (1984). Peer-mediated approaches to promoting children's social interaction: A review. *American Journal of Orthopsychiatry*, *54*(4), 544–557. doi:10.1111/j.1939-0025.1984.tb01525.x
- Odom, S. L., McConnell, S. R., & Brown, W. H. (2008). Social competence of young children: Conceptualization, assessment, and influences. In W. H. Brown, S. L. Odom, & S. R. McConnell (Eds.), *Social competence of young children: Risk, disability, and intervention* (pp. 3-29). Baltimore, MD: Paul H. Brookes.
- Orme, N. (2001). Medieval Children. New Haven, CT: Yale University Press.
- Ospina, M. B., Seida, J. K., Clark, B., Karkhaneh, M., Hartling, L., Tjosvold, L.,...Smith, V. (2008). Behavioral and developmental interventions for autism spectrum disorder: A clinical systematic review. *PLos one*, *3*(11), e3755. doi: 10.1371/journal.pone.0003755
- Ozonoff, S., Pennington, B. E, & Rogers, S. J. (1991). Executive function deficits in high-functioning autistic individuals: Relationship to theory of mind. *Journal of Child Psychology and Psychiatry*, *32*(7), 1081-1105.doi:10.1111/j.1469-7610.1991.tb00351.x

- Panksepp, J. (2004). Affective neuroscience: The foundations of human and animal emotions. USA: Oxford University Press.
- Parten, M. B. (1932). Social participation among pre-school children. *Journal of Abnormal and Social Psychology*, *27*(3), 243-269.doi: <u>10.1037/h0074524</u>
- Patrick, G. T. W. (1916). The Psychology of Relaxation. Boston: Houghton Mifflin Company
- Pellegrini, A.D, & Smith, P.K. (1998). Physical activity play: The nature and function of a neglected aspect of play. *Child Development*, 69(3), 577-598.
- Pellegrini, A.D. (2009). The role of play in human development. Oxford: Oxford University Press.
- Piaget, J. (1962). Play, dreams and imitation in childhood. New York: Norton.
- Piaget, J. (1979). The origins of intelligence in children. New York: International University Press.
- Porter, J. (2015). Engaging with research. In P. Lacey, R. Ashdown, P. Jones, H. Lawson, & M. Pipe (Eds.), *The Routledge companion to severe, profound and multiple learning difficulties* (pp. 399–410). London: Routledge.
- Pound, L. (2010). Playing music. In J. Moyles (ed.), *The Excellence of Play*. Maidenhead, UK: Open University Press.
- Prizant, B. M., & Wetherby, A. M. (2005). Critical issues in enhancing communication abilities for persons with autism spectrum disorders. In F. Volkmar, R. Paul, A. Ktin & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (pp. 925–945). New York: Wiley.
- Provenzo, E. F. Jr. (2009). Friedrich Froebel's gifts: Connecting the spiritual and the aesthetic to the real world of play and learning. *American Journal of Play*, *2*(1), 85–99.
- Ray, D. C, & McCullough, R. (2015; revised 2016). Evidence-based practice statement: Play therapy (Research report). Retrieved from Association for Play Therapy website: http://www.a4pt.org/?page=EvidenceBased
- Reichow, B., Volkmar, F. R., & Cicchetti, D. V. (2008). Development of the evaluative method for evaluating and determining evidence-based practices in autism. *Journal of Autism and Developmental Disorders*, *38*(7), 1311–1319. doi:10.1007/s10803-007-0517-7
- Ricks, D. N., & Wing, L. (1975). Language, communication and symbols in normal and autistic children. *Journal of Autism and Childhood Schizophrenia*, *5*, 191-222.
- Ring, K. (2010). Supporting a playful approach to drawing. In P. Broadhead, J. Howard and E. Wood (Eds.), *Play and learning in the early years*. London: Sage.
- Roeyers, H. (1996). The influence of nonhandicapped peers on the social interactions of children with a pervasive developmental disorder. *Journal of Autism and Developmental Disorders*, *26*(3), 303–320.doi: 10.1007/BF02172476
- Roeyers, H., & van Berckelaer-Onnes, I. (1994). Play in autistic children. *Communication and Cognition*, *27*(3), 349-359.

- Rogers, S. J., & Pennington, B. F. (1991). A theoretical approach to the deficits in infantile autism. *Development and Psychopathology*, *3*(2), 137-162.
- Rotheram-Fuller, E., Kasari, C., Chamberlain, B., & Locke, J. (2010). Social involvement of children with autism spectrum disorders in elementary school classrooms. *Journal of Child Psychology and Psychiatry*, *51*(11), 1227–1234. doi:10.111 1/j.1469-7610.2010.02289 .x
- Rothwell, P. M. (2005). External validity of randomized controlled trials: "To whom do the results apply?" *The Lancet*, *365*(9453), 83-93.
- Russell, J., Mauthner, N., Sharpe, S., & Tidswell, T. (1991). The 'windows task' as a measure of strategic deception in preschoolers and autistic subjects. *British Journal of Developmental Psychology*, 9(2), 331-349.doi: 10.1111/j.2044-835X.1991.tb00881.x
- Sarachana, T., & Hu, V. W. (2013). Genome-wide identification of transcriptional targets of RORA reveals direct regulation of multiple genes associated with autism spectrum disorder. *Molecular Autism*, *4*(1), 14.doi: 10.1186/2040-2392-4-14
- Sarama, J., & Clements, D. H. (2009). Building blocks and cognitive building blocks: Playing to know the world mathematically. *American Journal of Play*, *1*(3), 313–337.
- Scarlett, W. G., Naudeau, S., Salonius-Pasternak, D., & Ponte, I. (2005). *Children's play*. Thousand Oaks, CA: SAGE.
- Schaefer, C. E., & Reid, S. E. (2001). *Game play: therapeutic use of childhood games*. John Wiley and Sons.
- Schertz, H. H., Baker, C., Hurwitz, S., & Benner, L. (2010). Principles of early intervention reflected in toddler research in autism spectrum disorders. *Topics in Early Childhood Special Education*, *31*(4), 4–21.doi: 10.1177/0271121410382460
- Shire, S. Y., Shih, W., Chang, Y.-C., & Kasari, C. (2018). Short play and communication evaluation: Teachers' assessment of core social communication and play skills with young children with autism. *Autism*, *22*(3), 299-310.doi: 10.1177/1362361316674092
- Shumway,. S, & Wetherby, A. M. (2009) Communicative acts of children with autism spectrum disorders in the second year of life. *Journal of Speech, Language, and Hearing Research*, *52*(5), 1139–1156. doi: 10.1044/1092-4388(2009/07-0280)
- Sigman, M., & Ruskin, E. (1999). Continuity and change in the social competence of children with autism, Down syndrome, and developmental delays. *Monographs of the Society for Research in Child Development*, *64*(1),1-114.doi:10.1111/1540-5834.00001
- Sigman, M., & Ungerer, J. A. (1981). Sensorimotor skills and language comprehension in autistic children. *Journal of Abnormal Child Psychology*, 9, 149-165.
- Sigman, M., & Ungerer, J. A. (1984). Cognitive and language skills in autistic, mentally retarded, and normal children. *Developmental Psychology*, *20*(2), 293–302.

- Singer, D. G., Golinkoff, R. M., & Hirsh-Pasek, K. (2006). *Play = learning: How play motivates and enhances children's cognitive and social-emotional growth.* New York, NY: Oxford University Press.
- Siraj-Blatchford, I. (2009). Conceptualising progression in the pedagogy of play and sustained shared thinking in early childhood education: A Vygotskian perspective. *Educational and Child Psychology*, *26*(2), 77-89.
- Spencer, H. (1873). *The Principles of Psychology*. New York: Appleton.
- Spencer, P. E. (1996). The association between language and symbolic play at two years: Evidence from deaf toddlers. *Child Development*, *67*, 867–876.
- Stahmer, A. C. (1995). Teaching symbolic play skills to children with autism using Pivotal Response Training. *Journal of Autism and Developmental Disorders*, *25*(2), 123–141.
- Stagnitti, K. (2009). Play intervention The Learn to Play Program. In K. Stagnitti & R. Cooper (Eds.), *Play as therapy: Assessment and therapeutic interventions* (pp. 176–186). London: Jessica Kingsley Publishers.
- Stagnitti, K., O'Connor, C., & Sheppard, L. (2012). Impact of the Learn to Play program on play, social competence and language for children aged 5-8 years who attend a specialist school. *Australian Occupational Therapy Journal*, 59, 302-311.doi: 10.1111/j. 1440-1630.2012.01018.x
- Stahmer, A. C., Ingersoll, B., & Carter, C. (2013). Behavioral approaches to promoting play. *Autism*, *7*(4), 401–413.doi: 10.1177/1362361303007004006
- Stainback, W., & Stainback, S. (1987). Facilitating friendships. *Education and Training in Mental Retardation*, *22*, 18–25.
- Stewart, A., Field, T., & Echterling, L. (2016). Neuroscience and the magic of play therapy. *International Journal of Play Therapy*, 25(1), 4-13.doi: 10.1037/pla0000016
- Stockall, N., Dennis, L. R., & Rueter, J. A. (2014). Play-based interventions for children with PDD. *Young Exceptional Children*, *17*(4), 3–14.doi:10.1177/1096250613 493192.
- Strain, P. S., Odom, S. L., & McConnell, S. (1984). Promoting social reciprocity of exceptional children: Identification, target behavior selection and intervention. *Remedial and Special Education*, *5*(1), 21–28.doi: 10.1177/074193258400500106
- Tanta, K. J., Deitz, J. C., White, O., & Billingsley, P. (2005). The effects of peer-play level on initiations and responses of preschool children with delayed play skills. *American Journal of Occupational Therapy*, 59, 437-445. doi:10.5014/ajot.59.4.437
- Tasevska, A. (2017). The issue of the didactic aspect of the activity of play. *European Journal of Social Sciences*. *Education and Research*, 11(2), 59-69.
- Thiemann-Bourque, K. S., Brady, N. C., & Fleming, K. K. (2012). Symbolic play of preschoolers with severe communication impairments with autism and other developmental delays: More

- similarities than differences. *Journal of Autism and Developmental Disabilities*, 42(5), 863-873. doi: 10.1007/s10803-011-1317-7.
- Toth, K., Munson, J., Meltzoff, A., & Dawson, G. (2006). Early predictors of communication development in young children with autism spectrum disorder: Joint attention, imitation and toy play. *Journal of Autism Developmental and Disorders*, *36*(8), 993-1005. doi: 10.1007/s10803-006-0137-7
- Trevarthen, C. T., Aitken, K. J., Papoudi, D., & Robarts, J. Z. (1998). *Children with autism: Diagnosis and intervention to meet their needs* (2nd ed.). London: Jessica Kingsley.
- Udwin, O., & Yule, W. (1982). Validational data on Lowe and Costello's Symbolic Play Test. *Child: Care, Health and Development,* 8(6), 361–366.
- Uren, N. & Stagnitti, K. (2009). Pretend play, social competence and involvement in children aged 5-7 years: The concurrent validity of the Child-Initiated Pretend Play Assessment. *Australian Occupational Therapy Journal*, 56, 33-44.
- Volkmar, F., Carter, A., Grossman, J., & Klin, A. (1997). Social development in autism. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (2nd ed., pp. 173–194). New York: Wiley.
- Vygotsky, L. S. (1978). *Mind in society. The development of higher psychological processes.* M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.). London: Harvard University Press.
- Warreyn, P., Roeyers, H., De Groote, I. (2005). Early social communicative behaviors of preschoolers with autism spectrum disorder during interaction with their mothers. *Autism*, *9*(4), 342–361.
- Weisberg, D. S., Zosh, J. M., Hirsh-Pasek, K., & Golinkoff, R. M. (2013). Talking it up: Play, language development, and the role of adult support. *American Journal of Play*, *6*(1), 39–54.
- Westby, C. (2013). 'The roots of literacy: Play and language.' Handout provided at the annual Speech, Language, and Hearing Association of Peterborough conference in Peterborough, Ontario.
- Westby, C. (2000). A scale for assessing development of children's play. In K. Gitlin-Weiner, A. Sandgrund, & C. Schaefer (Eds.), *Play diagnosis and assessment* (pp. 15–57). New York, NY: John Wiley & Sons.
- Whitebread, D., Basilio, M., Kuvalja, M., & Verma, M. (2012). The importance of play. Retrieved from http:// www.importanceofplay.eu/IMG/pdf/dr david whitebread the importance of play.pdf
- Williams, E., Reddy, V., & Costall, A. (2001). Taking a closer look at functional play in children with autism. *Journal of Autism and Developmental Disorders*, *31*(1), 67–77.

- Wilson, K., & Ryan, V. (2005). *Play therapy: A non-directive approach for children and adolescents*. Jordon Hill, Oxford: Elsevier Limited.
- Wing, L. (1997). Syndromes of autism and atypical development. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (2nd ed.). New York: Wiley.
- Winnicott, D. (1971). *Playing αnd reality*. London, New York: Routledge.
- Wolfberg, P. J. (1999). *Play and imagination in children with autism*. New York, NY: Teachers College Press.
- Wong, C. S. (2013). A play and joint attention intervention for teachers of young children with autism: A randomized controlled pilot study. *Autism*, *17*(3), 340-357.doi: 10.1177/1362361312474723
- Wong, C. S., & Kasari, C. (2012). Play and joint attention of children with autism in the preschool special education classroom. Journal of Autism and Developmental Disorders, 42, 2152–2161. doi:10.1007/s10803-012-1467-2
- World Health Organization (WHO). (1993). *The ICD-10 classification of mental and behavioral disorders:* Diagnostic criteria for research. Geneva, WHO.
- Zigler, E., & Hodapp, R. M. (1986). *The retarded child as a whole person*. In E. Zigler & R. M. Hodapp (Eds.), Understanding mental retardation. Cambridge: Cambridge University Press.
- Καραμπατζάκη, Ζ., & Σαρρής, Δ. (2014). Το διδακτικό παιχνίδι ως μέσον γνωστικής ανάπτυξης παιδιών με ήπιες δυσκολίες μάθησης ηλικίας 4-8 ετών. Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης, 2014, 517-525.
- Σμαραγδά-Τσιαντζή, Μ. (1995). Εφαρμοσμένη Παιδαγωγική στα παιδιά της Προσχολικής Ηλικίας. Αθήνα: Gutenberg.
- Χουρδάκης, Γ.Α. (1999). Θέματα από την ιστορία της παιδείας. Αθήνα: Γρηγόρης.