THE BEHAVIORAL PARENTING INTERVENTIONS (BPT) FOR SUPPORT AND MANDATORY INTEGRATIVE THERAPY FOR CHILDREN AND ADOLESCENTS AFFECTED BY DISRUPTIVE BEHAVIOURAL DISORDERS: A BRIEF REVIEW

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ABSTRACT

The behavioral parenting interventions (BPT), commonly abbreviated as parent training, is a program conducted by an expert with the specific purpose of improving or modifying parental practices in order to promote the child's well-being, increasing parenting skills in the daily management of the child , problem solving and reducing the level of parenting and family stress.

BPT presents many positive effects on children or adolescents affected by neurodevelopmental disorder such as ADHD, autism and cognitive dysfunction but BPT appears to improve also other proximal outcomes such as parenting competence and parenting stress

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Background

The behavioral parenting interventions (BPT), commonly abbreviated as parent training, is a program conducted by an expert with the specific purpose of improving or modifying parental practices in order to promote the child's well-being, increasing parenting skills in the daily management of the child , problem solving and reducing the level of parenting and family stress.

BPT presents many positive effects on children or adolescents affected by neurodevelopmental disorder such as ADHD, autism and cognitive dysfunction but BPT appears to improve also other proximal outcomes such as parenting competence and parenting stress[1-5].

Operative concepts and strategies

BPT is a highly structured and manualized intervention that takes place in a group setting aimed at parents of children with specific problems whose application is extended to various disorders and problems of the evolutionary age: generic educational problems, disorderly deficits Attention and hyperactivity, provocative oppositional disturbance, some internalizing and somatiform disorders, generalized developmental disorders, intellectual disability, and psychosocial in families with children at

risk of neglect or malnutrition. Parent training is organized into groups of 5 -6 pairs, which require the presence of both parents, chosen as a homogeneous criterion for the age of the child, allows for a more specific orientation of the type of interventions and to promote a more rapid cohesion of the group. Typically, the closed format is chosen, without any member replacing the treatment. Treatment times are established from the start, the number of sessions can vary from 10 to 20 meetings of 2 hours duration, carried out weekly or fortnightly.

Exclusion criteria for PT participation are primarily the presence of a psychopathological disorder in a parent (major depression or personality disorders) as this could hinder integration in the group or impair regular frequency, so a path is preferred Individual who follows the guidelines of parent training, secondly, the presence of high levels of marital discord, in which it is preferable to orient parents to a type of therapy that will allow them to process their difficulties. Parent training is considered to be the first choice for parents of children with disruptive behavior disorders, especially if associated with a child's psychotherapeutic intervention[6-20].

The main objective of parent training is to diminish the aspects of parenting that support the child's dysfunctional behaviors such as incoherent discipline, corporal punishment or lack of consequences. Parallel goals are to recognize the strengths and qualities of the child, often blurred by parents in problematic behaviors, increasing the time parents spend with their children doing pleasant and shared activities, and finally improving communication between family members by making them explicit and effective[21-24].

Meetings are structured starting from the explanation of cognitive-behavioral educational strategies, their inclusion in the child's daily context, and empirical verification by parents who will have to check whether there have been changes or not. The therapist must seek to build a solid therapeutic alliance in the early stages, based on a collaborative and parity relationship, sessions and predetermined goals that are shared and monitored; This also to avoid drop out, whose rates at the start of the course fluctuate between 25% and 50%.

The therapist, in his style of conduct, will have to make a positive contribution to the positive, even small, changes he sees in the parents, in such a way as to increase the likelihood that parents will use the positive reinforcement to their child[25-35].

Only after highlighting the positive changes in the sharing times with the group can you try to suggest, or rather, to make the group suggest some possible change. The therapist must be able to take advantage of it And the group setting, in the group, the parents share their difficulties with other people who are experiencing their own experience, feeling less solitary in dealing with a difficult situation, and if they feel a reassuring and non-judgmental climate they will feel free To speak openly. The therapist, while providing each one with the ability to express what they are experiencing, will have to be able to focus attention on issues that are relevant to the group (and not just to the individual) and which are among the common shared goals.

It is not infrequent to attribute styles from one or both parents who tend to impute negative intentions to the child's aggressive behaviors, such as wanting to get something, be bad. This attributive style, often linked to the presence of psychopathology or high levels of stress or mechanisms of defense from shame and guilt, leads the parent to set up a parent-based style of control and hard and punitive discipline that in turn reinforces aggressive behavior.

The parent, unaware of the strengthening of this circle, must therefore reflect on the fact that his attributive style influences his own emotional and behavioral reactions. Improving the ability to read correctly to interpret their children's behavior can provide parents with the opportunity to reduce emotional impact and adjust their behavior to respond properly to requests. To help parents in this task you may be asked to keep a diary of your child's behavior according to the ABC schema, and cognitive self-observation cards.

Another factor in amplifying and maintaining the behavioral disorder is the insecure attachment that brings the child into desperate searching, listening to his or her emotional needs and emotional safety. In this framework new educational modes may not work. It may therefore be useful to help parents acquire awareness of these dynamics and urge them to spend more time with their children, encouraging sharing, inserting prizes that foster interaction; "modeling" would also be helpful in helping parents monitor their emotional communication mode with their child.

Therefore, it is advisable to work first on the attribute style of the parent, which does not allow emotional access to the needs of the child obsessed with disadvantageous behaviors, and only later on

reading the needs of the child. Ultimately, an additional obstacle to emotional access can also be represented by critical experiences experienced by the parent during childhood that may unconsciously raise emotional behaviors and emotional responses that become dominant to the child[36-70]. If the adult has unsafe or traumatic childhood experiences and is unable to reflect on the influences that such experiences have on his current mental processes too much shifted on the reading of his child's needs, he may not be able to find the parent ready and become a drop-out element[71-75].

External dropouts may, however, be incompatible working hours, lack of a family support network and economic difficulties. Although the path of parent training has proved to be very effective in decreasing dysfunctional behavior predictive predictors of a poor response to a single parent training course are the female sex since it is more difficult to pinpoint symptoms early than the males in which they usually Is more explicit, and comorbidity with internalizing symptoms (mood swings, sleep-wake rhythms, depressive symptoms) that may be obscured by the outsourcing symptomatology[76-90].

Finally, it is interesting to observe the importance of the relationship between parenting styles and Callous-Unemotional (CU) personality traits; In particular the insensitivity to punishment, present in children with this personality trait, seems to be largely related to the development of inconsistent and aggressive parenting style. It also seems that rigid discipline or lack of control by parents are associated with an increase in CU traits. Also the response to parent training is reduced to children with Callou-Unemotional traits, especially in that part of the treatment based on negative reinforcement, while using positive reinforcement strategies appear equally sensitive to other subjects.

From this it can be assumed that for children with CU traits are more effective paths based more on the positive reinforcement r on the construction of a more stable leg Affecting the parent and child. In order to evaluate the effectiveness of the intervention, it may be useful to give quantitative questionnaires at the beginning and end of the intervention; Among the most commonly used are the Alabama Parenting Questionnaire, the Parenting Stress Index (referred to above), the Questionnaire on Parents' Responsibility (in its two versions for fathers and mothers) has been widely used for interesting indications that it can offer on the two dimensions of parental self-esteem: satisfaction and sense of self-efficacy in their role. Within the scope of the qualitative instruments, it may be useful to use Auto Carattering and Design. Autocarriage is a constructivist matrix tool that allows you to get a fairly articulated representation of how the parent perceives when describing it. This is not a static description, but a construction of the possible ways in which the person develops, what possibilities / limitations he feels in front of himself, and what are his peculiar ways of anticipating and reading the events[81-90]. The subject is asked to write to a third person a "sketch" of his "being parent".

Important information can also be drawn through the use of the drawing, asking the parent to draw as seen as a parent, not only through an interpretative interpretation of formal and content aspects, but also through methodologies that allow a systemic and quantitative reading of the signs[91-100].

References

1) Chieffi S, Carotenuto M, Monda V, Valenzano A, Villano I, Precenzano F, Tafuri D, Salerno M, Filippi N, Nuccio F, Ruberto M, De Luca V, Cipolloni L, Cibelli G, Mollica MP, Iacono D, Nigro E, Monda M, Messina G and Messina A. Orexin System: The Key for a Healthy Life. Front. Physiol. 2017, 8: 357. doi: 10.3389/fphys.2017.00357.
2) Pisano S, Catone G, Coppola G, Carotenuto M, Iuliano R, Tiano C, Montesanto AR, D'Esposito V, Miraglia EDG, Formisano P, Bravaccio C. Different Immune Signature in Youths Experiencing Antipsychotic-Induced Weight Gain Compared to Untreated Obese Patients. J Child Adolesc Psychopharmacol. 2017 Apr 28. doi: 10.1089/cap.2016.0203.
3) Chieffi S, Carotenuto M, Monda V, Valenzano A, Villano I, Precenzano F, Tafuri D, Salerno M, Filippi N, Nuccio F, Ruberto M, De Luca V, Cipolloni L, Cibelli G, Mollica MP, Iacono D, Nigro E, Monda M, Messina G and Messina A. Orexin System: The Key for a Healthy Life. Front. Physiol. 2017; 8: 357. doi: 10.3389/fphys.2017.00357.
4) Panico A, Messina G, Lupoli GA, Lupoli R, Cacciapuoti M, Moscatelli F, Esposito T, Villano I, Valenzano A, Monda V, Messina A, Precenzano F, Cibelli G, Monda M, Lupoli G. Quality of life in overweight (obese) and normal-weight women with polycystic ovary syndrome. Patient Prefer Adherence. 2017 Mar 2; 11: 423-429. doi: 10.2147/PPA.S119180.
5) Precenzano F, Ruberto M, Parisi L, Salerno M, Maltese A, Gallai B, Marotta R, Lavano SM, Lavano F, Roccella M. Visual-spatial training efficacy in children affected by migraine without aura: a multicenter study. Neuropsychiatr Dis Treat. 2017 Jan 27; 13: 253-258. doi: 10.2147/NDT.S119648.
6) Chieffi S, Messina G, Villano I, Messina A, Esposito M, Monda V, Valenzano A, Moscatelli F, Esposito T, Carotenuto M, Viggiano A, Cibelli G, Monda M. Exercise Influence on Hippocampal Function: Possible

Involvement of Orexin-A. Front Physiol. 2017 Feb 14; 8: 85. doi: 10.3389/fphys.2017.00085.

7) Verrotti A, Casciato S, Spalice A, Carotenuto M, Striano P, Parisi P, Zamponi N, Savasta S, Rinaldi VE, D'Alonzo R, Mecarini F, Ritaccio AJ, Di Gennaro G. Coexistence of childhood absence epilepsy and benign epilepsy with centrotemporal spikes: A case series. Eur J Paediatr Neurol. 2017 May; 21(3): 570-575. doi: 10.1016/j.ejpn.2017.02.002.

8) Villano I, Messina A, Valenzano A, Moscatelli F, Esposito T, Monda V, Esposito M, Precenzano F, Carotenuto M, Viggiano A, Chieffi S, Cibelli G, Monda M, Messina G. Basal Forebrain Cholinergic System and Orexin Neurons: Effects on Attention. Front Behav Neurosci. 2017 Jan 31; 11: 10. doi: 10.3389/fnbeh.2017.00010.

9) Toldo I, Rattin M, Perissinotto E, De Carlo D, Bolzonella B, Nosadini M, Rossi LN, Vecchio A, Simonati A, Carotenuto M, Scalas C, Sciruicchio V, Raieli V, Mazzotta G, Tozzi E, Valeriani M, Cianchetti C, Balottin U, Guidetti V, Sartori S, Battistella PA. Survey on treatments for primary headaches in 13 specialized juvenile Headache Centers: The first multicenter Italian study. Eur J Paediatr Neurol. 2017 May; 21(3): 507-521. doi: 10.1016/j.ejpn.2016.12.009.

10) Messina A, De Fusco C, Monda V, Esposito M, Moscatelli F, Valenzano A, Carotenuto M, Viggiano E, Chieffi S, De Luca V, Cibelli G, Monda M, Messina G. Role of the Orexin System on the Hypothalamus-Pituitary-Thyroid Axis. Front Neural Circuits. 2016 Aug 25; 10:66. doi: 10.3389/fncir.2016.00066.

11) Matricardi S, Spalice A, Salpietro V, Di Rosa G, Balistreri MC, Grosso S, Parisi P, Elia M, Striano P, Accorsi P, Cusmai R, Specchio N, Coppola G, Savasta S, Carotenuto M, Tozzi E, Ferrara P, Ruggieri M, Verrotti A. Epilepsy in the setting of full trisomy 18: A multicenter study on 18 affected children with and without structural brain abnormalities. Am J Med Genet C Semin Med Genet. 2016 Sep; 172(3): 288-95. doi: 10.1002/ajmg.c.31513.

12) Moscatelli F, Valenzano A, Petito A, Triggiani AI, Ciliberti MAP, Luongo L, Carotenuto M, Esposito M, Messina A, Monda V, Monda M, Capranica L, Messina G, Cibelli G. Relationship between blood lactate and cortical excitability between taekwondo athletes and non-athletes after hand-grip exercise. Somatosens Mot Res. 2016 Jun; 33(2): 137-44. doi: 10.1080/08990220.2016.1203305.

13) Carotenuto M, Esposito M, Cortese S, Laino D, Verrotti A. Children with developmental dyslexia showed greater sleep disturbances than controls including problems initiating and maintaining sleep. Acta Paediatr. 2016 Sep; 105(9): 1079-82. doi: 10.1111/apa.13472.

14) Franzoni E, Matricardi S, Di Pisa V, Capovilla G, Romeo A, Tozzi E, Pruna D, Salerno GG, Zamponi N, Accorsi P, Giordano L, Coppola G, Cerminara C, Curatolo P, Nicita F, Spalice A, Grosso S, Pavone P, Striano P, Parisi P, Boni A, Gobbi G, Carotenuto M, Esposito M, Cottone C, Verrotti A. Refractory absence seizures: An Italian multicenter retrospective study. Eur J Paediatr Neurol. 2015 Nov; 19(6): 660-4. doi: 10.1016/j.ejpn.2015.07.008.

15) Morandi A, Bonnefond A, Lobbens S, Carotenuto M, Del Giudice EM, Froguel P, Maffeis C. A girl with incomplete Prader-Willi syndrome and negative MSPCR, found to have mosaic maternal UPD-15 at SNP array. Am J Med Genet A. 2015 Nov; 167A(11): 2720- 6. doi: 10.1002/ajmg.a.37222.

16) Pasquali D, Carotenuto M, Leporati P, Esposito M, Antinolfi L, Esposito D, Accardo G, Carella C, Chiovato L, Rotondi M. Maternal hypothyroidism and subsequent neuropsychological outcome of the progeny: a family portrait. Endocrine. 2015 Dec; 50(3): 797-801. doi: 10.1007/s12020-015-0564-3.

17) Esposito M, Precenzano F, Sorrentino M, Avolio D, Carotenuto M. A Medical Food Formulation of Griffonia simplicifolia/Magnesium for Childhood Periodic Syndrome Therapy: An Open-Label Study on Motion Sickness. J Med Food. 2015 Aug; 18(8): 916-20. doi: 10.1089/jmf.2014.0113.

18) Esposito M, Gallai B, Roccella M, Marotta R, Lavano F, Lavano SM, Mazzotta G, Bove D, Sorrentino M, Precenzano F, Carotenuto M. Anxiety and depression levels in prepubertal obese children: a case-control study. Neuropsychiatr Dis Treat. 2014 Oct 3; 10: 1897-902. doi: 10.2147/NDT.S69795.

19) Verrotti A, Cusmai R, Laino D, Carotenuto M, Esposito M, Falsaperla R, Margari L, Rizzo R, Savasta S, Grosso S, Striano P, Belcastro V, Franzoni E, Curatolo P, Giordano L, Freri E, Matricardi S, Pruna D, Toldo I, Tozzi E, Lobefalo L, Operto F, Altobelli E, Chiarelli F, Spalice A. Long-term outcome of epilepsy in patients with Prader-Willi syndrome. J Neurol. 2015 Jan; 262(1): 116-23. doi: 10.1007/s00415-014-7542-1.

20) Verrotti A, Carotenuto M, Altieri L, Parisi P, Tozzi E, Belcastro V, Esposito M, Guastaferro N, Ciuti A, Mohn A, Chiarelli F, Agostinelli S. Migraine and obesity: metabolic parameters and response to a weight loss programme. Pediatr Obes. 2015 Jun; 10(3): 220-5. doi: 10.1111/ijpo.245.

21) Carotenuto M, Parisi P, Esposito M, Cortese S, Elia M. Sleep alterations in children with refractory epileptic encephalopathies: a polysomnographic study. Epilepsy Behav. 2014 Jun; 35: 50-3. doi: 10.1016/j.yebeh.2014.03.009.

22) Perillo L, Esposito M, Caprioglio A, Attanasio S, Santini AC, Carotenuto M. Orthodontic treatment need for adolescents in the Campania region: the malocclusion impact on self-concept. Patient Prefer Adherence. 2014 Mar 19; 8: 353-9. doi: 10.2147/PPA.S58971.

23) Santamaria F, Esposito M, Montella S, Cantone E, Mollica C, De Stefano S, Mirra V, Carotenuto M. Sleep disordered breathing and airway disease in primary ciliary dyskinesia. Respirology. 2014 May; 19(4): 570-5. doi: 10.1111/resp.12273.

24) Esposito M, Marotta R, Roccella M, Gallai B, Parisi L, Lavano SM, Carotenuto M. Pediatric neurofibromatosis 1 and parental stress: a multicenter study. Neuropsychiatr Dis Treat. 2014 Jan 22;10:141-6. doi: 10.2147/NDT.S55518.

25) Esposito M, Ruberto M, Gimigliano F, Marotta R, Gallai B, Parisi L, Lavano SM, Roccella M, Carotenuto M. Effectiveness and safety of Nintendo Wii Fit Plus™ training in children with migraine without aura: a preliminary study. Neuropsychiatr Dis Treat. 2013; 9: 1803-10. doi: 10.2147/NDT.S53853.

26) Carotenuto M, Esposito M, Di Pasquale F, De Stefano

S, Santamaria F. Psychological, cognitive and maternal stress assessment in children with primary ciliary dyskinesia. World J Pediatr. 2013 Nov; 9(4): 312-7. doi: 10.1007/s12519-013-0441-1.

27) Di Filippo T, Orlando MF, Concialdi G, La Grutta S, Lo Baido R, Epifanio MS, Esposito M, Carotenuto M, Parisi L, Roccella M. The quality of life in developing age children with celiac disease. Minerva Pediatr. 2013 Dec; 65(6): 599-608.

28) Esposito M, Parisi L, Gallai B, Marotta R, Di Dona A, Lavano SM, Roccella M, Carotenuto M. Attachment styles in children affected by migraine without aura. Neuropsychiatr Dis Treat. 2013; 9: 1513-9. doi: 10.2147/NDT.S52716.

29) Esposito M, Gimigliano F, Ruberto M, Marotta R, Gallai B, Parisi L, Lavano SM, Mazzotta G, Roccella M, Carotenuto M. Psychomotor approach in children affected by nonretentive fecal soiling (FNRFS): a new rehabilitative purpose. Neuropsychiatr Dis Treat. 2013; 9: 1433-41. doi: 10.2147/NDT.S51257.

30) Bellini B, Arruda M, Cescut A, Saulle C, Persico A, Carotenuto M, Gatta M, Nacinovich R, Piazza FP, Termine C, Tozzi E, Lucchese F, Guidetti V. Headache and comorbidity in children and adolescents. J Headache Pain. 2013 Sep 24; 14:79. doi:10.1186/1129-2377-14-79.

31) Esposito M, Roccella M, Gallai B, Parisi L, Lavano SM, Marotta R, Carotenuto M. Maternal personalità profile of children affected by migraine. Neuropsychiatr Dis Treat. 2013; 9: 1351-8. doi: 10.2147/NDT.S51554.

32) Perillo L, Esposito M, Contiello M, Lucchese A, Santini AC, Carotenuto M. Occlusal traits in developmental dyslexia: a preliminary study. Neuropsychiatr Dis Treat. 2013; 9: 1231-7. doi: 10.2147/NDT.S49985.

33) Esposito M, Marotta R, Gallai B, Parisi L, Patriciello G, Lavano SM, Mazzotta G, Roccella M, Carotenuto M. Temperamental characteristics in childhood migraine without aura: a multicenter study. Neuropsychiatr Dis Treat. 2013; 9: 1187-92. doi: 10.2147/NDT.S50458.

34) Esposito M, Antinolfi L, Gallai B, Parisi L, Roccella M, Marotta R, Lavano SM, Mazzotta G, Precenzano F, Carotenuto M. Executive dysfunction in children affected by obstructive sleep apnea syndrome: an observational study. Neuropsychiatr Dis Treat. 2013; 9: 1087-94. doi: 10.2147/NDT.S47287.

35) Esposito M, Gallai B, Parisi L, Castaldo L, Marotta R, Lavano SM, Mazzotta G, Roccella M, Carotenuto M. Self-concept evaluation and migraine without aura in childhood. Neuropsychiatr Dis Treat. 2013; 9: 1061-6. doi: 10.2147/NDT.S49364.

36) Esposito M, Gallai B, Parisi L, Roccella M, Marotta R, Lavano SM, Mazzotta G, Patriciello G, Precenzano F, Carotenuto M. Visuomotor competencies and primary monosymptomatic nocturnal enuresis in prepubertal aged children. Neuropsychiatr Dis Treat. 2013; 9: 921-6. doi: 10.2147/NDT.S46772.

37) Esposito M, Parisi P, Miano S, Carotenuto M. Migraine and periodic limb movement disorders in sleep in children: a preliminary case-control study. J Headache Pain. 2013 Jul 1; 14: 57. doi: 10.1186/1129-2377-14-57.

38) Gallelli L, Avenoso T, Falcone D, Palleria C, Peltrone F, Esposito M, De Sarro G, Carotenuto M, Guidetti V. Effects of acetaminophen and ibuprofen in children with migraine receiving preventive treatment with magnesium. Headache. 2014 Feb; 54(2): 313-24. doi: 10.1111/head.12162.

39) Carotenuto M, Gimigliano F, Fiordelisi G, Ruberto M, Esposito M. Positional abnormalities during sleep in children affected by obstructive sleep apnea syndrome: the putative role of kinetic muscular chains. Med Hypotheses. 2013 Aug; 81(2): 306-8. doi: 10.1016/j.mehy.2013.04.023.

40) Esposito M, Gallai B, Parisi L, Roccella M, Marotta R, Lavano SM, Mazzotta G, Carotenuto M. Primary nocturnal enuresis as a risk factor for sleep disorders: an observational questionnaire-based multicenter study. Neuropsychiatr Dis Treat. 2013; 9: 437-43. doi: 10.2147/NDT.S43673.

41) Carotenuto M, Esposito M. Nutraceuticals safety and efficacy in migraine without aura in a population of children affected by neurofibromatosis type I. Neurol Sci. 2013 Nov; 34(11):1905-9. doi: 10.1007/s10072-013-1403-z.

42) Esposito M, Carotenuto M. Intellectual disabilities and power spectra analysis during sleep: a new perspective on borderline intellectual functioning. J Intellect Disabil Res. 2014 May;58(5):421-9. doi: 10.1111/jir.12036.

43) Esposito M, Gallai B, Parisi L, Roccella M, Marotta R, Lavano SM, Gritti A, Mazzotta G, Carotenuto M. Maternal stress and childhood migraine: a new perspective on management. Neuropsychiatr Dis Treat. 2013;9: 351-5. doi: 10.2147/NDT.S42818.

44) Esposito M, Roccella M, Parisi L, Gallai B, Carotenuto M. Hypersomnia in children affected by migraine without aura: a questionnaire-based case-control study. Neuropsychiatr Dis Treat. 2013; 9: 289-94. doi: 10.2147/NDT.S42182.

45) Parisi L, Di Filippo T, La Grutta S, Lo Baido R, Epifanio MS, Esposito M, Carotenuto M, Roccella M. Sturge-weber syndrome: a report of 14 cases. Ment Illn. 2013 Jun 3; 5(1): e7. doi: 10.4081/mi.2013.e7.

46) Carotenuto M, Gallai B, Parisi L, Roccella M, Esposito M. Acupressure therapy for insomnia in adolescents: a polysomnographic study. Neuropsychiatr Dis Treat. 2013; 9: 157-62. doi: 10.2147/NDT.S41892.

47) Esposito M, Pascotto A, Gallai B, Parisi L, Roccella M, Marotta R, Lavano SM, Gritti A, Mazzotta G, Carotenuto M. Can headache impair intellectual abilities in children? An observational study. Neuropsychiatr Dis Treat. 2012; 8: 509-13. doi:10.2147/NDT.S36863.

48) Carotenuto M, Esposito M, Parisi L, Gallai B, Marotta R, Pascotto A, Roccella M. Depressive symptoms and childhood sleep apnea syndrome. Neuropsychiatr Dis Treat. 2012; 8: 369-73. doi: 10.2147/NDT.S35974.

49) Esposito M, Verrotti A, Gimigliano F, Ruberto M, Agostinelli S, Scuccimarra G, Pascotto A, Carotenuto M. Motor coordination impairment and migraine in children: a new comorbidity? Eur J Pediatr. 2012 Nov;171(11): 1599-604. doi: 10.1007/s00431-012-1759-8.

50) Verrotti A, Agostinelli S, D'Egidio C, Di Fonzo A, Carotenuto M, Parisi P, Esposito M, Tozzi E, Belcastro V, Mohn A, Battistella PA. Impact of a weight loss pro-

gram on migraine in obese adolescents. Eur J Neurol. 2013 Feb; 20(2): 394-7. doi: 10.1111/j.1468-1331.2012.03771.x.

51) Elia M, Amato C, Bottitta M, Grillo L, Calabrese G, Esposito M, Carotenuto M. An atypical patient with Cowden syndrome and PTEN gene mutation presenting with cortical malformation and focal epilepsy. Brain Dev. 2012 Nov; 34(10): 873-6. doi: 10.1016/j.braindev.2012.03.005.

52) Esposito M, Ruberto M, Pascotto A, Carotenuto M. Nutraceutical preparations in childhood migraine prophylaxis: effects on headache outcomes including disability and behaviour. Neurol Sci. 2012 Dec; 33(6): 1365-8. doi: 10.1007/s10072-012-1019-8.

53) Carotenuto M, Esposito M, D'Aniello A, Rippa CD, Precenzano F, Pascotto A, Bravaccio C, Elia M. Polysomnographic findings in Rett syndrome: a case control study. Sleep Breath. 2013 Mar; 17(1): 93-8. doi: 10.1007/s11325-012-0654-x. Epub 2012 Mar 7; Erratum in: Sleep Breath. 2013 May; 17(2): 877-8.

54) Guzzetta A, D'Acunto MG, Carotenuto M, Berardi N, Bancale A, Biagioni E, Boldrini A, Ghirri P, Maffei L, Cioni G. The effects of preterm infant massage on brain electrical activity. Dev Med Child Neurol. 2011 Sep;53 Suppl 4:46-51. doi: 10.1111/j.1469-8749.2011.04065.x;

55) Carotenuto M, Esposito M, Precenzano F, Castaldo L, Roccella M. Cosleeping in childhood migraine. Minerva Pediatr. 2011 Apr; 63(2): 105-9.

56) Esposito M, Carotenuto M, Roccella M. Primary nocturnal enuresis and learning disability. Minerva Pediatr. 2011 Apr; 63(2): 99-104.

57) Esposito M, Carotenuto M. Ginkgolide B complex efficacy for brief prophylaxis of migraine in school-aged children: an open-label study. Neurol Sci. 2011 Feb; 32(1): 79-81. doi: 10.1007/s10072-010-0411-5.

58) Esposito M, Carotenuto M. Borderline intellectual functioning and sleep: the role of cyclic alternating pattern. Neurosci Lett. 2010 Nov 19; 485(2): 89-93. doi: 10.1016/j.neulet.2010.08.062.

59) Carotenuto M, Esposito M, Pascotto A. Facial patterns and primary nocturnal enuresis in children. Sleep Breath. 2011 May; 15(2): 221-7. doi: 10.1007/s11325-010-0388-6.

60) Guzzetta A, Pizzardi A, Belmonti V, Boldrini A, Carotenuto M, D'Acunto G, Ferrari F, Fiori S, Gallo C, Ghirri P, Mercuri E, Romeo D, Roversi MF, Cioni G. Hand movements at 3 months predict later emiplegia in term infants with neonatal cerebral infarction. Dev Med Child Neurol. 2010 Aug; 52(8): 767-72. doi: 10.1111/j.1469-8749.2009.03497.x.

61) Carotenuto M, Santoro N, Grandone A, Santoro E, Pascotto C, Pascotto A, Perrone L, del Giudice EM. The insulin gene variable number of tandem repeats (INS VNTR) genotype and sleep disordered breathing in childhood obesity. J Endocrinol Invest. 2009 Oct; 32(9): 752-5. doi: 10.3275/6398.

62) Elia M, Falco M, Ferri R, Spalletta A, Bottitta M, Calabrese G, Carotenuto M, Musumeci SA, Lo Giudice M, Fichera M. CDKL5 mutations in boys with severe encephalopathy and early-onset intractable epilepsy. Neurology. 2008 Sep 23; 71(13): 997-9. doi:10.1212/01.wnl.0000326592.37105.88.

63) Carotenuto M, Bruni O, Santoro N, Del Giudice EM, Perrone L, Pascotto A. Waist circumference predicts the occurrence of sleep-disordered breathing in obese children and adolescents: a questionnaire-based study. Sleep Med. 2006 Jun; 7(4):357-61.

64) Carotenuto M, Guidetti V, Ruju F, Galli F, Tagliente FR, Pascotto A. Headache disorders as risk factors for sleep disturbances in school aged children. J Headache Pain. 2005 Sep; 6(4): 268-70.

65) Coppola G, Auricchio G, Federico R, Carotenuto M, Pascotto A. Lamotrigine versus valproic acid as first-line monotherapy in newly diagnosed typical absence seizures: an open-label, randomized, parallel-group study. Epilepsia. 2004 Sep;45(9): 1049-53.

66) Coppola G, Licciardi F, Sciscio N, Russo F, Carotenuto M, Pascotto A. Lamotrigine as first-line drug in childhood absence epilepsy: a clinical and neurophysiological study. Brain Dev. 2004 Jan; 26(1): 26-9.

67) Capovilla G, Beccaria F, Montagnini A, Cusmai R, Franzoni E, Moscano F, Coppola G, Carotenuto M, Gobbi G, Seri S, Nabbout R, Vigevano F. Short-term nonhormonal and nonsteroid treatment in West syndrome. Epilepsia. 2003 Aug; 44(8): 1085-867.

68) Precenzano F, Ruberto M, Parisi L, Salerno M, Maltese A, Vagliano C, Messina G, Di Folco A, Di Filippo T, Roccella M. Executive functioning in preschool children affected by autism spectrum disorder: a pilot study. Acta Medica Mediterranea, 2017, 33: 35-39; DOI: 10.19193/0393-6384_2017_1_005; Precenzano F, Lombardi P, Ruberto M, Parisi L, Salerno M, Maltese A, D'alessandro I, Della Valle I, Magliulo RM, Messina G, Roccella M. Internalizing symptoms in children affected by childhood absence epilepsy: a preliminary study. Acta Medica Mediterranea, 2016, 32: 1749-1753; DOI: 10.19193/0393-6384_2016_6_158.

69) Precenzano F, Ruberto M, Parisi L, Salerno M, Maltese A, D'alessandro I, Grappa MF, Magliulo RM, Messina G, Roccella M. Borderline intellectual functioning and parental stress: an italian case-control study. Acta Medica Mediterranea, 2016, 32: 1761-1765; DOI: 10.19193/0393-6384_2016_6_160.

70) Ruberto M, Precenzano F, Parisi L, Salerno M, Maltese A, Messina G, Roccella M. Visuomotor integration skills in children affected by obstructive sleep apnea syndrome: a case-control study. Acta Medica Mediterranea, 2016, 32: 1659; DOI: 10.19193/0393-6384_2016_5_146.

71) Parisi L, Ruberto M, Precenzano F, Di Filippo T, Russotto C, Maltese A, Salerno M, Roccella M. The quality of life in children with cerebral palsy. Acta Medica Mediterranea, 2016, 32: 1665; DOI: 10.19193/0393-6384_2016_5_147; Epifanio, M.S., Genna, V., De Luca, C., Roccella, M., La Grutta, S. Paternal and maternal transition to parenthood. The risk of postpartum depression and parenting stress. 2015 Pediatric Reports, 7 (2), pp. 38-44.

72) Parisi, L., Di Filippo, T., Roccella, M. The child with Autism Spectrum Disorders (ASDS): Behavioral and neurobiological aspects. Acta Medica Mediterranea, 2015, 31 (6), pp. 1187-1194.

73) Vecchio D, Salzano E, Vecchio A, Di Filippo T, Roccella, M. A case of femoral-facial syndrome in a patient with autism spectrum disorders. Minerva Pediatrica, 2011, 63 (4), pp. 341-344.

74) Parisi, L., Di Filippo, T., Roccella, M. Hypomelanosis of Ito: Neurological and psychiatric pictures in devel-

opmental age. Minerva Pediatrica, 2012, 64 (1), pp. 65-70.

75) Di Filippo, T., Parisi, L., Roccella, M. Psychological aspects in children affected by Duchenne de Boulogne muscular dystrophy. Mental Illness, 2012, 4 (1), pp. 21-24.

76) Epifanio MS, Genna V, Vitello MG, Roccella M, La Grutta S. Parenting stress and impact of illness in parents of children with coeliac disease. Pediatr Rep. 2013 Dec 19; 5(4): e19. doi: 10.4081/pr.2013.e19.

77) Precenzano F, Ruberto M, Parisi L, Salerno M, Maltese A, D'alessandro I, Della Valle I, Visco G, Magliulo RM, Messina G, Roccella M. ADHD-like symptoms in children affected by obstructive sleep apnea syndrome: case-control study. Acta Medica Mediterranea, 2016, 32: 1755-1759; DOI: 10.19193/0393-6384_2016_6_159.

78) Parisi L, Salerno M, Maltese A, Tripi G, Romano P , Di Folco A, Di Filippo T, Roccella M. Anxiety levels in mothers of children affected by X-fragile syndrome. Acta Medica Mediterranea, 2017, 33: 495; DOI: 10.19193/0393-6384_2017_3_074.

79) Parisi L, Salerno M, Maltese A, Tripi G, Romano P , Di Folco A, Di Filippo T, Roccella M. Autonomic regulation in autism spectrum disorders. Acta Medica Mediterranea, 2017, 33: 491; DOI: 10.19193/0393-6384_2017_3_073.

80) Parisi L, Salerno M, Maltese A, Tripi G, Romano P, Di Folco A, Di Filippo T, Messina G, Roccella M. Emotional intelligence and obstructive sleep apnea syndrome in children: preliminary case-control study. Acta Medica Mediterranea, 2017, 33: 485; DOI: 10.19193/0393-6384_2017_3_072.

81) Parisi L, Salerno M, Maltese A, Tripi G, Romano P, Di Folco A, Di Filippo T, Roccella M. Paternal shift-working and sleep disorders in children affected by primary nocturnal enuresis. Acta Medica Mediterranea, 2017, 33: 481; DOI: 10.19193/0393-6384_2017_3_071.

82) Moscatelli F, Valenzano A, Monda V, Ruberto M, Monda G, Triggiani AI, Monda E, Chieffi S, Villano I, Parisi L, Roccella M, Messina A. Transcranial Magnetic Stimulation (TMS) application in sport medicine: A brief review. Acta Medica Mediterranea, 2017, 33: 423; Doi: 10.19193/0393-6384_2017_3_062;

83) Parisi L, Faraldo Ma, Ruberto M, Salerno M, Maltese A, Di Folco A, Messina G, Di Filippo T, Roccella M. Life events and primary monosymptomatic nocturnal enuresis: a pediatric pilot study. Acta Medica Mediterranea, 2017, 33: 23; DOI: 10.19193/0393-6384_2017_1_003.

84) Precenzano F, Ruberto M, Parisi L, Salerno M, Maltese A, Verde D, Tripi G, Romano P, Di Folco A, Di Filippo T, Messina G, Roccella M. Sleep habits in children affected by autism spectrum disorders: a preliminary case-control study. Acta Medica Mediterranea, 2017, 33: 405; DOI: 10.19193/0393-6384_2017_3_059.

85) Parisi L, Fortunato MR, Salerno M, Maltese A, Di Folco A, Di Filippo T, Roccella M. Sensory perception in preschool children affected by autism spectrum disorder: A pilot study. Acta Medica Mediterranea, 2017, 33: 49; DOI: 10.19193/0393-6384_2017_1_007.

86) Maltese A, Salerno M, Tripi G, Romano P, Ricciardi A, Di Folco A, Di Filippo T, Parisi L. The Angelman Syndrome: A Brief Review. Acta Medica Mediterranea, 2017, 33: 667; DOI: 10.19193/0393-6384_2017_4_100.

87) Salerno M, Maltese A, Tripi G, Romano P, Di Folco A, Di Filippo T. Separaxion anxiety in pediatric migraine without aura: A Pilot Study. Acta Medica Mediterranea, 2017, 33: 621; DOI: 10.19193/0393-6384_2017_4_092.

88) Maltese A, Salerno M, Tripi G, Romano P, Ricciardi A, Sessa G, Di Folco A, Di Filippo T, Parisi L. Rehabilitative treatment proposals in pediatric non-verbal syndrome. Acta Medica Mediterranea, 2017, 33: 675; DOI: 10.19193/0393-6384_2017_4_101.

89) Monda V, Nigro E, Ruberto M, Monda G, Valenzano A, Triggiani Ai, Moscatelli F, Monda E, Villano I, Roccella M, Parisi L, Messina A. Synergism or competition between zinc and chromium dietary levels on insulin action mechanism. A method to investigate. Acta Medica Mediterranea, 2017, 33: 581; DOI: 10.19193/0393-6384_2017_4_085.

90) Messina A, Monda V, Avola R, Moscatelli F, Valenzano AA, Villano I, Ruberto M, Monda E, La Marra M, Tafuri D, Chieffi S, Cibelli G, Monda M, Messina G. Role of the orexin system on arousal, attention, feeding behaviour and sleep disorders. Acta Medica Mediterranea, 2017, 33: 645; DOI: 10.19193/0393-6384_2017_4_096.

91) Messina A, Monda V, Nigro E, Valenzano AA; Villano I, Ruberto M, Monda G, Ascione A, Chieffi S, Cibelli G, Messina G, Monda M. AN Allied health: the pasta. Acta Medica Mediterranea, 2017, 33: 641; DOI: 10.19193/0393-6384_2017_4_095.

92) Huang, H.-T., Wang, F., Ding, S.-G., Lu, C.-X., Zhong, C.-J. Expression levels of Net1, Kai1/Cd82 proteins and D2-40 Labeled Lymphatic Vessel Invasion (LVI) in Esophageal Squamous Cell Carcinoma (ESCC) and their correlation with clinicopathological factors. Acta Medica Mediterranea, Volume 33, Issue 2, 2017, Pages 223-230; DOI: 10.19193/0393-6384_2017_2_033.

93) Díaz-Narváez, V.P., Alonso-Palacio, L.M., Caro, S.E., Silva, M., Arboledacastillo, J., Bilbao, J., Iglesias-Acosta, J., Calzadilla-Núñez, A., Utsman, R., Cervantes, M., Fajardo, E. Compassionate care component of the construct empathy in medical students in Colombia and Dominican Republic. Acta Medica Mediterranea, 2017 33 (1), pp. 115-121; DOI: 10.19193/0393-6384_2017_1_018.

94) Sahin, N., Yazgan, P., Karahan, A.Y., Bardak, A., Gur, A., Aksac, B. Demographic and clinical characteristics and functional status of patients with benign joint hypermobility syndrome. Acta Medica Mediterranea, 2017 33 (2), pp. 245-252. DOI: 10.19193/0393-6384_2017_2_036.

95) Li, Z., Mi, D., Wen, Z. A systematic review of the association between the inflammatory cytokines polymorphisms and cancer-related fatigue. Acta Medica Mediterranea, 2017 33 (1), pp. 41-47. DOI: 10.19193/0393-6384_2017_1_006.

96) Ibrahim, S., Bulgurlu, S.S., Demirtunç, R. The relation between HbA1c and urine albumin excretion in type 2 diabetes mellitus patients. Acta Medica Mediterranea, 2017 33 (1), pp. 65-69. DOI: 10.19193/0393-6384_2017_1_010.

97) Azizpour, M., Moosazadeh, M., Esmaeili, R. Use of physical restraints in intensive care unit: A systematic

review study. Acta Medica Mediterranea, 2017 33 (1), pp. 129-136. DOI: 10.19193/0393-6384_2017_1_020;

98) Yildirim, M.S., Dal, M.S., Karakuş, A., Oto, F., Görük, M., Akdoğan, M.R., Nas, N., Ayyildiz, O. Prevalence of factor XIII Val34Leu polymorphism in thrombosis cases in the southeast of Turkey and its correlation with thrombosis. Acta Medica Mediterranea, 2017 33 (1), pp. 83-87. DOI: 10.19193/0393-6384_2017_1_013.

99) Taravati, F., Irandoust, K., Rahimi, A. The effects of 8 weeks high intensity interval training (HIIT) with garlic complement on some lipid profiles in obese inactive women. Acta Medica Mediterranea, 2017 33 (2), pp. 271-274. DOI: 10.19193/0393-6384_2017_2_040.

100) Natanzi, M.M., Ghaderian, S.M.H., Khodaii, Z. Iron absorption improvement: An additional health benefit for certain probiotics, in vitro and In Vivo study. Acta Medica Mediterranea, 33 (2), pp. 295-300. DOI: 10.19193/0393-6384_2017_2_044.

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