

Original Article

The Effects of Individual and Group Training on General Health and Stress of Parents of Children with Autism Spectrum Disorders

Mehri Pourhidar

Islamic Azad University, Central Tehran Branch, Tehran, Iran

Asghar Dadkhah*

University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

Objectives: Stress level of families of children with autism is higher than moderate levels. Since the child with autism and the awareness of their disorders severely disappoint the parents, the problems, too much responsibility, and the attempts to improve the child's situation, which usually fail, gradually increases the feelings of depression, anger, and guilt in parents. This study compared the effects of individual and group training on general health and stress of parents of children with Autism Spectrum Disorders.

Methods: A number of 75 parents of children referring to Autistic Children Foundation (including 50 parents in two experimental groups and 25 parents in control group) were taken into account. Participated parents were selected through Accessible Sampling Method.

Results: In order to diagnose Autism Spectrum Disorders, questionnaires such as Goldberg-Williams', General Health, Abedin's Stress, and Gars' (Gilliam) were used; while in order to analyze the gathered data, the correlation method (comparison of pre-test and post-test means), independent t- (comparison of control and experimental groups) and one-way covariance (a survey of effects left by individual and group training methods on parents with emphasis being laid on control and experimental groups) were used.

Discussion: There was no difference between parents receiving training in group and those receiving training in individual form. With respect to the correlation between general health and stress levels, both group and individual trainings resulted in a raise in general health and stress levels of parents.

Key words: Autism Spectrum Disorder, Parents of Children with Autism Spectrum Disorder, Individual Training, Group Training

Submitted: 12 September 2015

Accepted: 10 November 2015

Introduction

Autism Spectrum Disorders (ASDs) or pervasive developmental disorders are recognized with severe and pervasive harms in different developmental fields such as mutual social communicational skills or the existence of stereotypical behaviors, interests and activities. It also includes autism disorders, Rets disorders, childhood disintegrative disorders, Asperger's disorders, and pervasive developmental disorders in an unspecified manner (1). The researchers have categorized these disorders and autism disorders as pervasive developmental disorders. Since these kinds of disorders include a group of problems which affect different aspects of child's life as crises, they are called pervasive. The common feature of all these 5 disorders is their occurrences in the first years of childhood and the

violation of social relations and performances which are known as the most pivotal feature of all these disorders. The basis of violation in social performances is revealed in the following three fields: disability in understanding and interpreting the symptoms, excitement and social mentioning of the environment which lead to the lack of exciting, emotional and social responses; the lack or deficit of attention to what is usually paid attention by other people; disability in direct and clear understanding of others' feelings and thoughts (as a defect or delay in the development of received and practical languages), behavioral stereotypical patterns, having symptoms like hyperactivity disorders, attention-deficit, anxiety symptoms especially the forced obsession, cognition limits, and mental retardation from moderate to severe which are observed among

*All correspondences to: Asghar Dadkhah, email: <asgaredu@gmail.com >

the members of this group (2). These disorders are usually diagnosed before the age of 3. By the precise consideration of the child's behavior, however, the diagnosis age can be reduced to age of two (3).

The birth or diagnosis of the child with autism causes so many challenges for the parents or other family members. The child with autism influences the lives of their family members; living with such a child is tiring and causes challenges such as stressful relations, heavy and increasing costs, social isolation, grief, and too much physical and emotional fatigue. The parents of children with ASDs experience feelings such as grief, denial, anger, guilt, depression, isolation, stress, difficult financial conditions, and marital struggles (4-7). ASDs can become a source of psychological stress for the child and their family due to the occurrence of a various spectrums of lingual, communicational, behavioral, and social disorders and also the difficulty in diagnosis, the occurrence of the symptoms after the natural growth of the child, the lack of decisive and effective treatments, and ineffective prognosis (2). Stress level of families of children with autism is higher than moderate levels. Since the child with autism and the awareness of their disorders severely disappoint the parents, the problems, too much responsibility, and the attempts to improve the child's situation, which usually fail, gradually increases the feelings of depression, anger, and guilt in parents. Children with autism learn with too much difficulty; therefore, they require too much costs, energy and time. The parents of these children seriously need some psychological treatment plans and programs in order to reduce their stresses to feel inner support and provide self-confidence enabling them to face the problems and stresses. Many studies show that the families having children with autism suffer from too much psychological stress, they always have to refer to different resources to receive help and information. These parents must pay attention to their health, too; the more their health levels are reduced, the more their ability in facing the problems and taking care of their children will be negatively affected. This matter requires some rest and being taken care of from other resources. Considering the effective people and conditions, some interventions are needed to help family members in order to properly satisfy their special needs (8). Taking care of a child can be stressful; families with children with autism, however, experience stress far more than families with children with chronic diseases or other

developmental disorders (9-15). The studies show that the parents of children with ASDs are more subject to suffer from psychological stresses resultant from having a disabled child, compared to other psychological disorders (16-18).

Researchers believe that there are some moderating factors between parents' psychological stresses and child's disorders. The existence of some of these characteristics can increase the inner strength of parents against these stresses and prevent the occurrence of their consequences (19). The studies show that parents and especially mothers of children with autism are subject to psychological problems (17). Stress, based on some researches, is of the problems taking place for mothers of children with autism (20). There are some considerable evidences that show that the high level of stress is accompanied by the duty and responsibility of taking care of a child with different disabilities (21, 22), although having a child with autism, itself, is a source of stress. The influence of a child with autism on the parents, like any other stresses, depends to a great extent on their cognitive evaluation of the problem and the available resources in facing them. The more the ability of people in facing the problem, the less the probability of being affected by harmful situations will be. In other words, the vulnerability of every person against stress is influenced by their coping strategies and social support. Coping strategies include behavioral and cognitive abilities used by the person in stressful situations. People resort to coping strategies in order to deal with the problem and avoid negative consequences in stressful situations (23). Training effective coping strategies can increase families' tolerance level and create new methods of overcoming life problems (24).

The need to care, training, special and constant treatment of the child with autism, the disability in communication and proper behavior, and their consequent disorders such as mental retardation and convulsion cause too much stress for the families (25). All these studies reveal the severe psychological stress on the parents of children with autism. The role of families in rehabilitation and treatment of people with special needs have been recently investigated more. Currently, the effect of family education and training on reducing the stresses of having a child with special needs in a family has been recognized. It is obvious that family participation in the treatment and rehabilitation processes and prognosis creation is helpful. Family education and their awareness can clarify the fact

that the family is not the reason of the child's disorder; therefore, families should not be ashamed and they have to have more interactions with the child and the specialized team of treatment and rehabilitation. Such a thing is not possible without training and reducing the negative psychological stresses on families and facing with the child's problem. Family is a natural supportive unit which is considered as an effective resource for the child rehabilitation. At first, families are worried about this responsibility, but the house environment and family is considered a natural place for training abilities (21). Training is one of the most necessary attempts in reducing people's problems. The aim of training is to provide people with enough information about their daily issues and control of their conditions, reduce their unnecessary concerns, and prevent un-required and even harmful attempts. Of the resources and solutions of confronting stress are the networks of formal and informal supports (24). Formal supports include parents' training, the extension of intervention services and child's training, and training other members of the families. Informal supports include parents' gatherings and the spread of information resources(18). The role of formal and informal supporting factors on psychological stresses of the parents of these children has been considered by the researchers. The more support sources of the family of the child with autism leads to the reduction of the imposed psychological stresses on the families. The families must note that until they stick to the social isolation of themselves and the child, they cannot easily find a support resource; they must feel calmness, freedom, reliability, and self-confidence from inside to attract support resources faster (14). The performed studies throughout the world have revealed that the parents of the children with autism experience more stress compared to the parents of children with other disorders; they use less effective coping strategies and show disability in life qualities such as general health and satisfaction from being a parent and their family relations. It must be mentioned that autism symptoms in the child, the gender of the parent (mother or father), the received social supports by the parents, and the whole personality of the parents such as self-control, self-confidence, and self-esteem all can influence the situation. Besides, the results of studies have shown that the psychological stress produced by the children with ASDs in Iranian parents is the same as that of other countries, except that Iranian families suffer from the lack of enough

information on this problem. Holding educational meetings provides Iranian families with an opportunity to better understand their children with autism, increasing their information levels. These meetings have had positive influences on families and their results are usually observable a few months later (18).

Consequently, the role of the group, training, and information exchange method are of importance in this research. In this research, the researcher attempts to realize whether parents' information exchange, experience sharing, and the extension of communicational and social networks are useful when accompanied by information presentation or the presentation of information alone is enough, since information presentation has been mentioned as a coping strategy and this research attempts to evaluate this matter. Therefore, these results will be internationally helpful in training parents of children with special needs, in addition to its effectiveness on Iranian parents. Regarding the above definitions, it can be said that this research tries to answer the question whether training, in group or individually, is effective in stress and general health levels of the parents of the children with ASDs.

Methods

The participated were selected randomly among the referring parents to the Children Autism Foundation in Tehran. Participants were randomly divided into 3 groups of (group experimental group, individual experimental group, and control group). In order to define and set the treatment protocol based on the referents' needs, parents' answers to the question stating "in case of needing training, which training is most required regarding your child autism disorders?" were collected and then prioritized. An educational protocol was set for 10 sessions based on the most asked subjects; parents of the first group attended 10 (group) meetings and some pre-determined subjects were taught; in the second group, the information was posted to the parents in 10 sessions. (Individually training) Parents could contact the researcher through meetings or telephone in case of the occurrence of any question. Initially, General Health Goldberg's and Williams' questionnaire (26), the shortened form of Stress Abedin's questionnaire (27), and Gars's (Gilliam) questionnaire (28) were distributed in all 3 groups (pre-tests); then, after the intervention (the implementation of the educational protocol in all 3 groups), General Health Goldberg's and Williams'

questionnaire, the shortened form of Stress Abedin's questionnaire, and Gars's (Gilliam) questionnaire were re-distributed in all 3 groups (post-tests) and eventually, pre-test and post-test information was analyzed through statistical methods. The instruments were used in order to collect the required data were General Health Goldberg's questionnaire and the shortened form of stress questionnaire for parents.

General Health Goldberg's questionnaire was constructed by Goldberg (1978) which has been extensively used in different researches; its validity has been confirmed in 12, 36, and 287-item forms. The 28-item form is mostly used in Iran which is known as GHQ-28. This test is a self-reporting scale of pencil-pen including 28 questions, and 4 secondary small scales, each having 7 questions. There are two scoring methods; in the first one, the results are scored on the basis of Lickert scale (as 0, 1, 2, and 3); while in the second method, the results are scored as (0, 0, 1, and 1). In addition, its reliability coefficients have been compared by researchers (29) which have been reported between 84% and 92%. Four small scales of this test are anxiety, depression, social performance disorders, and physical symptoms. The validity of this questionnaire has been evaluated on Iranian parents of the children with ASDs in Samadi's (18) studies. The obtained validity and reliability for the parents in his studies have been 80% and the research's Cronbach Alpha has been reported as 93% and has ranged from 51% to 90% in other tests.

The shortened form of stress questionnaire for parents has 36 items of the main version; the total stress score shows the total stress level of the parents. The validity of this questionnaire on Iranian parents of the children with ASDs has been evaluated by researchers (18). In his studies, Cronbach Alpha has been 78% and the reliability coefficient has been 98%; the scores of the shortened form has been convergent with total stress score in the main form of the test as 94%; the internal reliability Alpha coefficient has been 91%; and the reliability coefficient of the test has been 84%.

The interview was performed using Gars' (Gilliam) questionnaire (28). Gars' test was designed on the basis of the definition presented by Autism Association and American Psychiatric Association in 1995. This test was performed and standardized on participants including 10.94 people with autism in 46 states of America and Canada and its reliability was determined by Cronbach Alpha method. The performed studies showed the Alpha coefficient of

90%, for stereotypical behaviors, 89% for communication, 93% for social performances, 88% for developmental disorders, and 96% for autism symptoms. This test consists of 3 groups of 14 questions whose scores range from 0 to 3. This test has 14 developmental questions. The most score of every subcategory of the stereotypical behaviors, communication and social performances is 42 and the least score is 0. The total score of every child is 142 at most and 0 at least. In this study, ASD is diagnosed by interviewing the parents using these tests.

Results

Considering the analysis, it can be stated that there is a significant difference between the means of research participants in pre-tests of the two experimental groups and that of the control group at the level of $\alpha = 0.01$. Therefore, referring to the means of both groups, it can be said that the variable of "parents' stress" in the parents of children with autism disorders in control group has a higher mean in comparison with group experimental group. Consequently, the stress level of the parents of the children with autism disorders is more in the control group; while in small-scales of "physical performance", "lack of anxiety", "social performance", "lack of depression", and "general health", the group experimental group has higher means compared to the control group. Therefore, it is stated that "physical performance", "lack of anxiety", "lack of depression", and "general health" are higher in the parents of the children with autism disorders in the above group experimental group. Also there was a significant difference among the means of research participants in group experimental group, emphasizing on pre-test and post-test phases in all components at the level of $\alpha = 0.01$. Therefore, referring to the means of both groups, it is stated that the variable of "parents' stress" in the parents of children with autism disorders in pre-test phase has a higher mean in comparison with that of the post-test phase. Therefore, the stress of the parents of the children with autism disorders is more in pre-test phase, while the mean in small-scales of "physical performance", "lack of anxiety", "social performance", "lack of depression", and "general health" is higher in post-test phase, rather than pre-test phase. Therefore, it is mentioned that "physical performance", "lack of anxiety", "social performance", "lack of depression", and "general health" are higher in post-test phase in the parents of children with autism disorders.

Discussion

Regarding the obtained results, training has influenced the stress and general health of the parents of children with ASDs, i.e. lower stress and higher general health are seen in post- test phase; group training and individual training do not differ from each other; training itself, however, has influenced the parents. Emphasizing on the obtained amount of F, it is stated that there is a significant relation between the dependent variable (parents stress) and the auxiliary variable (pre-test) at the level of $\alpha = 0.01$. Consequently, regarding that the significant effect of pre-test variable has been useful and is stated as the control variable, the effects of the experimental variables of group training and individual training as the source of changes can be emphasized. And considering the F amount of 1.99 in the sources of changes in group and individual trainings, it can be stated that the stress of the parents of the children with ASDs (group-individual training) is higher and their general health is lower in pre-test phase; while in small-scales of "physical performance", "lack of anxiety", "social performance", "lack of depression", and "general health" they are higher in post-test phase, compared to pre-test phase. Therefore, it is stated that physical performance, lack of anxiety, social performance, lack of depression, and general health are higher in the parents of the children with ASDs in post- test phase. This shows the effect of training on general health and stress of the parents of the children with ASDs. Eventually, regarding the F amount of 6.39 in the sources of changes in group and individual trainings which is determined with the aim of recognizing the effects of group and individual trainings on "parents' stress" and is significant at the level of $\alpha = 0.01$, it can be stated that group and individual trainings have been effective on "parents' stress".

The results of the present study were in line with the results of the previous researches performed

References

1. Lai M-C, Lombardo MV, Chakrabarti B, Baron-Cohen S. Subgrouping the Autism "Spectrum": Reflections on DSM-5. 2013.
2. Aghababaei S, Akrami N. Comparison of the elements of Draw-a-Person (DAP) test in children aged 6-12 years with autism disorder and normal children. 2. 2013;4(4):12-9.
3. Gray K, Tonge B. Are there early features of autism in infants and preschool children? Journal of paediatrics and child health. 2001;37(3):221-6.
4. Mickelson KD, Wroble M, Helgeson VS. "Why My Child?": Parental Attributions for Children's Special Needs1. Journal of Applied Social Psychology. 1999;29(6):1263-91.
5. Midence K, O'neill M. The Experience of Parents in the Diagnosis of Autism A Pilot Study. Autism. 1999;3(3):273-85.
6. Rivers JW. Siblings relationships when a child has autism: temperament, family stress and coping: University of Georgia; 1998.
7. Ryan KA. Raising Children on the Autism Spectrum: Parental Needs: Antioch University; 2012.
8. Lainhart JE. Psychiatric problems in individuals with autism, their parents and siblings. International Review of Psychiatry. 1999;11(4):278-98.
9. Benson PR, Karlof KL. Anger, stress proliferation, and

(7, 18, 21, 30). Generally, it can be stated that group and individual trainings have caused a significant difference in all components, emphasizing on pre-test and post- test phases. Therefore, the stress of the parents of the children with ASDs has been higher in pre-test phase, compared to post-test phase, while it is higher in small-scales of "physical performances", "lack of anxiety", "social performance", "lack of depression", and "general health" in post-test phase. As a consequence, it is concluded that the increase of "physical performance", "lack of anxiety", "social performance", and "lack of depression" has been equivalent with the reduction of stress and the increase of general health in the parents of the children with ASDs; and no difference has been observed between the effects of training types.

Conclusion

With respect to the correlation between general health and stress levels, both group and individual trainings resulted in a raise in general health and stress levels of parents. Group and individual trainings have caused a significant difference in all components, emphasizing on pre-test and post- test phases. Therefore, the stress of the parents of the children with ASDs has been higher in pre-test phase, compared to post-test phase, while it is higher in small-scales of "physical performances", "lack of anxiety", "social performance", "lack of depression", and "general health" in post-test phase. This means the individual and group training had a positive effect on general health and stress of parents of children with autism spectrum disorders.

Acknowledgements

We would like to thank all parents who participated in this study and had very active role in discussions and participations. We also appreciate the kind cooperation of Children Autism Foundation in Tehran.

- depressed mood among parents of children with ASD: A longitudinal replication. *Journal of autism and developmental disorders*. 2009;39(2):350-62.
10. Davies JM. Autism spectrum disorder: impact of severity and emotional availability in the parent-child dyad: Seattle Pacific University; 2009.
 11. Honey E, Hastings RP, McConachie H. Use of the Questionnaire on Resources and Stress (QRS-F) with parents of young children with autism. *Autism*. 2005;9(3):246-55.
 12. Marcus LM, Kunce LJ, Schopler E. Working with families. *Handbook of Autism and Pervasive Developmental Disorders, Volume 2, Third Edition*. 1997:1055-86.
 13. Rubens JD. Effects of contextual influences on stress level for caregivers of children diagnosed with autism: University of Houston; 2009.
 14. White N, Hastings RP. Social and professional support for parents of adolescents with severe intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*. 2004;17(3):181-90.
 15. Cook P, Cook M, Tran L, Tu W, editors. Children enabling change: A multicultural, participatory, community-based rehabilitation research project involving Chinese children with disabilities and their families. *Child and Youth Care Forum*; 1997: Springer.
 16. Campbell-Sills L, Cohan SL, Stein MB. Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. *Behaviour Research and Therapy*. 2006;44(4):585-99.
 17. Sabih F, Sajid WB. There is significant stress among parents having children with autism. *Journal Rawalpindi Medical*. 2008;33(2):214-6.
 18. Samadi SA, McConkey R. Parents of children with autism spectrum disorder and children with intellectual disabilities and their stress and general health. *International Journal of Integrated Care*. 2008;9(Suppl).
 19. Feiz A, Taherneeshat-dost H, Naely H. the relationship between hardiness and coping strategies. *Journal of psychology*. 2002;5(4):303-15.
 20. Razieh Khoramabadi, Pouretamad Hr, Tahmasian K, Chimeh N. A comparative study of parental stress in mothers of autistic and non autistic children. *Journal of Family Research*. 2009;5(3):387-99.
 21. Khoramabadi R, Pouretamad Hr, Tahmasian K, Chimeh N. A comparative study of parental stress in mothers of autistic and non autistic children. 2009.
 22. Jalili N, Godarzi M, Rassafiani M, Haghgoo H, Dalvand H, Farzi M. The influenced factors on quality of life of mothers of children with severe cerebral palsy: A survey study. *Modern Rehabilitation*. 2013;7(3):40-7.
 23. Folkman S, Lazarus R. An analysis of coping in a middle-aged community sample. *Kango kenkyu The Japanese journal of nursing research*. 1988;21(4):337.
 24. Nasir M. The Relationship Strategies Coping With Stress And Resilience With Optimism In Female High School Students In Dezful City. *Journal Of Social Psychology (New Findings In Psychology)* 2010; 5(16):55 - 68.
 25. Kuhn JC, Carter AS. Maternal self-efficacy and associated parenting cognitions among mothers of children with autism. *American Journal of Orthopsychiatry*. 2006;76(4):564-75.
 26. Goldberg D, Williams P. General health questionnaire (GHQ). Swindon, Wiltshire, UK: nferNelson. 1988.
 27. Abidin RR. Parenting Stress Index:(Short Form): Pediatric Psychology Press Charlottesville, VA; 1990.
 28. Gilliam JE. Gilliam autism rating scale: Examiner's manual: Pro-ed; 1995.
 29. Nazifi M, Mokarami H, Akbaritabar A, Faraji Kujerdi M, Tabrizi R, Rahi A. Reliability, Validity and Factor Structure of the Persian Translation of General Health Questionnaire (GHQ-28) in Hospitals of Kerman University of Medical Sciences. *Journal of Fasa University of Medical Sciences*. 2014;3(4):336-42.
 30. Agosta J. Evaluating family support services. Two quantitative case studies. *Monographs of the American Association on Mental Retardation*. 1991(18):99-150.