Psychiatry and Behavioral Sciences 2018;8(2):79-85
http://dx.doi.org/10.5455/jmood.20171205113628

CASE REPORT

High Functioning Autism or Asperger's Disorder Follow-up Period: Detailed Retrospective Evaluation and Novel Status Determination of a Case and Prospective Guidance

Mehmet Hamdi Orum[1], Tezan Bildik[2], Mahmut Zabit Kara[3], Helin Yilmaz[2], Hasan Akin Tahillioglu[2], Aysun Kalenderoglu[1]

[1]Adiyaman University, School of Medicine, Department of Psychiatry, Adiyaman, Turkey
[2]Ege University, School of Medicine, Department of Child and Adolescent Psychiatry, Izmir, Turkey
[3]Adiyaman Training and Research Hospital, Child and Adolescent Psychiatry, Adiyaman, Turkey

ABSTRACT
The main characteristic of high functioning autism or Asperger's disorder (HFA/AD) is severe and sustained impairment in social interaction as well as development of restricted, repetitive patterns of behaviour, interests and activities. Pharmacotherapy helps to alleviate some symptoms and signs of autism and autistic spectrum disorders (ASD). However, the main problem with these patients is the incompatibility of the drug with various reasons. In this article, a case with the diagnosis of HFA/AD followed in the same clinic for more than 10 years has been presented. The files are being examined retrospectively, discussing the difficulties encountered during the diagnosis in the presence of varying symptoms during the follow-up, and presenting results from 12-weeks prospective follow-up in the context of various tests..
Keywords: Asperger disorder, high functioning autism, adolescent, scale, psychopathology

INTRODUCTION

High Functioning Autism or Asperger's disorder (HFA/AD) is a pervasive developmental disorder characterized by qualitative impairment in mutual social interaction, limitation in behavior, interest and activity, and repetitive patterns without a clinically significant delay in language and cognitive development. An important symptom may not occur in the first years of life, especially in the first 4 years (1). There are certain areas where the problem lies: speech, limited interests, and deterioration in social skills.

As children with HFA/AD grow, the problems also change. During adolescence; additional mental disorders are common. About half of the patients have personal health and self-care problems. Problems related to integration due to difficulties in academic work and peer relations are noteworthy in the school. Social withdrawal becomes apparent between the ages of 13-19 (2,3). The main purpose in the treatment of HFA/AD is to ensure the social harmony of the patient. In this context, when the variables affecting social adjustment in Asperger's syndrome are examined; severity of the disorder, cognitive capacity of the patient, comorbidity, family and environmental factors are found as the main factors. When comorbidity was examined, it was found that 30%

Corresponding author: Mehmet Hamdi Orum,
Adiyaman University, School of Medicine,
Department of Psychiatry, Adiyaman, Turkey
E-mail: mhorum@hotmail.com
Received: December 5, 2017 **Accepted:** February 13, 2018

Citation: Orum MH, Bildik T, Kara MZ, Yilmaz H, Tahillioglu HA, Kalenderoglu A. High functioning autism or asperger's disorder follow-up period: detailed retrospective evaluation and novel status determination of a case and prospective guidance. Psychiatry and Behavioral Sciences 2018;8(2):79-85. https://doi.org/10.5455/jmood.20171205113628

Table 1: The patient's past data

Years	2006	2010	2013	2016
TRF	Decreased attention in lectures, difficulty in writing, increase in the amount of speech, restless	Eccentric interests, stubborn, unhappy, decreased attention, social isolation	Hyperactivity, increase in the amount of speech, defensive, social isolation, decreased attention	Decreased attention, restless, eccentric interests, unhappy, badwriting, increase in the amount of speech, social isolation
CTRS-R	59	88	58	78
WISC-R	-	VSIQ:98, PSIQ:99, FSIQ:98	VSIQ:111, PSIQ:111, FSIQ:112	VSIQ:111, PSIQ:91, FSIQ:102
CBCL/4-18	-	85	-	78
SCARED-C	-	-	24	13

TRF: Teacher Report Form, Conners' Teacher Rating Scale-Revised (CTRS-R), WISC-R: Wechsler Intelligence Scale for Children-Revised, CBCL/4-18: Child Behavior Checklist for Ages 4-18, SCARED-C: Self-Report For Childhood Anxiety Related Disorders-Child Form

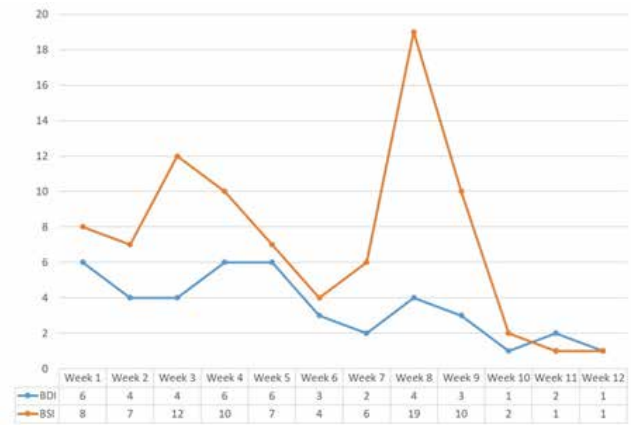


Figure 1: Beck depression inventory and brief symptom inventory scores

of patients were accompanied by one or more mental illnesses. The most common are; anxiety disorders, mood disorders, Tourette's syndrome, ADHD, sleep disorders, and psychotic disorders (4,7).

In this article, a case with the diagnosis of HFA/AD followed in the same clinic for more than 10 years will be reported. Patient's charts were examined retrospectively, discussing the difficulties encountered during the diagnosis in the presence of varying symptoms during the follow-up, and presenting results from 12-week prospective follow-up in the context of various tests.

CASE PRESENTATION

The patient was 15 years old. He was being followed at a psychiatry outpatient clinic for more than 10 years with complaints of distractibility, extreme mobility, weakness in handicrafts, difficulty in making things unwanted and bad writing. It was said that when the patient was 4 years old, there was a lot of interest in dinosaurs, that he was bored quickly during the games, he was moving, and that he did not want to go to the school after he started reading and there were crying episodes.

When communication was evaluated retrospectively; he was described as a child who speaks for a long time and quickly in situations such as Illuminati, unidentified flying objects (UFOs), space, mentalism, and computer games, who has difficulty expressing his feelings, and who only speaks about his topics of interests. It has been learned that the patient cannot make social friends and think that the people do not understand him because of his advanced intelligence. When the school situation was assessed, he was experiencing serious difficulties in his classes; the most important problems in the school are not getting friends, listening to lessons, excessive excitement and anxiety before the exams. When his interests were questioned, it was seen that the patient was curious about "electromagnetic field disorder, biokinesis, sufism, UFOs, mentalism", constantly trying to talk about such issues, and he was always obsessed with cleaning.

In his most recent follow-up exam; attention and behavior problems, difficulty in making friends were in the foreground during elementary school; strange interests, computer games, internet addiction, social isolation, obsessions, and depressive findings were dominant problems in middle school years; and performance anxiety, social behavior problems, depressive mood, and sexual relations problems became

Table 2: The patient's follow-up data

	Week 1	Week 4	Week 6	Week 7	Week 8	Week 9	Week 12
Medications	-	-Medikinet® retard (20 mg/day) -Fluoxetine (10 mg/day) -Aripiprazole (5 mg/day)	-Medikinet® retard (30 mg/day) -Fluoxetine (20 mg/day) -Aripiprazole (15 mg/day)	-Medikinet® retard (40 mg/day) -Fluoxetine (30 mg/day) -Aripiprazole (10 mg/day)	-Medikinet® retard (50 mg/day) -Fluoxetine (40 mg/day) -Risperidone (1.5 mg/day)	-Medikinet® retard (50 mg/day) -Fluoxetine (40 mg/day) -Risperidone (2.25 mg/day)	-Medikinet® retard (60 mg/day) -Fluoxetine (40 mg/day) -Risperidone (2 mg/day)
UKU-SERS	Sleeplessness	Decreased appetite, palpitation	Decreased appetite, sleeplessness	Restlessness,	Restlessness, decreased appetite, palpitation	-	-
GAS	21-30	31-40	31-40	41-50	21-30	31-40	51-60
Eccentric Words of Patient	-There is no invention, there is discovery.	-The alien group called 'zeta', who lost their emotions, is trying to earn their feelings by wearing a chip to people.	-I can see behind the walls.	-I am a born philosopher. -Michael Jackson was killed by the illuminati.	-I will control all the energy that exists in the world.	-Punk music is good for lack of attention.	-The people have fast-working brain, need more love.

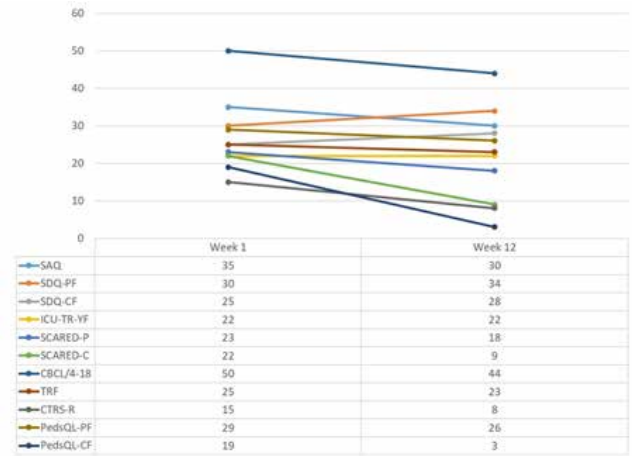
UKU-SERS: UKU Side Effects Rating Scale

clearer in the early days of high school. It is seen that because of his strange speech, no one in school wanted to spend time with him, he usually complied with the rules, but his attention was scattered and the directions must be repeated, his academic success was moderate and his writing was very poor. Psychostimulant, antidepressant, and antipsychotic treatment were started periodically for distress, mood and anxiety disorder of the patient, but no significant improvements were observed as he did not use medications regularly (Table 1).

In his family history, his mother had nail-biting and magical thoughts, had been managed by 15 mg/day escitalopram with the diagnosis of generalized anxiety disorder (GAD); his father was followed-up because of anxiety disorder and attention deficit. It has been learned that the cousin of the mother has been treated with the diagnosis of schizophrenia.

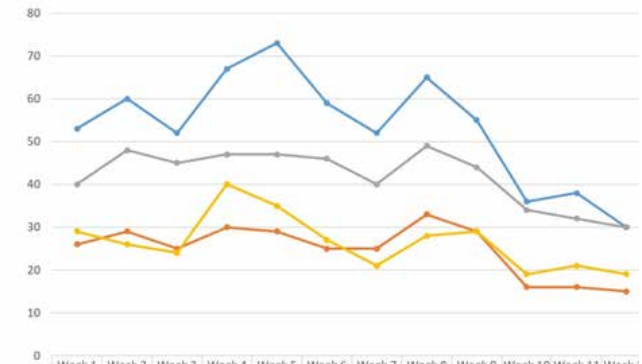
In his recent outpatient clinic exam, it was learned that he did not use medications, spent most of his time investigating areas of interest such as mentalism, biokinesis and Illuminati, his attention was disorganized and his course success was severely impaired, he had no friends, was afraid to fail and did not want to go to school. It was seen that he had sleep problems, daytime sedation, and cleaning compulsions, he was obsessed with swearing or punching people unintentionally, he had thoughts related to computer hacked by his friends because of important information and related to Illuminati saw the potential of "the person to save the world". Future concerns, anhedonia, avolition were described. His functionality was deteriorated further in all areas. Confidence in medicines was decreased. Psychiatric diagnoses in the mother and father made the treatment process more difficult. The therapeutic relationship established with the patient was reviewed and reorganized on the considerations of medications and compliance. It was explained that complaints will be evaluated in areas such as attention, anxiety, depression and quality of life, and the treatment will be regulated by looking at the results and receiving feedback directly from the patient with the help of scales administered in weekly follow-ups It was stated that the reasons and solutions of social problems will be discussed.

Prospectively administered scales were selected from four different areas: by the patient - Beck Depression Inventory (BDI), Brief Symptom Inventory (BSI), Self-Report For Childhood Anxiety Related Disorders-Child Form (SCARED-C), Pediatric Quality of Life Inventory-Child Form (PedsQL-CF), the UKU Side Effects Rating Scale (UKU-SERS), Self-Assessment Questionnaire (SAQ),



	Week 1	Week 12
SAQ	35	30
SDQ-PF	30	34
SDQ-CF	25	28
ICU-TR-YF	22	22
SCARED-P	23	18
SCARED-C	22	9
CBCL/4-18	50	44
TRF	25	23
CTRS-R	15	8
PedsQL-PF	29	26
PedsQL-CF	19	3

Figure 2: Scales completed at the beginning and end of the treatment



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week
BPRS	53	60	52	67	73	59	52	65	55	36	38	30
HARS	26	29	25	30	29	25	25	33	29	16	16	15
HDRS	40	48	45	47	47	46	40	49	44	34	32	30
YMRS	29	26	24	40	35	27	21	28	29	19	21	19

Figure 3: Scales filled by the physician

Inventory of Callous-Unemotional Traits-Youth Form (ICU-TR-YF), Maudsley Obsessional-Compulsive Inventory (MOCI), Sentence Completion Test (SCT) (Figure 1, Figure 2, Table 2, Table 3), by the parent - (Self-Report For Childhood Anxiety Related Disorders-Parents Form (SCARED-P), Child Behavior Checklist for Ages 4-18 (CBCL/4-18), Pediatric Quality of Life Inventory-Parent Form (PedsQL-PF), Strength and Difficulties Questionnaire-Parents Form (SDQ-PF), Autism Spectrum Screening Questionnaire (ASSQ) (Figure 2, Table 3), by the teacher (Teacher Report Form (TRF), Conners' Teacher Rating Scale-Revised (CTRS-R) (Figure 2), and by the physician (Young Mania Rating Scale (YMRS), Brief Psychiatric Rating Scale (BPRS), Hamilton Anxiety Rating Scale HARS), Hamilton Depression Rating Scale (HDRS), Global Assessment Scale (GAS), UKU Side Effects Rating Scale (UKU-SERS) (Figure 3, Table 2). Some of the scales were administered every week (Figure 1,3), some at the beginning and end of the observation (Figure 2), and some were administered once (Table 3). Minnesota Multiphasic Personality Inventory (MMPI), Thematic Apperception Test (TAT), and Rorschach test (Table 3) were administered during the follow-up.

When the patient's retrospective files were reviewed, it was seen that he was sensitive to side effects of the drug, and it was thought that it was mainly due to the rapid increase of drug doses and lack of information about side effects. During the follow-up period, drug therapy and side effects were discussed every week. Methylphenidate, which was started from the perspective of distraction, decreased patient's appetite and palpitation in the first weeks. Blood tests and pediatric consultation were repeated. Treatment continued afterwards and these side effects decreased and disappeared. For complaints of anxiety, depression and obsession fluoxetine started and the desire was increased. The initial uneasiness gradually diminished. It was verified that the depressive and obsessive complaints decreased. Aripiprazole was initiated in the patient because his Illuminati-related considerations pointed to a possible psychosis onset, but after 2 months there was no reduction in symptoms and risperidone was started. There has been a marked reduction in the complaints that may suggest psychosis in the ongoing process. There was no change in grandiosity. With the help of medications and verbal suggestions, his sleep was regulated. Suggestions were made to increase compliance and reduce social withdrawal. Considering that the psychiatric disorders in the parents had adversely affected the patient's treatment compliance, his mother and father were directed to the adult psychiatrist and their treatments were initiated.

At the end of the treatment period, the patient who had a medical diagnosis of Asperger syndrome or childhood autism according to the International Statistical Classification of Diseases and Related Health Problems-10

Table 3: The patient's follow-up scores/results

Scales/Tests/Forms	Scores/Results
MOCI	16/There is a high likelihood of being diagnosed with OCD by psychiatric examination.
ASSQ	15/Higher scores being more indicative of an autism spectrum disorder.
MMPI	-It is in a structure that wants to hide its emotional tension, defensively, shy, avoiding relationships, depressive, anxious, resisting to directions. -Fear of misunderstanding, low energy level, low motivation, low self-confidence, no purpose, difficulty in starting a job. -Two subscales with the highest scores; Social withdrawal and schizophrenia. -The lowest scored subtest; Hypomania. -Possible diagnosis: Schizoid personality disorder
TAT	Anxious, difficulty in storytelling. Indecision and extreme detailing suggest an obsessive nature. The heroes in the stories; unhappy, low self-confidence, and fear of failure. Mother figure dominant, controller, judge; Father figure is perceived as passive and emotional. The mother's solid superego causes guilt and regrets in the patient. The anger against the female / mother figures is apparently trying to suppress it. This can lead to self-destructive behaviors. The increase in sexual dysfunctions attracts attention.
SCT	-Bad writting. -Common expressions about 'mother'. -Advocate, expressing concern.
Rorschach's Test	-The patient claimed that he could understand the tricky points of test. -Advocate, deny, detail. -Emotional isolation. -Perseveration (Common in schizophrenia). -Response time is short (Difficulty in controlling yourself).

MOCI: Maudsley Obsessional-Compulsive Inventory, ASSQ: Autism Spectrum Screening Questionnaire, MMPI: Minnesota Multiphasic Personality Inventory, TAT: Thematic Apperception Test, SCT: Sentence Completion Test

(ICD-10) and Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-PL) (8). Current diagnosis; ADHD-compound type, subthreshold generalized anxiety disorder, subthreshold obsessive compulsive disorder. Past diagnoses; ADHD-compound type, generalized anxiety disorder, obsessive-compulsive disorder, psychotic-disordered mood disorder. This retrospective and prospective case report was approved by the patient and his parents, and the study was approved by the local academic committee.

DISCUSSION

When characteristics of the disease, cognitive capacity of the patient, additional psychiatric disorders, family and environmental factors were evaluated as variables affecting psychosocial adjustment in HFA/AD, it was seen that the presented case increased in social adjustment problems during adolescence and increased the incidence or severity of additional mental disorders. Consistent with the literature, ADHD and anxiety disorders are often seen as comorbid disorders with HFA/AD (1,3,5,9,11).

In a review of eleven-year studies; it has been determined that depressive symptoms such as unhappiness, loneliness, and anxiety are seen more frequently in the patients with HFA/AD than in the normal group and the diagnosis rate of major depression changes between 17-70%. In adults, the rate of single major episodes was 70% and recurrent episodes were 50% (4,9,12). As seen in this case, our adolescent patient was diagnosed with major depression, and treatment resulted in further recovery in the patient. In the literature, studies on the comorbidity of bipolar disorder in Asperger patients are limited. In a study with adult and young adult patients, mood disorders were reported in 16 of 44 patients and 12 of them (75%) were diagnosed with bipolar disorder (10). In this case, psychotic symptoms, grandiosity and sleep problems, which are at the beginning of the treatment period and partially remedied by treatment, have shown that the patient should be closely monitored for possible future mood disturbances. The most disruptive symptom of the 15-year-old male patient's social adjustment and quality of life were obsessive thoughts. It is also an important

finding that the patient benefited from antidepressant and antipsychotic treatment (13,14). In this article, it is noteworthy that the patient gets ADHD additional diagnosis and benefit from the treatment at advanced level, the increase of school success. According to the studies, ADHD is the most common accompanying diagnosis of HFA/AD in younger age groups. In these studies, 71-100% of the patients with HFA/AD had an additional psychiatric diagnosis, which was the most common social anxiety disorder, ADHD, oppositional defiant disorder, and major depressive disorder (6,15). Care about drug side effects have been found to be important in improving treatment compliance. Symptomatic deterioration and affective elevation in our patient at week 6, which lasted for three weeks and were reflected on scales, were thought to be mainly related to school examinations and partly to medications. Another issue that affects patients' compliance with therapy, but often overlooked in intensive outpatient settings is parental psychiatric disorders (16). Anxiety problems in the mother and father mentioned in this article have adversely affected the patient's treatment compliance. Possible problems in the process of separation-individuation disturbed the child's communication with his mother, even in establishing the patient-doctor relationship during the monitoring process. It has been seen that scales and forms filled in defensive, inconsistent or insensitive parents will give more useful information when compared with information obtained from teachers. When evaluated in conjunction with K-SADS-PL outcome, MMPI and other tests, it was seen that diagnosis of personality disorder should not be overlooked in the prospective follow-up of the patient.

CONCLUSION

When the retrospective and prospective follow-up of the patient is observed; antidepressant treatment was effective in our patient with the additional diagnosis of major depression and anxiety disorder, and antipsychotic use was found to be effective in relieving psychotic symptoms. The therapeutic relationship established with the patient was thought to have contributed significantly to treatment compliance. It was emphasized that solving the parental problem of resistance to treatment increased the functioning of the patient. It should not be forgotten that in the monitoring process, additional mental disorders might co-exist, especially during adolescence, and that early recognition and treatment of these disorders is important in improving the patient's social cohesion and functioning.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES

1. Lehnhardt FG, Gawronski A, Volpert K, Schilbach L, Tepest R, Vogeley K. Psychosocial functioning of adults with late diagnosed autism spectrum disorders: a retrospective study. Fortschr Neurol Psychiatr 2012;80(2):88-97. [CrossRef]
2. Weiss JA, Lunsky Y. Group cognitive behaviour therapy for adults with Asperger syndrome and anxiety or mood disorder: a case series. Clin Psychol Psychother 2010;17(5):438-46. [CrossRef]
3. Soussana M, Sunyer B, Pry R, Baghdadli A. Anxiety in children and adolescents with pervasive developmental disorder without mental retardation: review of literature. Encephale 2012;38(1):16-24. (French) [CrossRef]
4. Mazzone L, Ruta L, Reale L. Psychiatric comorbidities in asperger syndrome and high functioning autism: diagnostic challenges. Ann Gen Psychiatry 2012;11(1):16. [CrossRef]
5. Mukaddes NM, Fateh R. High rates of psychiatric co-morbidity in individuals with Asperger's disorder. World J Biol Psychiatry 2010;11(2-2):486-92.
6. Mukaddes NM, Herguner S, Tanidir C. Psychiatric disorders in individuals with high-functioning autism and Asperger's disorder: similarities and differences. World J Biol Psychiatry 2010;11(8):964-71. [CrossRef]
7. Paquette-Smith M, Weiss J, Lunsky Y. History of suicide attempts in adults with Asperger syndrome. Crisis 2014;35(4):273-7. [CrossRef]
8. Gokler B, Unal F, Pehlivanturk B, Kultur EC, Akdemir D, Taner Y. Reliability and validity of schedule for affective disorders and schizophrenia for school age children-present and life time version - Turkish version (K-SADS-PL-T). Çocuk ve Ergen Ruh Sagligi Dergisi 2004;11(3):109-16.

9. Lugnegard T, Hallerback MU, Gillberg C. Psychiatric comorbidity in young adults with a clinical diagnosis of Asperger syndrome. Res Dev Disabil 2011;32(5):1910-7. [CrossRef]
10. Munesue T, Ono Y, Mutoh K, Shimoda K, Nakatani H, Kikuchi M. High prevalance of bipolar disorder comorbidity in adolescents and young adults with high-functioning autism spectrum disorder: a preliminary study of 44 outpatients. J Affect Disord 2008;111(2-3):170-5. [CrossRef]
11. Hofvander B, Delorme R, Chaste P, Nydén A, Wentz E, Ståhlberg O, et al. Psychiatric and psychosocial problems in adults with normal-intelligence autism spectrum disorders. BMC Pscyhiatry 2009;9:35. [CrossRef]
12. Mikami K, Ohya A, Akasaka K, Matsumoto H. Attempted suicide of youth with Asperger's disorder. Seishin Shinkeigaku Zasshi 2006;108(6):587-96. (Japanese)
13. Green J, Gilchrist A, Burton D, Cox A. Social and psychiatric functioning in adolescents with Asperger syndrome compared with conduct disorder. J Autism Dev Disord 2000;30(4):279-93. [CrossRef]
14. Lai MC, Lombardo MV, Pasco G, Ruigrok AN, Wheelwright SJ, Sadek SA, et al. A behavioral comparison of male and female adults with high functioning autism spectrum conditions. PLoS One 2011;6(6):e20835. [CrossRef]
15. Simonoff E, Pickles A, Charman T, Chandler S, Loucas T, Baird G. Psychiatric disorders in children with autism spectrum disorders: prevalence, comorbidity, and associated factors in a population-derived sample. J Am Acad Child Adolesc Psychiatry 2008;47(8):921-9. [CrossRef]
16. Wolff S, Narayan S, Moyes B. Personality characteristics of parents of autistic children: a controlled study. J Child Psychol Psychiatry 1988;29:143-53. [CrossRef]