

EFFECTIVENESS OF A GROUP-BASED INTERVENTION ON THE FUNCTIONING OF ADOLESCENTS WITH ASPERGER'S SYNDROME: A PILOT STUDY

CRISTINA VOINEA^{1*}, LAURA MATEESCU^{1,2}

¹Resident doctor in Child and Adolescent psychiatry, "Prof. Dr. Alexandru Obregia" Psychiatry Hospital, Bucharest, Romania

²Lecturer, Child and Adolescent Psychiatry Department, University of Medicine and Pharmacy "Carol Davila", Bucharest, Primary doctor in child and adolescent psychiatry "Prof. Dr. Al. Obregia" Psychiatry Hospital

*Corresponding author email: cristina.voinea@rez.umfcd.ro

ABSTRACT

Despite the recognition of the need for group-based training programmes for children and adolescents with Autism Spectrum Disorders, a structured intervention is very difficult to create and implement. Since 2019, a group-based training programme for adolescents with Asperger's syndrome has been developed and conducted at the *Child and Adolescent Psychiatry Department* from "Prof. Dr. Alexandru Obregia" Psychiatry Hospital in Bucharest. The present paper aimed to observe the evolution of ten adolescents a year and a half after the establishment of this group, analyzing the influence that this intervention had on their quality of life and on some parameters of their functioning. We found that the inclusion of these adolescents in this group remarkably improved their social skills, their academic performance and their overall quality of life. Given the fact that this type of intervention is not very commonly used in Romania, the information acquired from this pilot study may serve as a starting point for further and more rigorous studies, with the aim of creating an efficient structured therapy group programme for adolescents with Asperger's disorder.

Keywords: group therapy, Asperger's syndrome, adolescents, psychoterapeutic intervention, social skills.

INTRODUCTION

Asperger's disorder is a type of Autism Spectrum Disorder (ASD), a neurodevelopmental condition characterized by persistent deficits in social communication and social interaction across multiple contexts and restricted, stereotypical and repetitive patterns of behavior, interests, or activities, usually without accompanying intellectual or language impairment [1].

Hans Asperger first described this syndrome in 1944, but the information remained unknown to the international scientific world until 1991, when Uta Frith published in her book, "Autism and Asperger syndrome", the first english translation of Asperger's original

article, "Die Autistischen Psychopathen im Kindesalter".

According to Asperger's account, children with this syndrome present odd or subtly inappropriate social interaction, early good grammatical speech acquisitions (but with difficulty in using pronouns) and poor gross motor co-ordination shown in posture and gait. They also tend to fall in the superior range of intelligence and have subtle non-verbal communication abnormalities, such as atypical syntax, pedantic vocabulary and particular prosody. They usually have spectacular performances in particular cognitive domains like astronomy, physics, mathematics [2].

Since the publication of the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Asperger's syndrome was removed as a diagnostic entity and placed on the highly-functional end of the Autism Spectrum Disorder.

According to Centers for Disease Control and Prevention's (CDC) last report from 2020, data from the Autism and Developmental Disabilities Monitoring (ADDM) suggests that about 1 in 54 of children were identified with ASD, with a male-to-female ratio of 4 to 1 [3].

Children with Asperger's disorder are often diagnosed later in life than those with infantile or atypical autism, mostly because they don't exhibit a language development delay and because their symptoms are more subtle, hence more easily overlooked by the people around them. It may be possible that families notice things like their children having a rigid insistence on sameness in terms of habits and routines, having outbursts and explosive emotional reactions when being faced with a new situation, but they simply think this is the way their child is.

Most frequently, school is where these children feel very overwhelmed, leading to meltdowns either at school, or as is often the case, once they get home where it is "safe." Many with Asperger's disorder are diagnosed during the elementary or high-school years, when social and sensory challenges are raised dramatically. What may have been ignored or rationalized when a child was younger can impede their progress and cause disruptions in the classroom or other areas of school [4].

Adolescence poses unique obstacles to individuals with Asperger's disorder, many of which will have escaped diagnosis in earlier years, or been misdiagnosed because of prevailing attention problems, anxiety, depression or other issues.

The fundamental impairment in social interaction and reciprocity is typically

expressed through the unique personality traits of the individual, and thus differ from person to person. One may display these social difficulties through isolative, introverted behaviour, while another may do so in an extroverted way. General observable characteristics of Asperger's disorder during adolescence include poor communication skills, often leading to avoidance of peer interaction, restrictive and obsessive interests and pursuits, a tendency to prefer predictable contexts and events and problems in self-organization and productivity, especially related to school [5].

The complex intervention programme for individuals with ASD comprises behavioral and educational interventions and pharmacotherapy. While various interventions strategies have been used to promote social skills of adolescents with Asperger disorder, the present paper focuses on group social skills interventions. Their use has increased considerably in the last 20 years, research showing evidence of their effectiveness and crucial impact on academic, adaptive and psychological functioning [6,7]. As their name suggests, their purpose is to improve social skills in a group context, encourage adaptive problem solving strategies, reduce maladaptive patterns of behaviour, and teach more effective communication [8].

Despite the recognition of the need for group-based training programmes for adolescents with ASD, they are not very commonly used in Romania. Since 2019, a group-based training intervention for adolescents with Asperger's syndrome has been developed and conducted at our department.

The information obtained from this descriptive study may serve as a starting point for further and more rigorous studies, with the aim of creating an efficient structured group therapy program for adolescents with Asperger's disorder.

OBJECTIVES AND ASSUMPTIONS

The present paper aimed to observe the evolution of ten adolescents a year and a half after the establishment of a therapy group, analyzing the influence that this group-based intervention had on their quality of life and on some parameters of their functioning. To do this, we asked ourselves the following questions:

1. Did the adolescents' social skills improve ? Has this happened in multiple contexts (peer group, family)?
2. Did the academic performance of the adolescents' improve?
3. Did the group-based intervention programme benefit the adolescents in terms of quality of life?

MATERIALS AND METHODS

The study was conducted on 10 adolescents with Asperger's disorder who were part of a group training programme for a year and a half, from march 2019 to october 2020. Given the fact that this type of intervention was the first of its kind in our clinic, at first, it didn't follow a structured curricula. Thus, it was focused on the needs of the adolescents with Asperger's disorder and the difficulties they were facing. Over the course of this year and a half, the meetings took place under the coordination and supervision of a team of therapists, who attended to the meetings by turn.

Initially, the intervention programme had a weekly frequency, a duration of three to four hours and comprised three elements: a group-based training (which was attended to by all the adolescents and coordinated by one or two members of the therapists team), individual psychotherapy sessions and parent meetings. All of these took place at our clinic. **At the parents' and adolescents' requests**, throughout the therapy process, the participants also met outside the hospital, at the movies, at the mall and, also,

organized day-trips outside the city together. At some point, the frequency of the meetings increased, up to three sessions per week. When the pandemic started, the meetings were suspended for a period of two months, with a negative impact on the adolescents' mood.

The successful development of the therapeutic relationship in the group had three major pylons:

1. The physical space of our clinic offered a safe haven for the adolescents in the group. All of the participants had been previously admitted to the hospital and spent at least one week here. Therefore, they were already familiarized with the surroundings and the medical personnel.
2. Each of the adolescent established a close relationship with one of the members of the therapeutic team. Given the length of therapy process and the increase in the group meetings, the participants became very accustomed to the members of the team and started sharing their feelings, thoughts and worries with them.
3. The parents of the adolescents actively participated in the therapy process, ensuring its structuring and its unfolding.

The sessions had various topics: relationship to peers (encouraging positive interaction and collaboration), emotions (decoding, imitation and reciprocity, self-perception), non-verbal skills (social eye contact, posture and social distance, facial expression), cognition (cognitive flexibility, simulation, imagination, humour and theory of mind, problem solving skills), appropriate social behaviour, pragmatic language skills, adaptative skills and organizational skills (teaching the use of scheduling, rules or lists with "things to do").

The methods used for assessing the impact of the group intervention programme were: a self-report questionnaire, parents' assessments and behavioural observation by the therapists – coding the frequency and

duration of the participants' interactions and the degree to which participants initiate and/or respond to interactions.

STUDY DESIGN AND SAMPLE SIZE

The study sample included 10 adolescents aged 13-18 years who were diagnosed with Asperger disorder based on the International Classification of Diseases – 10th edition (ICD-10) criteria, who were previously admitted to the *Child and Adolescent Psychiatry Department* from “Prof. Dr. Alexandru Obregia” Psychiatry Hospital in Bucharest. The Childhood Autism Spectrum Test (CAST) and the Autism Diagnostic Observation Schedule (ADOS-2) were used to confirm the diagnosis. We used Raven's Matrices to measure their Intelligence Quotient and obtained a medium value of the study sample of 114.2, which is situated in the high average range (see Figure 1).

Their global functioning was assessed after a year and a half of being enrolled in a group-based social communication and interaction skills training, in comparison with their functioning before the intervention.

The first notable mention about these adolescents is the fact that nine out of ten of them were brought in by the police or by the ambulance on their first admission to the

hospital, with only one of them being voluntarily hospitalized. This is a very important aspect to take into consideration, because the reasons these teenagers were brought to the emergency department were substance abuse, hetero-aggressive outbursts, psychotic episodes and suicidal attempts; consequently, they were a threat to their own safety and their family's (see Figure 2).

Secondly, before being enrolled in this group-based intervention programme, four out of ten experienced school refusal behaviour and the other six were on the verge of it (see Figure 3).

School refusal behaviour is defined as “child-motivated refusal to attend school and/or difficulties remaining in class for an entire day, that manifests in students aged 5–17 years”. It can be considered to occur along a continuum, with different expressions, such as: repeated misbehaviours in the morning to avoid school, periodic absences or skipping of classes or complete absence from school during a certain period of the school year [9].

School refusal behaviour represents a frustrating situation for the adolescent, the family, and the teachers, and it is a serious public health concern. The early identification of this behaviour is of serious importance, thus helping prevent both short and

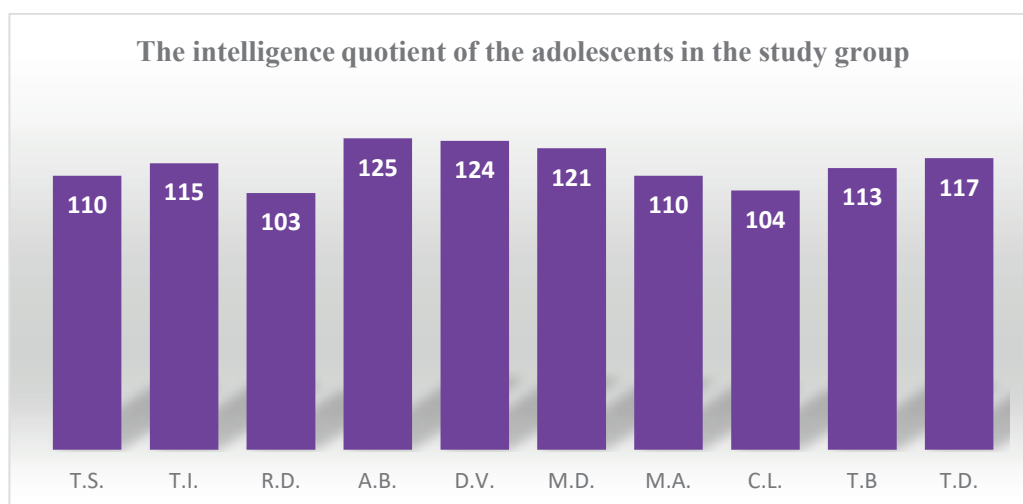


Figure 1 – The intelligence quotient scores of the participants of the therapy group

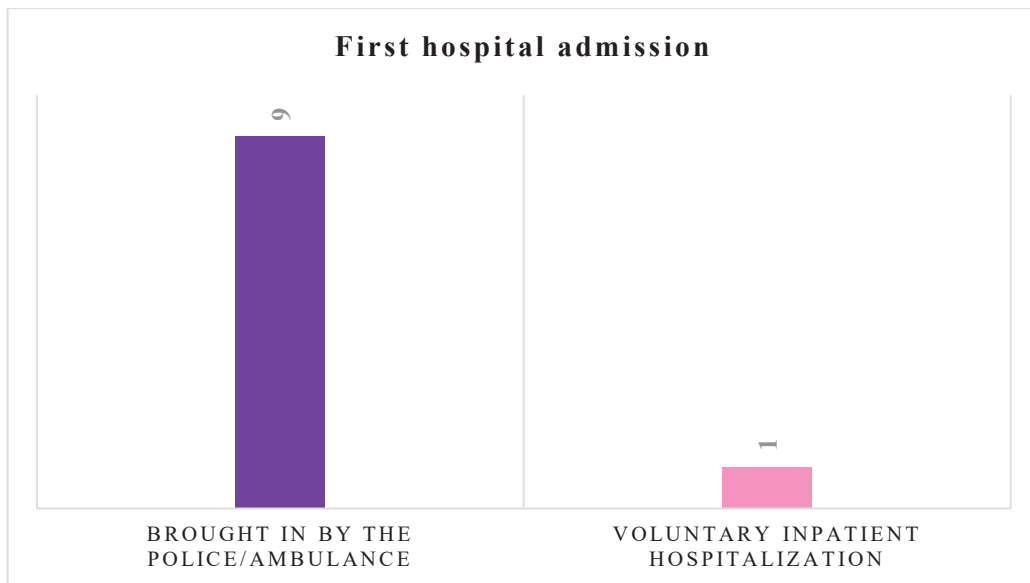


Figure 2 – First hospital admission of the adolescents

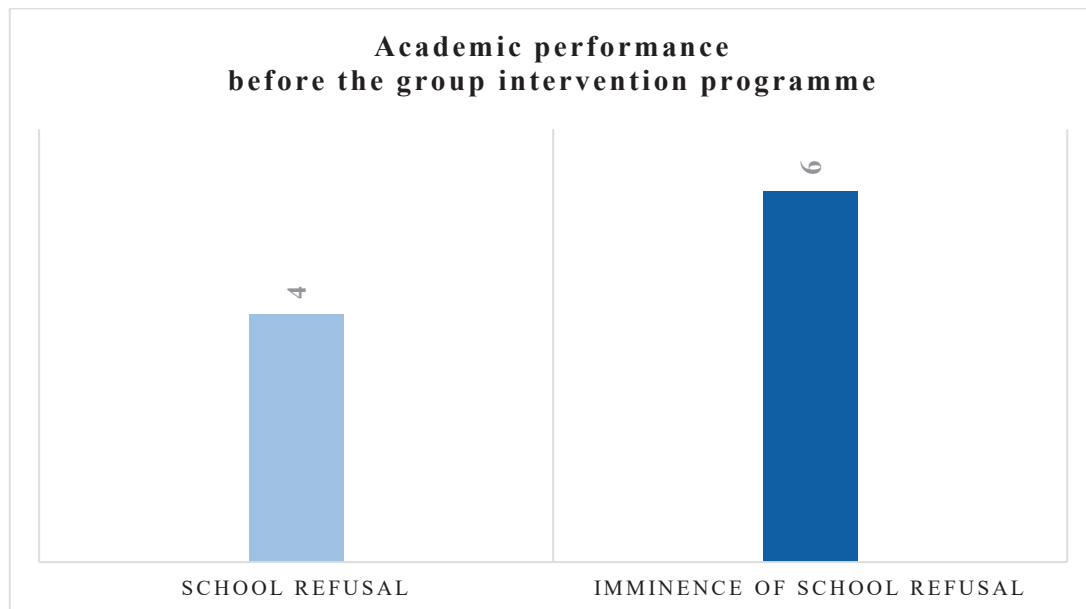


Figure 3 – The academic performance before the group intervention programme

long-term consequences. In the short term, failure to attend school may affect both academic and social achievement and attitudes towards school. The long-term consequences may negatively impact the students' academic, psychological, and social progress, and it may eventually put the student at risk for dropping out of school.

Last, but not least, all of them manifested isolation behaviour, spending most of their day in their room, playing games on the

computer or on their phone, refusing to leave the house for days. They also refused to have any sort of communication or engage in any kind of activity with their families or friends.

RESULTS

The present paper aimed to observe the evolution of ten adolescents a year and a half after the establishment of a therapy group, analyzing the influence that this group-based

intervention had on their quality of life and on some parameters of their functioning.

1. Social skills

The participants in the study reported an improvement following intervention in terms of social skills (such as cooperation, empathy, self-control and responsibility) and an increase in their motivation of engaging in activities with their families. These statements were confirmed by their parents and by the therapists in charge of the intervention.

2. Academic performance

Based on the adolescents', parents' and teachers' assessments, all of the students in the group have improved their academic performance, either in terms of school attendance, or in terms of grades. Moreover, it is worth mentioning that five of them passed their final examination after the 12th grade and two have been admitted to graduate studies. This is a remarkable progress for these students, being known that individuals with Asperger's have a hard time adapting to the education curriculum and teaching styles that do not accommodate their cognitive and sensory profile.

On one hand, being enrolled in this programme helped them cope with the anxiety and stress at school, giving them a sense of "being together in this", validating their emotions. On the other hand, they were taught adaptative and organisational skills which helped them comply to the study schedule and get better grades.

3. Quality of life

It goes without saying that all the improvements mentioned above had a significant impact on the adolescents' quality of life. Their overall outturn before the intervention was very low, most of them were spending their days inside the house playing games on the computer, listening endlessly

to music, not engaging in any activity that might benefit them personally or scholarly. Moreover, they self-isolated, refusing to spend time with their families or friends. Following the intervention, they started doing sports and pursuing hobbies and some of them got employed. During this year and a half, the adolescents met multiple times outside the group meeting for entertainment purposes and they made close friends.

DISCUSSIONS

Difficulties in social interaction are among the characteristic symptoms of Autism Spectrum Disorders (ASD). Individuals with Asperger's disorder, who do not have a significant cognitive deficit or language delays, often make substantial progress with psychotherapeutic interventions; communication skills can improve significantly and their repetitive behaviours may decrease with age, but their social inadequacy often persists and can significantly affect their quality of life.

The first study that provided a model curriculum and outlined the key points that should be addressed in group therapy was published by Krasny, Williams, Provencal și Ozonoff în 2003 in North America [10]. Among the first studies to provide detailed information about adolescent therapy groups and to analyze their level of satisfaction and impact on their development is a 2006 study from Norway, which described 3 such groups. When a satisfaction survey was conducted, the majority of the participants (76.5%) and almost all of their parents (95%) rated satisfaction with the group meetings as good or very good [11].

This result is consistent with the one we found in our study, all of the participants (100%) and the majority of their parents (80%) rating satisfaction with the group meetings as good or very good.. These responses indicate that adolescents with Asperger's syndrome and their parents perceive peer support groups as helpful.

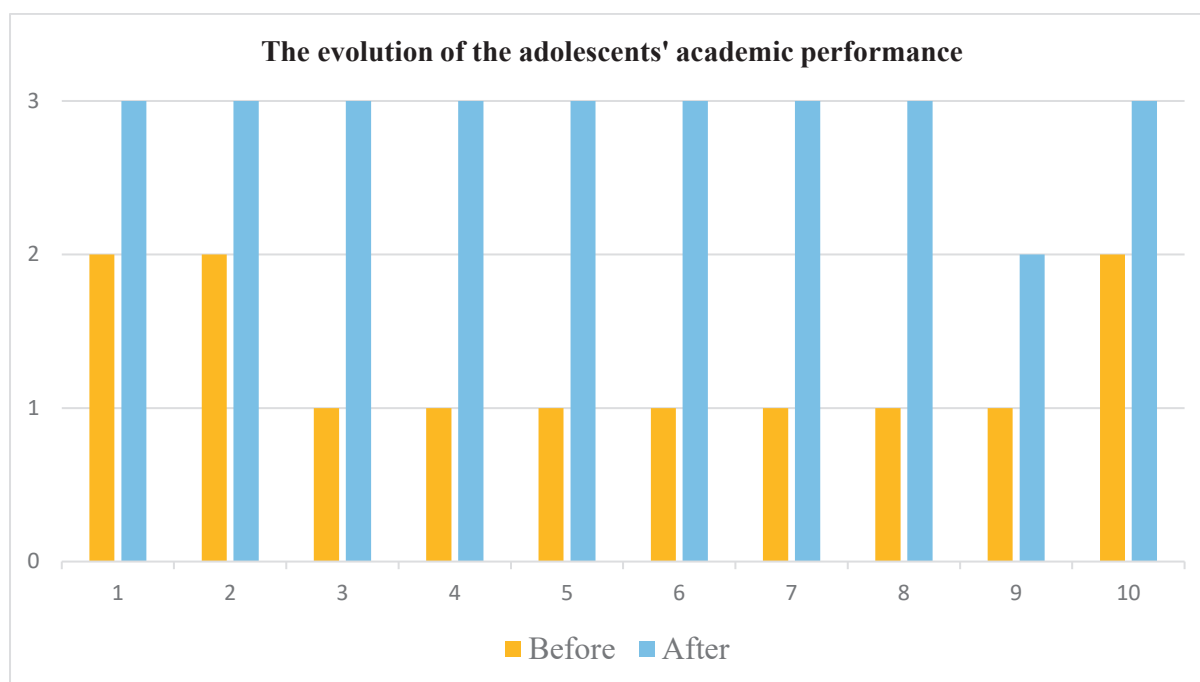


Figure 4 – The evolution of the adolescents' academic performance related to their enrolment in the group-based intervention programme: 1 = school absenteeism and/or failing classes; 2 = low grades; 3 = good school attendance rate and/or average or good grades

When a self-report questionnaire was applied, nine out of ten participants responded that during their first session, their motivation to interact with the others in the group was weak or very weak, whereas in the following sessions, ten out of ten stated their motivation was strong and very strong.

The improvement in academic performance is probably the most notable aspect that has changed after the intervention. School refusal behaviour is not an uncommon situation among adolescents with ASD, as a study from Norway reveals, students with ASD without intellectual disability having an increased risk for school refusal behaviour (42.6%), as compared to matched typically developing students (7.1%). Moreover, they found that students with ASD showed school refusal behaviour for a longer duration than did typically developing students [12] (see Figure 4).

Before the intervention, seven participants were manifesting school refusal behaviour or were failing classes and three

participants were reported to have low grades, whereas after being enrolled in the group-based programme, nine out of ten showed improved grades and good school attendance.

CONCLUSIONS

The international scientific literature provides evidence-based information about the effectiveness of group-based therapy programmes, so that they have recently become the intervention of first choice due to their positive impact on the development of social communication, on family and friendship relationships and on their social integration. How exactly these aspects can be influenced is, however, difficult to assess and quantify, thus, creating a structured group therapy program that works universally is a real challenge.

In Romania, however, this form of psychotherapeutic intervention for adolescents with Asperger's disorder is hardly ever used

and is relatively recently implemented in their therapeutic intervention.

The intervention we conducted at our clinic proved itself to be effective in the improvement of the quality of life of the participants. Some aspects were of critical importance in this favourable outcome. Firstly, it is a known fact that, because of their social impairments, individuals with ASD need their parents to facilitate their interactions with other people. Thus, the active involvement of their parents played a key role in the success of this therapy intervention. Secondly, another major regard is that, due to the development of their personal abilities during the individual therapy sessions, the self-esteem of the participants was boosted and they were more fit to interact and form solid relationships with the others. Last, but not least, of critical significance were the dyads that were formed during this year and a half of therapy : some of the adolescents in this group faced some difficult life situations (single-parent family, death of a relative, a parent with chronic diseases) and they received unconditional support from some other adolescent and his family; two of the participants helped directly another one in improving his scholar abilities in mathematics and history.

As directions for future research, it would be important to observe what participant characteristics could account for some part of the outcome. We also need to create and use more sensitive and standardized tools of assessing the intervention characteristics associated with efficacy of group-based interventions for adolescents with Asperger's disorder.

REFERENCES

1. Association, American Psychiatric. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. [ed.] American Psychiatry Association. s.l.: Arlington, 2013.
2. Frith, Uta. Autism and Asprger syndrome. Cambridge: s.n., 1991.
3. ADDM Community Report 2020. Centers for Disease Control and Prevention. [Online] [Cited: january 3, 2021.] <https://www.cdc.gov/ncbddd/autism/addm-community-report/documents/addm-community-report-2020-h.pdf>.
4. DuCharme, Raymond W and Gullota, P Thomas. Asperger syndrome. New York : s.n., 2013.
5. Willey, Liane Holliday. Asperger Syndrome in Adolescence: Living with the Ups, the Downs and Things in beteween. London: s.n., 2003.
6. Elliott, Stephen N. Malecki, Christine K. Demaray, Michelle K. New directions in social skills assessment and intervention for elementary and middle school students. *Exceptionality* 2001, 9, 19-32.
7. J. Wolstencroft, L. Robinson, R. Srinivasan, E. Kerry, W. Mandy, D. Skuse. A Systematic Review of Group Social Skills Interventions, and Meta-analysis of Outcomes, for Children with High Functioning ASD. *Journal of Autism and Developmental Disorders* 2018, 48, 2293-2307.
8. Marc R Woodbury-Smith, Fred R Volkmar. Asperger syndrome. *European Child and Adolescent Psychiatry* 2009, 18, 2-11.
9. A. Kearney. School absenteeism and school refusal behavior in youth: A contemporary review. *Clinical Psychology Review*, 2008, 28, 451-471.
10. Krasny L., Williams B.J., Provencal S., Ozonoff S. Social skills interventions for the autism spectrum: essential ingredients and a model curriculum. *Child and Adolescent Psychiatric Clinics of North America* 2003, 12, 107-122.
11. Are peer support groups for adolescents with Asperger's syndrome helpful? Weidle B., Bolme B., Hoeyland A. L. *Clinical child and adolescent psychiatry* 2006, 11, 45-62.
12. Munkhaugena E. K., Gjevikk E., Pripp A. H., Sponheim E., Trond H. Diseth T.H. School refusal behaviour: Are children and adolescents with autism spectrum disorder at a higher risk? *Research in Autism Spectrum Disorders* 2017, 41-42, 31-38.