

TEACHERS' VIEWS OF ACADEMIC ACHIEVEMENT AND COMMUNITY INVOLVEMENT OF STUDENTS WITH HIGH-FUNCTIONING AUTISM

STAVOVI NASTAVNIKA O AKADEMSKOM USPJEHU I UKLJUČENOSTI U ZAJEDNICU UČENIKA S VISOKOFUNKCIONIRAJUĆIM AUTIZMOM

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ABSTRACT

High-functioning autism is a pervasive developmental disorder whose prevalence is increasing nowadays. That opens the question about the success in the academic achievements of the students with high-functioning autism and the influence it has in their inclusion in all the aspects of everyday life. Research carried out in this field, shows that the students with high-functioning autism in all-inclusive schools achieve better academic success and therefore it is easier for them to adapt in the environment. The purpose of this research is to determine whether the inclusion, the awareness of the educators in the course of teaching the students with high-functioning autism and the collaboration with the special educators and parents, would benefit the improvement of the academic success. The research was carried out in all the elementary, secondary, public and private schools in the city of Skopje, including 115 participants throughout the period of one year. The results show that high-functioning autism students do not achieve the expected academic results throughout all the parts of education and they are not completely integrated in the community. According to the results of our research, we can conclude that even though our country provides complete inclusion of the students with high-functioning autism, the necessary conditions are not yet met to enable improvement in academic achievement and integration in society. The research was conducted with support of Questionnaire for assessing the awareness and attitudes of teachers about the academic achievement and inclusion in the community of persons with high-functioning autism and Asperger Test for Children. The interview technique was also carried out with some of the teachers from the mentioned schools.

Key words: High-functioning autism, Asperger syndrome, autism, autistic spectrum disorder.

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INTRODUCTION

The increasing number of people with autism spectrum disorder (ASD) and Asperger's syndrome (AS) imposes the need to provide conditions and appropriate education in educational institutions and educational staff. People with ASD/AS have an equal right to acquire an appropriate education, which will serve as a basis for further training and inclusion in community life. There is an increasing number of parents of children with AS who engage in the process of acquiring quality education and improving the conditions in educational institutions in order to meet the needs of their children. Children with AS, as a higher functioning form of autism, have better prospects for achieving solid academic success if appropriate inclusion criteria are met. As a result, researches related to the inclusive education of people with ASD can be found in the literature, but less often with an emphasis on the high-functioning form of autism or AS. One of the challenges in providing adequate education is the identification of children with AS, that is, the awareness of the educational staff regarding the disorder and their readiness for further teaching. Of course, here also comes the question of the readiness to enable the appropriate conditions within the institutions - schools as a factor for improving the academic achievements of people with AS. Quality education affects not only the possibility of employment, but also the fulfillment of the needs for social adaptation and belonging in the environment as the main human impulse. The process of education enables socialization that enriches the life of individuals and the realization of social interaction. Our country is one of the countries with inclusive education for people with ASD and AS, which allows insight and monitoring of their academic progress. The attitude of the teachers, as persons who continuously monitor the academic progress, which is of special importance in understanding the actual situation in relation to what are the results of achieving the desired academic success. Since they are in a direct relationship with the students, as experts in their field they can provide the best insight into all the factors that affect the education process and also provide guidance for improving the methods and techniques for achieving better academic success for students with AS.

MATERIAL AND METHODS

The subject of this research is to determine if and how informed teachers are about students with high-functioning autism and what are their attitudes about their academic achievements and community involvement. At the same time, we check the attitudes of teachers regarding students with high-functioning autism in regular schools and whether the attitudes affect their investment in achieving better academic success and, consequently, the opportunity to gain employment and function normally in society. Research checks whether there are adequate conditions for the inclusion of students with HFA in regular schools, and checks the opinion of teachers whether awareness is sufficiently developed among students with typical development that would allow a pleasant atmosphere for the smooth running of teaching when including students with HFA.

The research sample consists of teachers from primary and secondary schools, from state and private schools in the territory of the city of Skopje.

Questionnaires and interviews were sent to 16 schools in the territory of the city of Skopje, where the total number of teachers is approximately 800 people.

115 respondents were included in the research, with 97 of the respondents working in public schools and 18 in private schools. Also, the majority of respondents are employed in primary schools, while only 28 respondents answered from secondary schools. Furthermore, in relation to elementary schools, respondents from both grade and subject teaching are included.

A qualitative and quantitative approach was applied in the research. For the research we have used descriptive method to describe the stance of the teachers against the academic success and community integration of the studnets with AC. Also, we apply the induction method to conclude general conclusions from the individual knowledge of the participants.

One of the instruments with which the research was carried out is the Questionnaire for assessing the awareness and attitudes of teachers about the academic achievement and inclusion in the community of persons with high-functioning autism. The questionnaire consists of 27 open-ended questions and questions with alternation. The questionnaire provides insight into the attitudes of teachers, and above all, into the awareness of high-functioning autism and the possibility of academic success. Another useful instrument is the Asperger Test for Children, which consists of five separate sections in the areas of (1) communication, (2) observational skills, (3) behavioral, sensory, and motor skills, (4) social interaction, and (5) personal interests. The questions are of a multiple nature and provide insight into the delineation of similarities and differences among students with autism and Asperger's syndrome.

The interview technique was also carried out with some of the teachers from the mentioned schools. The interview consisted of questions related to the objectives of the research, in order to obtain a more extensive explanation regarding the topic.

RESULTS AND DISCUSSION

Regarding the question of whether teachers are familiar with the term ASD, the majority of respondents answered that they are familiar with the term, but when asked whether they are familiar with the term AS, the percentage differs significantly. That is, most respondents do not differentiate between the terms ASD and AS as two different disorders. When defining the term AS, a large percentage of teachers identify it as a communication and socialization disorder, equating it with the term ASD. About 20% of teachers define the term AS as an intellectual disability. The same percentage believe that it is a disorder characterized by a lack of empathy and emotional maturity and the inability to establish relationships. 5% of them give the definition that they are children who live alone in their own world. Hence, we can observe that the majority of teaching staff are not familiar with the term high-functioning autism and the skills that students with AS have. The lack of awareness certainly affects the possibility to first of all recognize the condition at an earlier age, which would further refer the students to evaluation by the appropriate special educators and institutions. The lack of formal or informal training for getting to know the condition of students with highfunctioning autism further contributes to the failure of strategies for educating those students who need specific strategies. Half of the teachers, when asked if they were able to recognize

students with AS, answered negatively and two-thirds of them answered that they had never attended any training for working with students with AS. When asked whether all teachers should undergo training for working with people with ASD/AS, 100% of teachers answered in the affirmative. That attitude itself clearly indicates the need to conduct training for teachers in order to achieve better results in the academic success of students with AS.

However, with the help of a t-test for the significance of differences, it can be determined that there are no differences between the two compared groups in terms of the academic success of the students, that is, the hypothesis was not confirmed.

Table 1. Significance of differences between the two groups of respondents in terms of awareness

	Degree of awareness	M	SD	p
Awareness	Yes	13.38	1.39	p>0.05
	No	13.50	1.63	

The results of the analysis show that there is no statistically significant difference in the level of awareness between the two groups of respondents (informed and uninformed), because their average values (13.38 and 13.50) are very similar, and the p-value is greater than 0.05, which means that the difference is not is significant.

Almost all respondents stated that they were willing to work with students with AS and that they would not mind being included in the class. The small percentage who answered negatively give mainly two explanations why they think they should not be included in regular classes. That is, one reason is that the teaching will not be able to proceed smoothly and they believe that it will be to the detriment of all the participants in the class. The other reason is that there will be no effect in learning the material for students with AS because for them it is necessary to learn "one on one" how the education would have an effect. It is necessary to have a special educator and rehabilitator during the lesson, who could devote himself completely to the student, because the teacher will not be able to devote enough attention to the implementation of the curriculum for students with typical development and especially for students with AS .

The fact that the majority of teachers have not received any training or are informed about high-functioning autism, indicates that they do not know strategies that would help students master the material more easily. Consequently, teachers use the same teaching methods for people with AS as they do for students with typical development.

Using a t-test for the significance of differences, it can be determined that there are no differences between the two compared groups (teachers in private or public schools) regarding whether they know strategies for working with HFA.

Table 2. Significance of differences between the two compared groups in terms of knowledge of techniques for working with HFA

	Work with HFA	M	SD	р
Work with HFA	Yes	11.18	1.49	p>0.05
	No	11.10	1.43	

The results of the table show that there is no statistically significant difference in the knowledge of techniques for working with HFA between the two groups of respondents (those who have and those who do not have knowledge), because their average values (11.1889 and 11.1093) are very similar, and the p-value is greater than 0.05, which means that the difference is not significant.

The views of teachers who had students with high-functioning autism, regarding the achieved success, are partly divided. The majority of the teachers believe that the students have no problem with understanding the tasks and the basic principles of mastering the material. Students with HFA are quite capable of understanding and completing assigned tasks and learning material. They prefer subjects such as mathematics and languages, and show the least interest in the subject of history. They are particularly uninterested in subjects such as physical education that require involvement in team activities.

According to research, the majority of students like to talk a lot and have no problem engaging in a discussion on a different topic. The results are divided in terms of their fixation on certain topics. Also, the majority of teachers say that students do not have a problem or are indifferent when changing the topic or task, but there is resistance when changing routines or schedules.

In the conducted interviews with teachers who taught students with HFA, the prevailing fact is that students can achieve solid success, achieving better results in the subjects that are interesting to them, while failing in others. In terms of whether they achieve the expected results in relation to children with typical development, the prevailing view is that in primary schools they manage to achieve the desired academic success, but this is more difficult to achieve during secondary education. According to them, a smaller percentage of students with HFA manage to obtain a diploma of completed secondary education, and perhaps only 1% with higher education. Students with high-functioning autism are able to understand and perform tasks, learn the material, and thus achieve the expected results.

Regarding the question of whether students with high-functioning autism are sufficiently involved in social events in the community, 95% answered negatively. The teachers believe that there is not a sufficient number of cultural and social events where people with ASD/AS can be included as active members.

The attitude they expressed during the research shows that students with AS are not involved in school activities and that their students prefer to spend time in a home atmosphere, mostly reading. Opinions about whether their students want to meet new people are divided. That is, they believe that even when they want to meet someone, there is a strong feeling of anxiety and insecurity at the beginning, which may disappear later.

In the interviews that were conducted, a large part of the teachers expressed their opinion that it is necessary for the state to organize a greater number of events aimed at raising public awareness regarding people with AS and also to organize events adapted to their needs. The prevailing view is that if a greater number of social events and school activities adapted to the needs of students with HFA are made possible from the beginning of school age, it will result in easier socialization and making friends and adaptation in society.

According to them, the current situation does not allow them to improve their participation in the social environment and improve their socialization. 80% of the teachers think that

children with AS have no friends at all, and the remaining percentage think that they can make at most 2 friends during their life.

The results show us that to the greatest extent the individual approach and customized programs contribute to the inclusion of children with HFA and will contribute to better socialization.

Regarding the provision of physical conditions intended for the needs of students with AS, the prevailing view is that those conditions are not met. First of all, the schools do not have the appropriate didactic materials that the students may need, such as, for example, visual layouts, maps, special corners intended specifically for them, etc.

Furthermore, students with AS are often hypersensitive or hyposensitive to certain sensory stimuli from the environment, which requires adaptation in classrooms. The opinion of all the teachers involved in the research is that the schools do not provide the appropriate conditions and are not able to do so. That is, the schools are not equipped with the necessary conditions for lighting, or suppression of external sounds that could disturb the students. The conditions for inclusion in external physical activities have not been met.

Most importantly, regarding the issue of whether all schools are provided with adequate professionals ready to work daily throughout the entire teaching process with students with AS, the views completely agree on the lack of special educators. Half of the respondents answered that there is no special educator and rehabilitator in their school, regardless of the fact that the full inclusion of students with AS implies the provision of a special educator as support for children with autism spectrum disorder. Teachers lack strategies for working with this category of students and the lack of teacher training makes it impossible to achieve the desired results in improving academic success. When asked if there are enough resources and professional staff to work with students with AS, 97% answered negatively. The data show that teachers generally have a negative attitude regarding the systemic readiness of schools and teaching staff to work with students with HFA.

Research shows that in terms of social interaction, students with AS, despite loving being in company and wanting to talk all the time, fail to always understand social rules of behavior. Namely, students do not recognize when their classmates want to change the topic of conversation and fail to recognize their emotions. Opinions are divided on whether the student enjoys receiving attention from the teacher and classmates, but the prevailing opinion is that students prefer to be alone than in a group.

The teachers, in a larger number, believe that students with AS are well received by their classmates and help them in teaching, but even then, a large number of them assume that students with AS very often feel lonely and rejected. This is probably due to the fact that they still fail to get involved in social games and activities outside of school.

Opinions regarding employment opportunities for people with AS are split in half. Half of the respondents believe that students with secondary education have equal rights in the employment process. They believe that if people have the appropriate qualifications and are capable of work, they can get employment. According to them, regardless of legal regulations, every person should have the opportunity to be an active member and contribute to the good of society. Some of the respondents believe that people with AS do not have equal rights in the employment process. Some of them believe that the problem lies in the fact that in our country, above all, people with AS do not have equal rights in the

employment process, while the rest say that even if they have equal rights, there are few companies that agree to provide suitable employment for them.

The position on which it is based refers to the fact that employers are not sufficiently informed about the term AS and at the same time consider that persons with high-functioning autism would not have the appropriate skills to perform their work tasks. The prevailing view is that even though people with AS have obtained a diploma for completed education, the academic success does not correspond to the skills and knowledge they possess.

One of the more significant studies in the field of education for people with ASD/AS is the research conducted by Vicky G. Spencer and Cynthia G. Simpson in 2009. Their research includes a number of teachers, special educators, parents of children with high-functioning autism, and experts who have spent years working with children with HFA. An analysis of the data collected from interviews and questionnaires was used, and the research itself offers a series of strategies and methods with which a greater effect can be achieved in the education of students with AS. The results of the research come down to the fact that cooperation between teachers, special educators and parents is essential in the education and success of students with AS. Executive functions (planning, problem solving, memory, generating ideas and thoughts) are usually impaired in children with AS. Standardized tests are intended to assess the level of performance of executive functions, which will help teachers in creating an individual plan. Spencer and Cynthia suggest that curriculum is essential because it is a prerequisite for a child's academic success. Considering that every child is different, it is necessary for the teacher to get to know the child, in terms of the way of studying the material, topics of interest and way of socialization. The evaluation should be conducted in an environment that is familiar to the child with HFA/AS, or if the classroom is changed, it should be modified beforehand according to the student's needs. Also, the student should get to know all the people involved in the evaluation. When developing the individual plan, certain issues should be taken into account, such as: how much time does the student with HFA need to complete the tasks compared to other students, which aspects of the disorder prevent the student from mastering the material, are there progress over standard material.

The suggested strategies refer to the instructions, which should be clear and precise, and presented at an appropriate pace to keep the child's interest. The pleasant working atmosphere, as well as the teacher's enthusiasm regarding the realization of the subject of the lesson, are of particular importance for the student with HFA.

Mastropieri and Scruggs (2007) suggest that teachers implement the PASS variables to promote learning in an inclusive environment. PASS includes the following: 1) Prioritizing goals, 2) Adapting instruction or the environment, 3) using Systematic Instructional Variables (SCREAM), and 4) implementing Systematic Evaluation Procedures. (Spencer, Cynthia, 2009)

Other strategies refer to using visual aids (maps, globes, videos, pictures) that will help to remember the material more easily. The strategy of using their gifts and strengths refers to the implementation of topics of interest to the student with AS when solving everyday tasks. Acquaintance of classmates with the term AS/HFA should start from an early age, in order to create a pleasant atmosphere for working in the classroom and socializing with the student with HFA. Also included are strategies for transition (preparation and adjustment for

transferring to another classroom or school) as well as encouraging independence in performing daily tasks for more successful independent functioning in the future.

Another significant study was conducted by Mesibov, Shea, and Adams in 2001 that focused on delineating high-functioning autism or Asperger's syndrome and on strategies for teaching individuals with AS. Data were collected from a ten-year follow-up and evaluation of people with AS by experts in the field. The results of their research show that students with highfunctioning autism have great potential for learning the skills and understanding they need to function productively as adults. It is possible only with appropriate directions, strategies and modification of environmental factors. Early intervention is one of the key factors in the future academic success of children with HFA. According to their research, in preschool age it is necessary to make a developmental evaluation through a team of pediatrician, occupational therapist, psychologist and speech therapist as well as an interview with parents and caregivers. The strategies that have been suggested relate to the way of giving instructions (clarity, precision and pace), adjusting the environment in terms of sensory stimuli and taking advantage of their talents and interests. During the school age, special attention should be paid to creating a pleasant atmosphere for work and socialization in a way in which the student will feel accepted and where he will be able to use his skills to the maximum. Using social stories is very helpful in introducing AS students to social rules. From an educational point of view, modifications are needed in the testing and the expectations for the achieved results. Communication disorders and the complex way of speech and expression are a challenge for students with HFA. Visual aids and writing some more complex information on the board can help the learning process. The individual teaching plan as well as the strategy for the organization of the daily schedule and the organization of the material (preparation of utensils, marking of all textbooks and notebooks) are part of the strategies for a more successful realization of the material. Regarding behavioral and emotional problems, cognitive therapy is one of the strategies to calm anxiety. The student should have the opportunity to turn to a special educator or therapist if he needs to calm down and retreat to "his corner", specially designed for the needs of students with AS. Older students can practice other types of strategies to deal with anxiety and stress, such as slow breathing, counting, meditation by visualizing a happy place, and so on. Since very often students with AS use the technique of reformulating statements and know how to bypass criticism (for example, I didn't run, I walked fast), a good strategy is to have a written schedule and rules ready that can be pointed out in a situation where students get distracted from the task.

J. Sansosti, A. Powell-Smith, J. Cowan's 2010 research on high-functioning autism/Asperger syndrome in schools provides a detailed account of methods for improving and developing the academic, behavioral, and social achievement of individuals with AS. They emphasize, above all, the need for cooperation between parents, educators and everyone involved in the education process of students with high-functioning autism, emphasizing the fact that parents are still the primary teachers of people with ASD. And they list certain strategies that would improve the academic success of students with HFA. The main concepts are similar to the strategies mentioned by previous authors, such as the strategy for the presentation of tasks. That is, the instructions should always be clear, precise and their explanation should not be too long or too short, which would confuse the child. Instructions for more complex tasks

should be presented in smaller chunks and with breaks. Communication with teachers facilitates the performance of executive functions. Teachers should first check that students understand the instructions by asking them to repeat them and if necessary repeat them several times or write them down. They may also use visual aids and ensure that the environment is suitable in terms of sensory stimuli. Preparation is a particularly important strategy.

The goals of preparation are to: 1) increase student ability, 2) familiarize the student with the material, 3) reduce frustration and anxiety, and 4) allow exploration of concepts before instruction is given. (Sansosti., Smith., Cowan, 2010).

A good strategy for completing projects and assignments is to break them into smaller chunks, maximizing the amount of time a student with AS needs to be focused on the task before losing interest. Until one task is completed, a new one is not started, and appropriate aids such as digitrons, maps and even recording the material can be used, because it is often easier to remember the audio information than the written one. A detailed account is given of strategies for improving writing and reading comprehension skills, as well as strategies for studying other subjects such as chemistry and mathematics. According to their research, the results show that students with HFA/AS when using these strategies show better academic success.

It is interesting to mention Hugo & Hedegaard's research conducted in 2018 where, using the interview technique, 21 students with high-functioning autism were questioned about their experience in high school in Sweden. Positive results were obtained from the conducted research regarding the inclusion of students in secondary school. This was due, first of all, to the good acceptance by all students and staff, the interest and attitude of the teachers, as well as to the well-prepared teaching plan. The emphasis of the implementation of teaching is placed on two main components: teachers who devote themselves to each individual separately and try to get to know their needs and way of teaching and learning through an individual plan designed for the needs of each special student. In accordance with that, the strategies of creating a safe environment, support systems, internships and contact with employers and independent living are applied. In their experiment, maximum attention is paid to each student with high-functioning autism, and in fact the entire environment adapts to them. A particularly important factor contributing to the motivation of students with HFA is the good acceptance by their classmates and the fact that they felt like they belonged in the environment. The research shows that the conditions that allow providing a pleasant environment, where teaching is adapted to the needs of students with HFA with all services and educators familiar with individualized teaching, allow a significant improvement in academic achievements.

Research presented in Social Skills Success for Students with Autism/Asperger's (Helping Adolescents on the Spectrum to Fit In) conducted by Frankel and Wood in 2011 elaborates in great detail the educational role in improving the academic achievement of students with autism and AS, putting emphasis on social skills. Three models of inclusion were analyzed: full inclusion in a special class for students with AS in regular schools, partial inclusion and full inclusion with a special educator who is involved in teaching throughout the school day. Furthermore, they describe many and varied strategies for improving students' social skills, which then contribute to improving overall success. The main emphasis is placed on

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interacting with classmates and managing social skills. Classmates are one of the most important factors in the development of social skills, which is achieved through awareness of students about AS/ASD, starting with the formation of appropriate work groups that will best affect their success, through exercises to engage in trivial conversations and choosing friends. Interventions are also planned to improve idioms and sarcasm, with constant repetition leading to a gradual understanding of meaning and even when they can be used. Also, the use of strategies to reduce anxiety and stress in the school environment is an important factor that contributes to their success and is elaborated in more detail in the research. The results of the research show that students with AS included in regular classes show more developed social connections and build more complex friendships over time if they are exposed to interaction with students with typical development. Although, that alone is not enough for full integration in social life. According to the parents involved in this research, even when social skills improve, children with AS fail to form long-lasting friendships and are more often rejected than typically developing children.

CONCLUSION

Students with high-functioning autism do not achieve the expected results in all stages of education. Although during elementary school they can achieve solid results in learning, however, in the process of secondary education, the expected academic success is not achieved. Students with high-functioning autism are not fully integrated into the community, that is, they have difficulties in socialization, which leads to a lack of building friendships. There is a lack of social events organized by the state that would enable better socialization for people with high-functioning autism, and would also raise public awareness of the condition. Teachers are not sufficiently informed about the term high-functioning autism/Asperger's syndrome, which leads to more difficult recognition of students at the earliest school age, as they would then be recommended for further evaluation by professional services. Only a small percentage of school teachers differentiate between the terms ASD and AS, which also makes it impossible to recognize students with highfunctioning autism. Teachers who have undergone informal training are better acquainted with the needs of students with high-functioning autism and can more easily recognize them during teaching from an earlier age. Teachers with ASD/AS training also know more strategies and methods for working with these students, which contributes to achieving better results. The teaching staff in the schools in the city of Skopje believe that our schools are not sufficiently prepared to provide the necessary conditions for holding classes with full inclusion of students with high-functioning autism. Not all the necessary environmental factors are provided in the classroom, as well as the appropriate adaptations in physical accessibility and access to information and communication. Teachers believe that schools do not have a sufficient number of trained staff and professionals who could work daily with students with high-functioning autism. There is not a sufficient number of special educators and rehabilitators in schools during the teaching period who will offer specific strategies for working with students. The attitude of the teachers in relation to the prepared curriculum is that the educational system has not yet implemented a suitable program and readiness to prepare an individual curriculum for each individual student with AS, which could be their

direction in the way of teaching and at the same time ensure better academic achievement. A positive working atmosphere can be ensured in the school by classmates. Classmates have an understanding of the needs of students with high-functioning autism and in most cases provide help to their classmates during lessons and board games. But students with highfunctioning autism, despite this, often feel rejected and different from their peers. Socialization and building friendships is simpler and easier to achieve if people with highfunctioning autism are included in regular schools. Employment represents a greater challenge for students with high-functioning autism who have obtained a diploma for a completed education. That is, only a small percentage manage to get a job and keep a longterm employment. Impediments in socialization and communication are the main contributing factor. Employers in our country are not ready to offer jobs in their companies for people with AS, primarily because of their lack of information regarding the characteristics of people with AS. Workers are not ready to meet all the conditions for securing jobs for people with AS. The cooperation between teachers, special educators and parents of students allows achieving better results in the process of academic achievement and involvement in the community. Socialization, public awareness and acceptance by all members of the community contributes to better adaptation of people with HFA and the possibility of better functioning in all spheres of everyday life.

The main findings point to the following recommendations:

- To provide training on strategies and methods for working with students with high-functioning autism for all teachers in primary and secondary, and private and public schools.
- To introduce a subject for getting to know and studying strategies for working with students with ASD/AS during the study of higher education within the profession of graduate professors.
- Care should be taken during the process of hiring the teaching staff in relation to the obtained diploma and the readiness to perform the work tasks.
- To conduct training for the entire educational staff involved in the education process, as well as the entire staff in the school for familiarization with the basic principles of socialization for students with HFA.
- To enable the partial inclusion of students with HFA in regular schools, after a prior evaluation in cooperation with special educators and the students' parents, if for justified reasons it is in the best interest of the specific student.
- To enable early, comprehensive professional orientation, which will enable encouragement and motivation of young generations when choosing a profession.
- All schools should be provided with the necessary environmental conditions, aids and didactic material for work that are necessary for students with SEN. Be careful in creating a pleasant working atmosphere in the classroom in terms of sensory integration.
- To ensure a positive working atmosphere between classmates. Teachers and parents should familiarize children with typical development about the condition of students with HFA and build an atmosphere of understanding and tolerance.
- To conduct workshops in which classmates will be informed about the different types of disorders and learning disabilities and to teach them how to build friendships and socialize with classmates.

- To provide a safe corner adapted for students with HFA where they can retreat in case of excessive anxiety and stress, where they would be able to calm down.
- The state should provide work programs and strategies for full inclusion of students with HFA. To provide a detailed plan for the planned strategies and methods in cooperation with the special educators in the country.
- To organize social events that will enable better socialization of people with HFA, and will also contribute to raising public awareness.
- To organize social activities within the schools that will be adapted to the needs and in which students with HFA can participate.
- The state should offer financial compensation and other subsidies to all employers who would employ a person with HFA in their companies.
- To define the legal regulations for fulfilling all the conditions necessary for the smooth performance of the work by the person with HFA in the company.
- The state should provide work positions for all persons with HFA who will obtain a diploma for completed secondary and higher education.
- To enable cooperation between educational institutions, the special educator in the school, teachers and parents in order to create an individual curriculum for each individual student adapted to his needs that will contribute to better academic success.
- Cooperation between parents and educators in the formation of strategies to minimize unwanted behavior in students with HFA, in a state of anxiety or aggression.
- Cooperation between parents, teachers and the special educator and rehabilitator in the formation of strategies and methods for more successful socialization and adaptation among students..

REFERENCES

- 1. Bishop, S. (2012). The experiences of siblings of children with autism. Stellenbosch University.
- 2. Brown, M.H. (2013). Academic Achievement of Children and Adolescents with HighFunctioning Autism Spectrum Disorder with In-Depth Focus on Written Expression. Western University: The school of graduate and postdoctoral studies.
- 3. Busch de Ahumada, L.C.; Ahumada, J.L. (2017). Contacting the Autistic Child. London and New York: Routledge.
- 4. Carpenter, L. A., Soorya, L., and Halpern, D. (2009). Asperger's syndrome and high-functioning autism. Pediatric Annals 38, 30–35.
- 5. Canavan, C. (2015). Supporting Pupils on the Autism Spectrum in Secondary Schools. London and New York: Routledge.
- 6. Chez, G.M. (2008). Autism and its medical management: A Guide for Parents and Professionals. London and Philadelphia: Jessica Kingsley Publishers.
- 7. Chiang, H.; Lin, Y. (2007). Mathematical ability of students with Asperger syndrome and high-functioning autism: A review of the literature. Autism, 11(6), 547–556.
- 8. Chilvers, R. (2007). The Hidden World of Autism Writing and Art by Children with High-functioning Autism. London and Philadelphia: Jessica Kingsley Publishers.

- 9. Dijkhuis, R. and co. (2020). Autism Symptoms, Executive Functioning and Academic Progress in Higher Education Students. Retrieved from: https://link.springer.com/article/10.1007/s10803-019-04267-8
- 10. Feinsten, A. (2010) A history of autism: Conversations with the Pioneers. London: Wiley-Blackwell.
- 11. Fitzpatrick, M. (2009). Defeating autism A damaging delusion. London and New York: Routledge Taylor and Francis Group.
- 12. Frankel, F.; Wood, J.J. (2011). Social Skills Success for Students with Autism/Asperger's Helping Adolescents on the Spectrum to Fit In. San Francisco, CA: Jossey-Bass.
- 13. Gabriels, R.L.; Hill, D.E. (2007). Growing Up with Autism. New York: The Gilford Press.
- 14. Green, L. (2013) The Well-Being of Siblings of Individuals with Autism. Retrieverd from: https://www.hindawi.com/journals/isrn/2013/417194/.
- 15. Hugo, M.; Hedegaard, J. (2018). Inclusion through folk high school in Sweden the experience of young adult students with high-functioning autism. Retrieved from: https://www.tandfonline.com/doi/full/10.1080/09638288.2020.1717651
- 16. Hollander, E.; Anagnostou, E. (2007). Clinical Manual for the Treatment of Autism. London, England: American psychiatric publishing, Inc.
- 17. Jensen A. (2005). When Babies Read A Practical Guide to Help Young Children with Hyperlexia, Asperger Syndrome and High-Functioning Autism. London and Philadelphia: Jessica Kingsley Publishers.
- 18. Johnson, J.; Rensselaer, V. A. (2008). Families of adults with autism: Stories and Advice for the Next Generation. London and Philadelphia: Jessica Kingsley Publishers.
- 19. Keen, B.; Webster, A.; Ridley, G. (2016). How well are children with autism spectrum disorder doing academically at school? An overview of the literature. Retrieved from: https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=&httpsredir=1&article=3226&context=sspapers
- 20. Keen, D.; Meadan, H.; Brady, C.N.; Halle, W.J. (2016). Prelinguistic and minimally verbal communicators on the autism spectrum. Singapore: Springer.
- 21. Keenan, M.; Henderson, M.; Kerr, P.K.; Dillenburger, K. (2006). Applied behaviour analysis and autism: Building a future together. London and Philadelphia: Jessica Kingsley publishers.
- 22. Kurth, A.J.; Mastergeorge, M. A. (2010). Academic and cognitive profiles of students with autism: implications for classroom practice and placement. International journal of special education Vol 25 No 2 2010.
- 23. Kurtz, L.A. (2008). Understanding Controversial Therapies for Children with Autism, Attention Deficit Disorder, and Other Learning Disabilities. London: Jessica Kingsley publishers.
- 24. Kurtz, L.A. (2008). Understanding Motor Skills in Children with Dyspraxia, ADHD, Autism, and Other Learning Disabilities A Guide to Improving Coordination. London and Philadelphia: Jessica Kingsley publishers.
- 25. Lang, R.; Hancock, B.T.; Singh, N.N. (2016). Early Intervention for Young Children with Autism Disorder. Switzerland: Springer.
- 26. Lincoln, A.J.; Courchesne, E.; Kilman, B.A.; Elmasian, R.; Alen, M. (1988). A study of intellectual abilities in high functioning people with autism. Journal of Autism and Developmental Disorders 18, 505–524.

- 27. Luiselli, J.K and co. (2008). Effective practices for children with autism. New York: Oxford University Press.
- 28. Luiselli, J.K. (2011). Teaching and behavior support for children and adults with autism spectrum disorder. New York: Oxford University Press.
- 29. Lundine, V.; Smith, C. (2006). Career Training and Personal Planning for Students with Autism Spectrum Disorders. London and Philadelphia: Jessica Kingsley Publishers.
- 30. MacKenzie, H. (2008). Reaching and Teaching the Child with Autism Spectrum Disorder. London and Philadelphia: Jessica Kingsley Publishers.
- 31. Magyar, C.I. (2011). Developing and Evaluating Educational Programs for Students with Autism. New York: Springer.
- 32. Matson, J.L. (2008). Clinical Assessment and Intervention for Autism Spectrum Disorders. London: Elsevier.
- 33. Miller, A.; Chrétien, K. (2007). The Miller Method Developing the Capacities of Children on the Autism Spectrum. London and Philadelphia: Jessica Kingsley Publishers.
- 34. Miller, E. (2008). Autism through art the girl who spoke with pictures. London and Philadelphia: Jessica Kingsley Publishers.
- 35. Miller, L. (2010). Practical Behaviour Management Solutions for Children and Teens with Autism. London and Philadelphia: Jessica Kingsley Publishers.
- 36. Mesibov, G.B.; Shea V; Adams, L.W. (2002). Understanding Asperger Syndrome and High Functioning Autism. New York: Kluwer Academic Publishers.
- 37. McDougal, E.; Riby, M.D.; Hanley, M. (2020). Profiles of academic achievement and attention in children with and without Autism Spectrum Disorder. Retrieved from: https://www.sciencedirect.com/science/article/pii/S0891422220301797
- 38. Moreno, S. (2018). A Teacher's Brief Guide to Teaching More Advanced Students on the Autism Spectrum. Retrieved from: https://www.iidc.indiana.edu/irca/articles/a-teacher-s-brief-guide-to-teaching-more-advanced-students-on-the-autism-spectrum
- 39. Osteen, M. (2008). Autism and representation. New York, London: Routledge taylor and Francis Group.
- 40. Palmer, A. (2006). Realizing the College Dream with Autism or Asperger Syndrome A Parent's Guide to Student. Success. London and Philadelphia: Jessica Kingsley Publishers.
- 41. Palvides, M. (2008). Animal-assisted interventions for individuals with autism. London and Philadelphia: Jessica Kingsley Publishers.
- 42. Quinn, C. (2006). 100 Questions and Answers about autism: expert advice from a physician/parent caregiver. Sudbury, Massachusetts. Boston Toronto London Singapore: Jones and Bartlett publishers.
- 43. Ritvo, E.R. (2006). Understanding the Nature of Autism and Asperger's Disorder. London: Jessica Kingsley publishers.
- 44. Sansosti, F.J; Powell-Smith, K.A; Cowan, R.J. (2010). High-Functioning Autism/Asperger Syndrome in Schools. New York: The Guilford Press.
- 45. Silverman, S. M.; Weinfeld, R. (2007). School success for kids with Asperger's syndrome. Texas: Prufrock Press.
- 46. Silverman, C. (2012). Understanding autism Parents, Doctors, and the History of a Disorder. Princeton and Oxford: Princeton university press.
- 47. Spears, C.L.; Turner, V.L. (2011). Rising to New Heights of Communication and Learning for Children with Autism The Definitive Guide to Using Alternative-

- Augmentative Communication, Visual Strategies, and Learning Supports at Home and School. London and Philadelphia: Jessica Kingsley Publishers.
- 48. Spencer, V.G.; Simpson, C.G. (2009). Teaching children with autism in the general classroom. Texas: Prufrock Press Inc.
- 49. Volkmar, F.R.; Paul, R.; Klin, A.; Cohen, D. (2005). Handbook of Autism and Pervasive Developmental Disorders. New Jersey: John Wiley & Sons, Inc.
- 50. Williams, D. (2016). Teaching Children with High Functioning Autism What Teachers Understand About High Functioning Autism and What Support They Would Like to Receive. Kairaranga Volume 17, issue 1:2016.
- 51. Wilkinson, L.A. (2010). A Best Practice Guide to Assessment and Intervention for Autism and Asperger Syndrome in Schools. London and Philadelphia: Jessica Kingsley Publishers.
- 52. Zimmerman, W.A. (2008) Autism: Current theories and evidence. Baltimore, Maryland: Kennedy Krieger Institute and Johns Hopkins University.
- 53. Трајковска, С.Н. (2020). Емпатија и систематизирање кај деца со аутистичен спектар на нарушување. Скопје: Филозофски факултет.
- 54. Трајковска, С. Н. Ѓорѓевска С. (2019). Значење на интензивниот третман во рехабилитацијата на децата со аутистичен спектар на нарушување. Годишен зборник на Филозофскиот факултет УДК: 616.896-053.2.
- 55. Whitbey, P.; Mansir, R. (2009). Academic achievement profiles of children with high functioning autism and Asperger syndrome: A review of the literature. Retrieved from: https://www.researchgate.net/publication/283863566_Academic_achievement_profiles_of_children_with_high_functioning_autism_and_Asperger_syndrome_A_review_of_the_literature