

EDUCATION OF CHILDREN WITH FETAL ALCOHOL SPECTRUM DISORDERS- FASD

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Abstract

In this paper, we describe strategies for education children with FASD. Children with this diagnosis show great behavioral and learning difficulties. Traditional methods of education are the least successful. Children with FASD do not respond as well as typical children because they have organic changes in their brains due to PAE, and for some children, trauma is also a cause. They can learn, but they learn differently. They can behave in a regulated way, but they need external adult support to do so. If appropriate individual strategies are not used in the education of children with FASD, they fail. Therefore, we do not focus on the outward manifestations of behavior, but on understanding the inner needs of these children - the causes of the problematic behavior in question. Therefore, emotional support from adults is necessary, which helps the development of regulatory mechanisms in children with FASD. In particular, children with FASD need structure, emotional anchoring, and secure relational bonds.

Keywords: Fetal Alcohol Spectrum Disorder (FASD), Trauma, Adverse Childhood Experiences (ACEs)

INTRODUCTION

The issue of fetal alcohol spectrum disorders in the context of variability and severity of manifestations, along with comorbidities with other diseases and/or problematic associations, is a major challenge in the context of early intervention, diagnosis, treatment, and subsequent recommendations regarding educational strategies. Children with FASD struggle with significant learning and behavioural difficulties. In the following, we approach the complexity of the issue with a focus on educational interventions in the family and in the school.

1 DEFINITION AND ETIOLOGY OF FETAL ALCOHOL SPECTRUM DISORDERS - FASD

Astley (2004) states that Fetal Alcohol Spectrum Disorders (FASD) is an umbrella term covering a group of congenital neurodevelopmental defects and brain damage resulting from prenatal alcohol exposure - PAE (Prenatal Alcohol Exposure). Longitudinal studies have provided key evidence of altered brain developmental trajectories in children and adolescents with FASD. Abnormalities have been observed in the volume and thickness of the cerebral cortex, with variations depending on the type and area of brain tissue damaged (Brown et al., 2019). Zieff, Schwartz-Bloom & Williams (2016) report that each of these disorders involves brain damage that results in neuropsychological and behavioral dysfunction. FASD encompasses a range of diagnoses. According to the Center for Substance Abuse Prevention (2014) the spectrum of FASD includes the following diagnoses and problem areas:

- Fetal Alcohol Syndrome - FAS (Fetal Alcohol Syndrome - Q86). This is the most severe diagnosis on the spectrum (ICD10, 2021). FAS is diagnostically defined by the presence of all of the following criteria (a triad of features): 1. two of the three characteristic facial features; 2. growth retardation; 3. central nervous system disturbances that are demonstrated by functional impairments in the area of intellect. Children with FAS show characteristics such as hyperactivity, aggression, impaired judgment as well as speech and language difficulties (Stade et al., 2006). According to the CDC (2021), children with FAS have concurrent problems with learning, memory, attention span, communication, vision, or hearing, or may have a combination of these problems. Difficulties and their consequences are particularly evident in the school and social domains.
- Partial FAS (PFAS). A study by Hoyme et. al. (2016) divide PFAS into:
 - PFAS with documented prenatal alcohol exposure (PAE) and
 - PFAS without documented alcohol exposure (no PAE present). Diagnoses at the end of the spectrum with more severe consequences (i.e., FAS and PFAS) require the presence of the characteristic facial anomalies originally identified by Jones & Smith (1973).
- Alcohol-Related Neurodevelopmental Disorder (ARND) describes individuals who have neurobehavioral disorders with documented prenatal alcohol exposure, but have minimal or no physical findings and cannot be diagnosed before the age of three (Astley, 2004). They often fall through the professional care system (Riley, Infante & Warren, 2011). Individuals with ARND may have intellectual disabilities and behavioral and learning problems. They have problems in school especially in math and with memory, attention, judgment, and poor impulse control (CDC, 2021).
- Alcohol-Related Birth Defects - ARBD (Alcohol-Related Birth Defects). This term describes individuals with organ defects secondary to fetal alcohol exposure, but who do not have neuropsychological deficits (CDC, 2021). Individuals diagnosed with ARBD have a documented history of prenatal alcohol exposure and exhibit one or more physical abnormalities (Hoyme et al., 2016).

A new term has been added to the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, DSM5, to describe neurobehavioral problems associated with PAE called Neurobehavioral Disorder associated with PAE, abbreviated ND-PAE (Neurobehavioral Disorder associated with Prenatal Alcohol Exposure). It is a newly proposed diagnosis in the DSM5 with a note that it requires further study. It states that in utero alcohol exposure negatively affects a number of cognitive domains, including general intelligence, motor function, attention and activity levels, speech development, executive function, visual perception, learning, memory, and adaptive functioning. In addition, ND-PAE also has high rates of comorbidity with learning and behavioral disorders (Mattson et al., 2011). The findings of Kable et. al (2016) say that ND-PAE encompasses a range of neurobehavioral effects associated with prenatal alcohol exposure and can be diagnosed independently of any physical findings.

Cook et al. (2016) report that although FASD was originally used as a non-diagnostic umbrella term, it has recently been suggested that FASD should be used as a diagnostic term with the specification of the presence or absence of sentinel facial features. Lange et al. (2019) note that the lack of generally accepted diagnostic criteria, high rates of psychiatric comorbidity, and symptom overlap with other neurodevelopmental disorders make the diagnosis of FASD difficult. A review of the most widely used diagnostic procedures and manuals in the world is further detailed by Brown et al. (2019), Riley et al. (2011), and Bower et al. (2020). In an effort to improve FASD screening and diagnosis, Lange et al. (2019) focused their study on identifying a neurodevelopmental profile that would be sensitive and specific for FASD. They argue that the concept of a unique neurodevelopmental profile of FASD, which is defined as the outward manifestation of central nervous system (behavioral and developmental) damage caused by prenatal alcohol exposure, has received some research attention in recent years. The authors found that the neurodevelopmental profile of children with FASD tested consists of impairments in perceptual processing, verbal comprehension, visuospatial speed, and motor coordination, speed of processing nonverbal information, attention and executive functions, visuospatial processing, and language, combined with rule-breaking behaviors and attention problems. Although the neurodevelopmental profile identified was sensitive to FASD, it was not specific to FASD, suggesting that a neurodevelopmental profile that may distinguish children with FASD from children with other neurodevelopmental disorders may not exist. Authors Brown & Mather (2020) report that children with FASD have difficulty in understanding the connections between their behavior and the consequences of their actions. According to Peadon & Elliot (2010), the behavioral phenotype of children with FASD includes difficulties in executive functions, with memory, planning, information processing speed, and attention. Within FASD, Mattson et al. (2011) delineate possible deficits in

particular neuropsychological domains, which may vary in severity and prevalence from child to child. In addition to the aforementioned impairments, the authors highlight possible deficits within general intelligence (the most severe deficits in this domain are in children with FAS); deficits in motor skills; and learning and memory difficulties (impairments manifest in encoding, recalling, and discriminating verbal information). In the context of academic performance, the authors (ibid) report high rates of conditional and definitive school expulsion or dropout for children with FASD, and severe deficits in mathematical skills related to impairments in spatial processing, spatial memory, and reduced ability to perform numerical operations, together with spelling and reading impairments related to deficits in working memory. According to Brown and Mather (2020), the school environment presents three areas of challenge for the child with FASD: 1. the area of the content itself, 2. the less structured nature of the regular school environment, and 3. the social challenges of the school environment. Mattson et al. (2011) discuss the difficulties children with FASD have in adaptively functioning in the context of the social environment. Deficits in communication, socialization and daily living skills are common in children with FASD. Performance in the areas of communication and socialization declines with age, resulting in negative experiences in schooling, possible alcohol and drug problems during adolescence, increased rates of disordered sexual behavior, and reduced capacity for independent living. The diagnostic process for FASD is complex and requires a holistic and multidisciplinary diagnostic assessment for the suspected individual (Brown et al., 2019). The impact of FASD can be mitigated by a diagnosis before age 6 (CDC, 2021). The ICF-CY can be used as a complement to medical and psychological diagnosis to determine the child's individual functioning in each domain of development. It provides a comprehensive view of different perspectives of health from biological, individual, and social perspectives. It takes into account the developmental and eco-systemic contexts of child health (WHO, 2007). Lange et al. (2019) suggest future studies explore whether neurodevelopmental data combined with genetic and epigenetic data would create a profile that would be able to diagnose and differentiate FASD from other neurodevelopmental disorders.

1.1 The Impact of Traumatization on the Health and Development of Children With FASD

Some children affected by PAE will also experience early deprivation, neglect, abuse, and multiple foster care placements due to parental substance abuse or their parent's mental health and social problems (Streissguth et al., 2004). Brodzinsky, Gunnar & Palacios (2022) state that adoption itself is a psychological trauma that predisposes the individual to emotional difficulties. These aversive experiences negatively affect the quality of the child's early experiences and thus overall development (Elbers et al. 2018). It follows that some children with FASD, in addition to brain damage due to PAE, also struggle with the effects of early traumatization. Black et al. (2017) discuss the cumulative effect of accumulated traumatic experiences and experiences that impact a child's overall development and health. A study looking at children from residential care settings in Romania suggested that the negative effect of adverse experiences may disrupt the regulation of the hypothalamic-pituitary-adrenocortical axis (McLaughlin et al., 2015). Childhood traumatization may be related to the development of insecure forms of relational attachment (Kaščáková et al., 2020). Insecure relational attachment can impair a child's ability to manage emotions, cope with stress, learn, and function socially (Hoffman, Cooper & Powell, 2018). Prince et al. (2017) say that PAE and traumatic childhood experiences, such as abuse or neglect, can cause neurobiological changes to the central nervous system or structural damage that can manifest as cognitive and behavioral dysfunction. The authors conclude that children with both exposures simultaneously, PAE and early traumatic experience, are more likely to show deficits in language, attention, memory, and intelligence and more severe behavioral problems than children with only one exposure without the other. The overlap of PAE and early trauma issues presents enormous diagnostic complexity. To assess dual exposure to these complex negative circumstances is to consider a wide range of effects as well as the different diagnostic criteria associated with PAE.

2 EDUCATIONAL AND UPBRINGING STRATEGIES IN CHILDREN WITH FASD

There is a general lack of awareness and deeper understanding of FASD in society, which makes things difficult for these children and their parents/caregivers (Zieff, Schwartz-Bloom & Williams, 2016). According to Millans (2015), the stigma associated with PAE may prevent some parents/guardians from disclosing important information needed to obtain an accurate diagnosis and appropriate services. Support for children and families with FASD should be assessed based on their functional needs and not just their diagnosis (Slepian, 2021). Millans (2015) highlights that parents/carers, school staff, and other professionals need training on the impact of PAE on development and learning. Mitasikova & Vodickova (2022) list four clusters of negative aspects that impact the quality of life of a child with FASD and their parents/carers that need to

be addressed in educational strategies. The authors discuss the behavioral problems of the child with FASD in school and home environments; the impact of traumatization and retraumatization on the child with FASD; the disrupted relational bond between the parent/carer and the child with FASD; and the negative impact of parenting a child with FASD on the mental and physical health of the parents/carers. Raina et al. (2005) state that the practical day-to-day needs of the child create complex challenges for parents. Parents of children with FASD report increased levels of stress (Reid & Moritz, 2019). Domeij et al. (2018) found through research on the experiences of parents of children with FASD that they perceive parenting as a lifelong burden and that the whole family feels socially isolated and overwhelmed by the child's difficulties. Mitasikova & Vodickova (2022) discuss the following needs of children with FASD and their parents/guardians: 1. provision of professional intervention support; 2. conscious creation of secure relational bonds; 3. compensating for the difficulties of the child with FASD in the home environment; and 4. application of alternative approaches to raising a child with FASD in school. It follows from the above that educational strategies need to focus not only on supporting the development of the child with FASD, but also on improving the educational competencies of parents/carers and teachers, and on improving the availability of specialist support services for all. Petrenko & Alto (2017) provide specific intervention programs for parents/caregivers of children with FASD that focus on parent education and training. These are parent training and support programs that help parents better understand and respond to their children's neurodevelopmental difficulties and specifics. They focus on supporting the parent/caregiver-child relationship, psychoeducation, positive parenting support, mentoring, and access to community resources. The authors list the following programs:

- Parent-Child Assistance Program (P-CAP),
- Breaking the Cycle (BTC),
- Parent training workshops and psychoeducation,
- Coaching Families (CF) Program,
- Parent-Child Interaction Therapy (PCIT),
- Step-by-Step Program and others.

Kable et al. (2012) say that providing families with basic information about the neurological impairment their child may have suffered as a result of PAE and the impact of this impairment on their child's adjustment and achievement of basic life skills is the first step in developing a family-centered habilitation care plan. Educational interventions for parents result in an increase in parents' knowledge of their child's neurodevelopmental functioning and the principles of promoting behavior regulation in their child.

Petrenko & Alto (2017) also go on to discuss intervention programs aimed specifically at children with FASD. The authors divided them into two areas:

1. Attention and self-regulation

Children with FASD often struggle with attention deficits and difficulties in self-regulation. A number of intervention programs have been developed to address these problems, e.g.:

- Computerized Progressive Attention Training (CPAT),
- Pay Attention Program,
- Cognitive Control Therapy (CCT),
- Alert Program for Self-Regulation and others.

2. Adaptive Behavior

Target tasks in promoting adaptive behavior include such things as awareness of safe behavior rules, desired social behavior, school progress, and substance use prevention. The authors included here e.g.:

- Good Buddies,
- Kids Club and
- Literacy and Language Training.

Brown & Mather (2020) provide general strategies for children with FASD, specifically applicable to education. The authors recommend: building on the knowledge of the diagnosis; maintaining routines, structure, and constancy of the environment; rehearsing specific routines from daily rituals with the child in a

playful way, e.g. through role play; monitoring even small achievements of the child; lowering and adjusting expectations towards the child; providing a high level of supervision of the child appropriate to his/her developmental stage, not biological age; preventing problem behaviors, e.g., "etc. Avoid overstimulating the child by avoiding overstimulating the environment; prepare the child for changes; provide sufficient rest and breaks, especially after cognitive tasks; reduce the number of options offered; use 'quiet time' with the child; channel negative emotions; use 'I statements'; reward even small positive expressions in the child; reiterate behavioral expectations; involve children in appropriate structured group activities (e.g. scouting). They advise parents to communicate with the school; continually educate themselves about FASD and build a community support network. Millans (2015) says that parents and guardians seeking services in schools and in the community for children with FASD talk about the need to offer inclusive and collaborative programs. According to the author, using a comprehensive and collaborative approach in providing needed educational care for children with Fetal Alcohol Spectrum Disorder (FASD) can reduce the risk of academic and school failure. Educators would also benefit from training programs that provide strategies on how to support children affected by PAE within the classroom and school. These often unidentified pupils remain frequently misunderstood with their expressions. The lack of success of these students with FASD has been attributed to many other, proxy reasons. Teachers are often baffled by the difficult-to-grasp and sometimes unexpected behaviors and learning problems that these students exhibit. Working with these pupils can be frustrating and discouraging. Teachers find traditional learning methods and standard teaching practices ineffective for students with FASD (Zieff, Schwartz-Bloom & Williams, 2016). Most of the unwanted behaviors in children with FASD can be attributed to their memory problems, social incompetence, and lack of self-control. The causes of behavioral problems may lie in both internal and external factors. It is important to influence the way people treat a child with FASD (Brown & Mather, 2020). Socially, the unpredictability of interactions of children with FASD may mean an increased incidence of peer avoidance and an increase in reports from teachers of behavioral problems (Millans 2015). According to Brown & Mather (2020), there is no one right educational solution for children with FASD. Education modalities vary from home education to special education, to mainstream education with varying degrees of additional support. Educational pathways need to be reassessed over time depending on the child's developmental progress. How important it is to implement interdisciplinary collaboration and support from professionals from different helping professions. Weston & Thomas (2018) discuss strategies applicable in classrooms in the context of personalized learning and support for cognitive and communication development, behavioral development, and social and emotional development. Millans (2015) highlights the need for special education and support services throughout the formal education of children affected by PAE. In the context of dual exposure to the effects of PAE and concurrent early trauma, we need to take this into account in the education of some children. According to the Child Welfare Information Gateway (2014), although childhood trauma can have serious lasting effects, there is hope. With the help of supportive caring adults, children can and do recover. In parenting, the following tips should be considered: Identify triggers of trauma; be emotionally and physically available to the child; do not overwhelm the child with your own emotions; avoid physical punishment; do not take the child's behavior personally; listen-do not avoid difficult topics; help the child learn to relax; be consistent and predictable; be patient; allow a measure of self-control to the child; foster self-confidence through positive experiences and increase resilience.

3 CASE STUDY

Tomas, currently 14 years old, was adopted at the age of 1.5 years. At that time he had one sibling who was adopted into another family. He grew up with the biological daughter of the adoptive parents. He was diagnosed with FASD at the age of 7. The child was born to a drug-addicted mother who was on drug substitutes throughout her pregnancy. After birth, the child exhibited withdrawal symptoms. The child spent almost the entire first six months of his life in hospital. After six months, she was placed with a professional family. Staying with a professional family helped him to calm down and his development started to progress with little delay. Little is known about this phase of his life. At the age of 1.5 years, he was adopted into a foster family. At that time he was already speaking his first words. He ate adequately, preferred a softer diet, and had problems with constipation. He slept well and a lot. He had difficulty tolerating changes, was very excitable, and had difficulty calming down. Socially among children, he was difficult to adjust to and occasionally hurt other children. In the home environment, the child functioned quite well. It was more difficult among people and in a strange environment. His high excitability, and poor ability to calm down and concentrate became more and more frequent. In a group of children (in Sunday church school) he was disruptive and occasionally hurt other children. At the age of 5.5, he started half-day kindergarten. Teachers reported that he was distracted not concentrating, and children looked at him as the one who was always distracting and being the "bad boy". The teachers tried to manage him but repeatedly communicated how difficult he behave. At the end of the school year, were to parents advised looking for a school other than the

regular school for the child. The adoptive parents still had no idea what the child's real problem was; they tried to guide the child in the usual way, which did not help the situation at all. The first pressure appeared from other parents for the adoptive parents to "clean up" the child. Most often they were advised to be more strict, to punish him, but that did not work. The child had a school suspension. Eventually, the adoptive parents decided not to place the child in a mainstream school and homeschooling became their choice. They were determined to take him through 1st-grade primary school in this way. They wanted to help the child learn what he needed to learn and not experience so much rejection from his environment. The adoptive parents suspected that the child had issues that would only culminate in a regular school setting. In addition, the parents had not had a good experience with the local primary school where their daughter with Attention Deficit Disorder had previously attended. They had no desire to attend numerous meetings with the teachers and listen to their complaints about the child. So they took the child's education upon themselves. The school, although home-based, was a great burden for their son, which manifested itself in an overload of his nervous system and severe behavioral conditions (tantrum tempers, attacks on parents, etc.). At that time, the parents discovered that there was a possibility of a diagnosis of FASD. Although the confirmation of FASD took the parents by surprise, on the other hand, it helped them to change their approach to their child. The child was home-schooled by the parents in a rigid structure (every day from 9.00 am to 12.00 pm). In a one-to-one setting, the child was able to learn the necessary. When learning, the child needed lots of breaks and rest. The biggest problems were with math. The writing was more difficult, so the parents chose a special font, Comenia Script, which made everything easier. He learned to write well, but he did not like it, it was a considerable burden for him. The parents were looking for the best way to teach him new things. They tried different ways and struggled a lot with teaching the child. Teaching was a tremendous burden for the child. During mathematics, he would go through states of despair, he sweat all over, have the urge to undress, jump up on the table, etc. It was extremely difficult to teach a child a new substance. When the end of the first level of primary school was approaching, the parents began to look for a school where the child could full-time presence attend.

They did not plan to put him in the local primary school because of the negative reports of that school about their attitude towards "other" children. They looked for options at an elementary school for children with ADHD, where they also had special education and psychological evaluations with the child. They confirmed that the child needed special access and a group of no more than 10 children, but could not accept him "due to lack of space". The parents telephoned several schools in their area, but no one was interested in placing the child. They, therefore, decided to continue home education in the second level of primary school in a Czech school, as Slovak legislation did not yet allow the child to be educated at home in the second level of primary school. In addition to the regular curriculum, the child was given the Czech language and all the subjects in it, which was an extra burden. Always with the new school year approaching, parents tried to approach different schools to see if they would accept their child. They approached a school for children with autism, and two schools for children with hearing impairment. Although they were initially receptive, and even called the parents to the school, in the end, they did not accept the child "for lack of space" or because his diagnosis did not fit their focus. A child with such a diagnosis did not fit into any of the special schools. And so the child with FASD was eventually home-schooled for up to 8 years. The parents did not find a school with a smaller ensemble for the child (in the vicinity of Bratislava, mainstream schools are overcrowded) and there is no special school for children with FASD. The parents did not place him in a local school. They were discouraged by knowing the case of another adopted child with Asperger's Syndrome from this school, where the parents of his classmates banded together and wrote a petition to have the child expelled from the school. The management of that school more or less accepts it if other parents push for the exclusion of such a child with a disability and decide that the child should be educated at home and can come to school for a maximum of 4 hours a week. Parents were also put off by the knowledge from one of the teachers who had a son with Asperger's Syndrome at this school, who confirmed to them that this school was only geared for 'able-bodied' children. The parents knew that if they went to this school, they and their child would experience a lot of unpleasant things. The parents did not have the strength to go to such conditions. The parents expressed hope that the 8th grade would be their last year in home school. Homeschooling was also allowed in the second level of primary school in Slovakia from September 2021, so they were finally able to start learning in Slovak again after three years, which was a great relief for the family. The parents enrolled the child in a primary school in a nearby town where the school management was known for its excellent attitude towards inclusion. The parents very much wanted their son to be taken into full-time education in Grade 9 and to be given the help he needed. They believe that this would help him prepare for secondary school. Tomas would very much like to go to a local vocational school to learn to be an agricultural machinery repairman. As for the interests of the child. The child started piano lessons but was expelled from there. He started going to gymnastics, but they expelled him from there as well. After that, his

parents did not enroll him in clubs anymore. The boy rides a scooter and is good at it. When he was 10 years old his parents bought him an old car, and with his father, he learned to disassemble and reassemble it, take apart the engine, plug in the circuits, to weld. An acquaintance gave him a second old car, which he is thrilled with. He learned to drive it. This is his world, this is what he likes and this is what he knows. So hopefully one day he will be able to make a living out of it.

3.1 Discussion on the Case Study

The child was adopted when he was only 18 months old. Brodzinsky, Gunnar & Palacios (2022) discuss emotional difficulties in children caused by adoption. They perceive adoption itself as a psychological trauma for the child. Due to withdrawal symptoms after birth, the child spent the entire first six months in the hospital without a relational person, which did not allow him to establish of a secure relational bond with the relational person. Similarly, Kashchakova, et al. 2020 write that childhood traumatization may be related to the development of insecure forms of relational attachment. Relational attachment and its insecure forms have been discussed by Bowlby and Ainsworth (Bowlby, 2010; Hašto, 2005). Subsequently, the child was placed with a professional family and only at one and a half years was he/she adapted to an adoptive family. This shows that the child had two placements in a family setting and one long-term hospital stay. These early circumstances were traumatic for the child. Black et al. (2017); Prince et al. (2017) discuss the cumulative effect of such adverse experiences. Post-adoption, the child appeared to have difficulty adapting to change with significant difficulties in socializing among peers (see also Millans, 2015; Mattson et al., 2011). The child functioned better in the safety of the home in contrast to the preschool. He needed to process of trauma and calm down his nervous system. Brown & Mather (2020) suggest that a child with FASD functions better in a home environment that is more predictable and safe compared to school settings (assuming the family is meeting the child's needs). The child manifested behavioral problems, particularly outside the home. On the positive side, the child did not start kindergarten until he was 5.5 years old. Parents had ample time to establish relational bonding. The importance of supporting child-parent/caregiver interactions is highlighted by Petrenko & Alto (2017). Behavioral problems in preschool began to immediately manifest externally. Behavioral problems in children with FASD have been reported in many studies (Millans, 2015; Zieff, Schwartz-Bloom & Williams, 2016; Lange et al., 2019; Mattson et al., 2011). The preschool setting exhibited barriers in willingness and ability to help the child. Already in the preschool setting, the pressure was placed on parents to exclude the child from mainstream kindergarten. Mattson et al. (2011) confirm that children are often excluded from the educational environment. The child had not yet been diagnosed with FASD at that time. Parents and teachers did not know the true cause of the child's problem behavior, i.e., FASD, which caused a loss of opportunity for early intervention. According to the CDC (2021), the impact of FASD can be mitigated by making a diagnosis before age 6 and initiating early interventions. There has also been increasing pressure from parents of other children to exclude children with FASD from kindergarten because of the threat to other children. The child entered a deferral of compulsory schooling, which may be considered necessary in a child with multiple problems. The parents opted for home education in the context of protecting the child from further traumatization. Homeschooling as one of the educational options for a child with FASD is discussed by Brown & Mather (2020). Parents assumed that problems in a regular school setting would only increase. Parents chose a preventative approach and tried to prevent the problems they perceived prior to starting school. Despite the one-to-one home education, the child manifested significant learning difficulties with behavioral impact. Behavioral manifestations worsened to the point of aggressive outbursts and attacks on others. It was not until a diagnosis of FASD was made that the parents were able to change their child's educational approach. The importance of parents' knowledge of the child's diagnosis is confirmed by Brown & Mather (2020). Within homeschooling, parents relied on a fixed time structure, predictability, regimens, alternative teaching methods, and ample breaks and rest. The need for alternative methods when teaching a child is discussed by Mitasikova & Vodickova (2022), and personalized learning is discussed by Weston & Thomas (2018). The child was showing erratic performance in academics, particularly in maths and writing. Learning difficulties are typical for children with FASD, with studies describing difficulties in mathematics (Mattson et al., 2011; Millans, 2015). The child was not placeable, either in mainstream primary or special school or in circle time activities, due to the FASD diagnosis. The child lacked sufficient social contact with peers. The parents built on the child's real interests, which was an interest in car construction, and supported him in his interests. Homeschooling meant a great psychological strain on the parents, with a negative impact on their health and quality of life. On the one hand, parents avoided fights with the school in this situation, but on the other hand, it caused a significant reduction in their quality of life. Raina et al. (2005) state that the practical day-to-day needs of the child create complex challenges for parents. Parents of children with FASD report increased levels of stress (Reid & Moritz, 2019).

CONCLUSION

Given the high degree of variability in symptoms resulting from PAE, often complicated by other serious circumstances, such as the effects of early trauma or the confluence of other medical circumstances, and family stresses, the need for highly personalized educational strategies can be noted. The whole ecosystem of the child with FASD needs to be taken into account in the educational context. It is necessary to build a support network for the child with FASD and his/her entire family in the areas of physical and mental health, social and school inclusion, and prevention of secondary problems. A major challenge in selecting appropriate educational strategies is early detection of early diagnosis, not only in naming the diagnosis but also in describing the functional status of the different domains of development.

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