

FIRST STEPS OF EDUCATION IN THE FAMILY – THE POSSIBILITIES OF EARLY CHILDHOOD PREVENTION AND INTERVENTION AT THE DEPARTMENT OF PEDIATRICS OF THE UNIVERSITY OF DEBRECEN

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Szele, A. & Nagy, B. E. (2022). First Steps of Education in the Family – the Possibilities of Early Childhood Prevention and Intervention at the Department of Pediatrics of the University of Debrecen. *Különleges Bánásmód*, 8. (1). 109-116. DOI [10.18458/KB.2022.1.109](https://doi.org/10.18458/KB.2022.1.109)

Abstract:

In Hungary, preterm birth is a common issue; approximately 8.000 infants are born preterm each year. At the *Department of Pediatrics of the University of Debrecen*, our *Pediatric Psychology and Psychosomatic Unit* work to minimize the risk of neurodevelopmental delay in children born prematurely or in other risk groups. In favour of it, we help families at both the prevention and the intervention levels. Parent education, organization of parent groups, and counselling provide us an opportunity to acquaint parents with the possibilities of using help. The chapter briefly describes the possibilities of prevention (screening tests, diagnostics) and intervention (parent group, music therapy, animal-assisted therapy, sensory integration therapy), the family implications of the COVID-19 pandemic, and the Bayley-III diagnostic and screening test, which is one of the most advanced developmental tools for early prevention.

Our approach is that, in favour of healthy and balanced development, the whole family needs to get the appropriate support and care. Supporting and strengthening parental efficiency is an important step by which the parent is able to implement a method of education that takes into account the individual characteristics of the child, by which the child's adaptability, carrying capacity, and social skills develop and strengthen.

Keywords: prevention, intervention, parent education, Bayley-III

Discipline: psychology

AZ OKTATÁS ELSŐ LÉPÉSEI A CSALÁDBAN – A KORAGYERMEKKORI PREVENCIÓ ÉS INTERVENCIÓ LEHETŐSÉGEI A DE-KK GYERMEKKLINIKÁN

Absztrakt:

Magyarországon a koraszülés szinte népbetegségnek tekinthető jelenség, évente mintegy 8000 gyermek születik korán, vagyis a 37. gesztációs hét előtt. A *Debreceni Egyetem Gyermekklinikáján a Gyermeklélektani és Pszichoszomatikus Osztályunk* azért dolgozik, hogy a koraszülött vagy más egyéb rizikócsoporthoz tartozó gyermekek esetében a fejlődésneurológiai kérés kockázatát a minimálisra csökkentsük. Ennek érdekében mind a prevenció, mind az intervenció szintjén segítjük a családok életét. A szülő edukáció, a szülőcsoportok szervezése, a nevelési tanácsadás lehetőséget nyújt számunkra abban, hogy megismertessük a szülőket a segítség igénybevételének lehetőségeivel. A fejezetben röviden ismertetjük a *prevenció* (szűrővizsgálatok, diagnosztika) és *intervenció* (szülőcsoport, zeneterápia, állat-asszisztált terápia, szenzoros érzékenyítő tréning) lehetőségeit, bemutatjuk az egyik legkorszerűbb fejlődésvizsgáló eszközt, a Bayley-III (Bayley Csecsemő és Kisgyermek Skálák, Harmadik kiadás) diagnosztikai és szűrőtesztet, valamint kitérünk a napjainkat átíró COVID-19 járványhelyzet családi vonatkozásaira.

Szemléletünk alapját képezi, hogy az egészséges és kiegyensúlyozott fejlődés érdekében, a gyermek mellett fontos, hogy a család egésze is megfelelő ellátást, segítséget kapjon. A szülői hatékonyság támogatása, erősítése a szakemberek részéről fontos lépés, mellyel a szülő képes gyermeke egyéni sajátosságait figyelembe véve olyan nevelési módot megvalósítani, mely által fejlődik, erősödik a gyermek alkalmazkodóképessége, teherbírása, szociális készsége.

Kulsszavak: prevenció, intervenció, szülő edukáció, Bayley-III

Diszciplína: psychology

Pediatric Psychology and Psychosomatic Unit was established in 2016 at the *Department of Pediatrics of the University of Debrecen*. Our team consists of clinical child psychologists, health psychologists, physiotherapists, hospital teachers, and assistants. Our main activities include the psychological examination (psychodiagnostic) and therapeutic care of children with a psychosomatic problem in pediatric inpatient wards, and the minimization of the risk of neurodevelopmental delays in preterm or other at-risk children. Several studies have shown that preterm infants are more affected by cognitive problems, learning difficulties in the school-age, language deficits, and difficulties in

reading and math skills in later years of life (e.g., Hee Chung, Chou and Brown, 2020; Putnick, Bornstein, Eryigit-Madzwamuse and Wolke, 2017). As a result, preterm infants are more likely to obtain lower educational levels and participate in special education than their full-term peers (Eryigit-Madzwamuse et al, 2015; Kelly, 2016). The extreme complexity of the condition, which affects almost all areas of life functions, requires increased care, careful follow-up, and very close cooperation with all participants of primary care. We carry out our tasks in close cooperation with paediatricians and nurses, physiotherapists, and hospital teachers in teamwork. At our psychological ambulances, we

attend children who come with a GP referral and premature infants in a framework of a status examination.

Our *Unit* primarily provides group sensory integration therapy for preterm infants with developmental delays, but it is also possible for children with attention and behavioural problems to join these groups. In case of delayed language development, we expand the movement development occasions with music and speech therapy. In this chapter, we describe the preventive and interventional care options for the 0-5 age group.

Possibilities of prevention in early childhood (screening, diagnostics)

Preventive pediatrics includes not only the preservation of health and the prevention of disease but also all activities aimed at restoring health in case of health damage and preventing the increase of damage (Molnár et al, 2013). Monitoring the neuromotor development, the timely recognition of hindering factors of development, and screening are significant parts of primary care. *Early screening* is the first, signaling stage of the early intervention system that points to the existence of a problem or difficulty. Carrying out psychological and special pedagogical screenings at an early age of life is essential for later development, as it helps young children to access support and development in time by revealing developmental risks. This is followed by the *diagnostic period*, which is the process of recognizing disease or absence, identifying it based on the symptoms. Finally, *special care* is provided in the framework of early intervention, which is a planned, complex developmental program, for children aged 0–5 years, whose development differs from the average in the direction or pace (Nagy, 2007).

Infant psychodiagnostic and screening tests are tools for indicating and diagnosing delayed development. They can indicate and identify the child's delayed language, fine and/or gross motor skills, and social development. By setting up the child's ability profile, they contribute to the assessment of strengths and weaknesses. In our *Unit*, we carried out the assessment of preterm infants at the age of 12 and 24 months of corrected age, using one of the most modern developmental testing tools, the Bayley-III (Bayley Scales of Infant and Toddler Development – Third Edition) screening, and diagnostic test.

Bayley-III (Bayley Scales of Infant and Toddler Development – Third Edition) Diagnostic Test (Bayley, 2006; Kő et al, 2017)

Bayley-III (an improved version of Bayley-II (Bayley, 1993)) is one of the most advanced and widespread developmental testing tools for infants and young children, measuring abilities in five main areas. The test measures the cognitive, language (receptive and expressive subscales), motor (fine and gross motor subscales), social-emotional, and adaptive behaviour skills from 16 days to 42 months of age. For the Social-Emotional and Adaptive Behaviour Scales, questionnaires are filled by the parent/caregiver, which can provide a way for family and professional cooperation and active participation of family members in the evaluation process (Summers, Hoffman, Marquis, Turnbull and Poston, 2005; Weiss, Oakland and Aylward, 2010). The time taken to address the complete test battery is ~ 90 minutes, followed by evaluation (Bayley, 2006; Kő et al., 2017).

Its primary goal is to identify children with developmental delays and provide information about the need for early interventions. It also helps the general practitioners to plan the necessary interventions and provide insights into the child's potential learning disorders (e.g., attention and spatial orientation disorders). The Bayley-III is an

excellent tool in the diagnostic work of a multidisciplinary team.

Involving the parent/caregiver to the examination can be also an important tool for the supportive intervention of the family. In Hungary, we started the standardization process of the test together with the company of OS Hungary (a member of Giunti O. S. International Group) in the spring of 2016, in which our workgroup took an integral part.

Bayley-III (Bayley Scales of Infant and Toddler Development – Third Edition) Screening Test (Bayley, 2005; Kő et al, 2017)

In addition to the complete Bayley-III test battery, the abbreviated screening test version has also been standardized in Hungary. The primary purpose of the tool is to determine whether the child is developing appropriately, according to his or her own age in the areas of cognitive, receptive, and expressive language, fine and gross motor skills, or further testing is needed. The test can determine that the risk for the developmental delay is high, moderate, or low. It can be used in children between 1 and 42 months, taking only 15-20 minutes to record (Bayley, 2006; Kő et al, 2017).

The difference between screening and diagnostic tests, the problem of measurement

Screening tests are suitable for indicating and detecting developmental delays in early childhood, but not for making a specific diagnosis. However, they help prevent future developmental problems as well as design-personalized interventions. By contrast, infant diagnostic tests such as *Brunet-Lézine Scale* (Farkas and Csiky, 1980) or *Bayley diagnostic tests* are also suitable for diagnosis. They contribute to the design of special interventions and the prevention of subsequent problems, such as the prevention of learning disabilities (Nagy, 2018).

The problem with these developmental tools is that none of them allows the dynamic nature of child development to be measured; they give just a

cross-sectional picture of the development, on a given day, at a given hour. In such cases, a child's performance can be affected by a number of external and internal factors. Thus, when we are applying these tools, it should be taken into account that the child's development is not a linear process, there are also faster developmental stages and developmental relapses, and a very important addition is the anamnesis taken with the parent (Nagy, 2018).

Special care

In the following, we briefly present the interventions provided by our *Unit* for 0-5-year-olds and their families, such as *Animal Assisted Therapy*, *Ayres' Sensory Integration therapy*, *music therapy*, and our supportive, educational work and counseling for parents.

Animal Assisted Therapy (AAT)

Animal Assisted Therapy is a complementary therapy, in which the use of animals can help to cope with physical, mental, emotional, and social difficulties. In Hungarian AAT, using dogs and horses is a common practice. The goals of these therapies are to gain experience (e.g. by caring for animals), to develop and increase motivation (e.g. in connection with everyday activities), to practice certain activities, to improve mobility (e.g. crawling, walking) and the sense of balance (e.g. by riding), to increase communication motivation and social adaptability skills (e.g. patience, joint activities with others), and to help children to integrate into the group and society. Our department is currently organizing dog-assisted therapy for premature and children with signs of atypical development age 0-5 years and children with different developmental stages (in several groups).

Ayres' Sensory Integration Therapy

The *Ayres Sensory Integration* intervention is a sensory integration movement therapy, which was developed by an American neuropsychologist,

Anne Jane Ayres. The essence of the therapy is the maturation of the nervous system, the development and catching up of the child with movements. It can be used almost from infancy, it is recommended when the child is too sensitive to tactile, certain movements, certain visual stimuli, sounds, tastes or constantly looking for stimuli, when the child has difficulty to coordinate movements, to control behaviour, is too fast or slow, frustrated quickly and unmotivated. In case of the occurrence of learning disorders, poor fine motor skills, delayed language development, lack of concentration, and autism, therapy is also recommended (Ayres, 1972/1999; Varga and Szvatkó, 1993/4). At our *Unit*, a clinical psychologist, DSIT (Dynamic Sensory Integration Therapy) therapist, carries out Ayres' therapy.

Development by music therapy

Music has a beneficial, developmental effect on almost all areas, e.g. language and motor development (gross and fine motor skills), development of intellectual (attention, memory, concentration, thinking, imagination) emotional (self-expression, aesthetic sense), and social skills (empathy, tolerance). There are two possibilities in our *Unit*, which provide excellent opportunities to strengthen the intellectual and emotional abilities of children with atypical development, to promote their development using the power of music (Urbán Varga, 1999). We organize music groups for the 0-3 age group (nursery age group); many rhymes, songs, lap games, and live music help babies and mothers to tune to the beauty of music, strengthen the mother-child relationship, help the initial phase of hearing and rhythm, the clear speech and the integration into the first small community. For children aged 3-7 years, we provide sessions to develop hearing, sense of rhythm, fine and gross motor skills, and to stimulate attention and concentration by listening to music. Young children get to know the joy of group collaboration by singing and making music

together. In cooperation with the *Children's Rehabilitation Centre* in Debrecen, we can also organize gymnastics and hydro gymnastics groups.

Parent groups

Parent groups also role an important supportive and educational element of our activities; we usually organize groups for parents of premature and chronically ill children. The fact of preterm birth is extremely stressful for both the child and the family, a sudden, unexpected event, a state of crisis. The intimate state of pregnancy ends prematurely; the child is transferred from the protection of the mother's uterus to an incubator, which can be further aggravated by the fight against possible infections and diseases. Maternal pleasures are replaced by a kind of passive attitude, a helpless concern for the child. It is especially dangerous if we do not devote enough attention to the mothers and their emotions in connection with premature birth. The difficulty of making contact and the uncertainty of the infant's fate can result in several types of caring behaviours. There are mothers who are more accepting in attitude, more responsive, more likely to stimulate their children, more involved in parenting, while others are less affectionate. Differential treatment of children born at risk by parents can continue until school age. This specific parental behaviour is derived from a compensatory effort in response to the real or perceived developmental retardation of the child. In the long run, untreated, unprocessed emotional problems can lead to health problems, deteriorating quality of life, sleep and concentration disorders, indecision, social withdrawal, and indirectly can cause social, cognitive, emotional, and behavioural developmental delays in children (Arzani, Valizadeh and Mohammadi, 2015). It is significant to help mothers as early as possible, to give undivided attention, to accept any statement made by the mother without judgment so that she can connect with her own feelings. This allows the mother to face her own difficulties as well as

respond more sensitively to her baby's signals. It is also important to support fathers and siblings in this process. Mother and parent groups help to prevent these problems; parents receive help and support from both professionals and each other. They have the opportunity to discuss the problems together, to deal with them.

It is also important to inform parents as much as possible because parents' knowledge of child development can influence how they interpret their child's behaviour, which can even indirectly affect the child's cognitive development. Our aim is to create the opportunity for parents to discuss issues, difficulties and everyday problems related to preterm birth, and last but not least to communicate knowledge and counseling. Our common topics are motor development and movement therapy possibilities, language and cognitive development; issues in the emotional and social development of the child; defiance period, toilet training; eating and sleeping habits; possibilities of nursery, kindergarten, and school; financial aid; the burden of disease, the judgment of the family; changes in the family life and difficulties in the light of the child's illness.

Infant-parent consultation

At the infant-parent consultations, we deal with the difficulties and regulatory problems of infants and young children aged 0-3 years. Regulatory disorders can be considered as several forms of psychological or psychosomatic illnesses in early childhood and relationship problems, which in many cases are developed based on parental transferences and projections. According to the literature, the most common (*primary*) *regulatory disorders* include excessive crying, eating, and sleeping disorders. From the second year of life, symptoms of regulatory disorders may extend (*secondary regulatory problems*) and may manifest as, for example, separation anxiety, emotional-attachment problems, sibling rivalry, excessive defiance, uncontrollable tantrums, aggression, or

concentration difficulties (Hédervári-Heller, 2020). Together with the parents, we explore and address the underlying causes of the problems and find the most appropriate solutions. At the consultations, the baby, as well as one or both parents, are participated.

Post-COVID Ambulance

The work of our *Unit*, our organized interventions – as well as our everyday life – was radically rewritten by the COVID-19 pandemic and lockdown. Uncertainty, isolation, and anxiety have characterized the lives of both adults and children in recent years. All of this can affect our mental health, which can also weaken our immune system. More and more studies published in international journals draw attention to the most common symptoms and connections at different ages. A preliminary study of the ongoing epidemic found that younger children (3-6 years old) were more likely to develop clinginess and fear of infection of family members than older children (6-18 years old) (Singh et al., 2020). In younger children, frequent crying, motor restlessness, increased clinging to parents, separation anxiety, eating and sleeping problems were highlighted. It has been observed the more repetitive play of taking care of dolls (e.g., wrapping, covering) and intense emotional reactions (anger, shyness, aggression, regression) (Scharff and Schon, 2020).

At the *Pediatric Psychology and Psychosomatic Unit* and the *Post-COVID Ambulance of the Department of Pediatrics*, we also help infants, children, their parents, and families with difficulties during COVID and post-COVID. Crisis intervention, psychoeducation, as well as individual and group psychotherapy can be required in person and in the framework of telemedicine.

Summary

With our chapter, we tried to emphasize the importance of early screening and interventions. If we can early manage to intervene in the

unfavourable development process and achieve positive changes, we can facilitate the development of later complex abilities. Since the plasticity of the brain, i.e. its adaptability, is the most intensive in early childhood, we can achieve more significant results with even less effort, children's development responds favourably to interventional effects during this period (Danis, Farkas and Oates, 2011). Experience shows that investing in early childhood education and care shows a return morefold, not only for the individual and their family but also for the society. The earlier we can identify biologically or socially vulnerable families and get them to the right services, the higher the rate of return on investment in human capital (Carneiro and Heckman, 2003). Our aim is to facilitate the optimal development of children, to educate families, to provide up-to-date information for parents, to help and support them, to promote social integration, and to reduce the costs of society.

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