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DOCTORAL (PHD) DISSERTATION SUMMARY

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OPERATION AND DEVELOPMENT OPPORTUNITIES OF THE EARLY CHILDHOOD INTERVENTION SYSTEM IN THE LIGHT OF THE INTEGRATED CHILDREN'S PATHWAY

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1. Introduction

Early childhood has an essential role in the development of children and in forming their future opportunities in life, therefore the promotion of healthy development and timely prevention and intervention services are of great importance on various levels. Early years intervention affects the chances of children for individual improvement and it also has an impact on the life of their families. As a result, the competencies of parents broaden, they increasingly recognise the strengths and abilities, of their children and they learn to respond adequately to their needs (Bailey et al., 2006). Early childhood intervention also has a profound implication within the society as a whole. Numerous studies show that prevention and intervention in the early stages of life are much more successful, their long-term results are stronger than those of later intervention and they are also a beneficial investment for the society as a whole. (Heckman, 2000; Heckman & Krueger, 2003; Carneiro & Heckman, 2003; Grunewald & Rolnick, 2004; Heckman, 2008a, 2008b; Doyle et al., 2009) These are all strong arguments for the importance of early childhood intervention and also a motivational reason for us to adopt a holistic approach in designing an efficient children and family-centred system in order to experience the effects of early childhood intervention within the society in all three previously mentioned levels.

The research and development of the early childhood intervention system has come into the focus of attention in the last ten years, the systematic problems have been identified and the implementation of evidence-based developmental programs in different sectors has been introduced. The developmental projects that were built on each other looked for mutual connection points, and gradually laid the foundations of activities aimed at creating a unified children's pathway. All the researches taking place in those ten years (2008–2019) were in connection with laying the foundations for the transformation of the early childhood intervention system. Finally, by 2017, the various results coagulated into a consciously structured development arc, which is currently being manifested in an intersectoral project. My active role and related research in developmental programs allow me to summarize the empirical experience gained in the operation of the early childhood intervention care system, with special regard to the results aimed at developing an integrated children's pathway. Based on these results, the directions of further progress can be defined. My dissertation aims to summarise and present in a comprehensive manner, the evolutionary processes and systemic changes in the field of early childhood intervention in the last ten years, particularly the

period in between 2008 and 2019. It undertakes to compile the fragmented information available on early childhood intervention in a coherent framework in order to identify important problematic areas and formulate directions for progress towards the development and operation of an integrated approach to early childhood intervention.

2. The aim and hypotheses of the summative study

The aim of the summative study is to describe the operation of the early childhood intervention system and its changes in the light of the results of studies in the last decade and the available literature, documents and legislation, with special highlights to the changes in the interpretation of the children's pathway and desirable directions for future development.

Based on the main objective of the study, the sub-objectives can be defined as follows:

- The development of the theoretical framework of early childhood intervention, the presentation of its international and national interpretation, the justification of its priority at the individual, family and societal level;
- Description of the international regulatory and financing framework of early childhood intervention, the organisation and operation of the institutional system, the examination of the experiences of the models operating in the international field which can be integrated and adapted into the Hungarian practice;
- Analysis and description of the regulatory and financial development of the Hungarian early childhood intervention system, with a brief analysis of the development environment;
- A description of the operation of the Hungarian early intervention system and its changes in the light of the results of studies over the last ten years and the current statistical data available, with special regard to access to services, collaborations and the evolution of the children's pathway;
- Presentation of the developmental history of the children's pathway through research, results of development programs and changes in legislation, formulation of proposals for the development of further development perspectives.

Hypotheses

- The national regulatory environment of early childhood intervention and its changes in the period 2008-2019 could not provide the systemic operation of the area. Crosssectoral pathways are still incoherently regulated, which does not support sufficiently the timely involvement of children getting into the system.
- 2. In the period 2008-2019, the conceptual transformation of early childhood intervention shifted towards a more unified approach, the knowledge of professionals representing different disciplines about early childhood intervention, intersectoral cooperation and referral paths increased, the interdisciplinary team approach became more widespread, which increased the chances of getting care on time.
- 3. The Hungarian early care system became increasingly resource-scarce in the period between 2008 and 2019, and problems in capacity prevented an adequate level of access to services.
- 4. Territorial disparities in the early childhood intervention system also persisted in that period.

3. Methods of summative study

Quantitative and qualitative studies have been performed in the research used in the summative study. In the quantitative study, the available statistical databases were analysed and questionnaire surveys were conducted in paper-based, electronic and online forms. The qualitative studies included document analysis and interviews with individuals and focus groups. The research projects involved with the analysis took place within the following framework:

2008-2009 - Early Intervention Systems Project (FSZK - Tárki-Tudok)

2010-2011 - Situation analysis, regional situation analyses (Tárki-Tudok - AITA) - 3.1.1. 21. century education – (development, coordination project (Educatio)

2012 – Development of concept and of proposals for the formation of a performance evaluation system and uniform quality framework of the institutional system of early childhood care, as well as the development of a concept for the universal, comprehensive

application of the protocols used in the care system. (A.I.M. 2011) In: TÁMOP 3.1.1 21. century education – (development, coordination project (Educatio)

2014 - Possible children's pathway model. In: TÁMOP 6.1.4. In the framework of Early childhood (0-7 years) project, 2012-2015 (ÁEEK-OTH)

2014-2015 – *R&D program for the development of the optimal client path model* (AITA) In: TÁMOP 3.1.1 *XXI. century education (development, coordination) II. phase* project (Educatio)

2019 - Collaborations in the early childhood institutional system (qualitative study) – EFOP 1.9.5. Cross-sectoral development of early childhood intervention (2017-2021) (Családbarát Ország Nonprofit Közhasznú Kft.)

The summative study compiles the fragmented information in a coherent framework, builds a structure into the quantitative and qualitative research results and subject them to secondary analysis, combined with the analysis of the relevant documents, legislation and statistical indicators available today.

4. The interpretation framework of early childhood intervention

Supporting early childhood development and promoting lifelong health has been increasing emphasis in both national and international policies. They fundamentally rely on evidencebased scientific and professional approaches (Woodhead & Moss, 2007; The Science of Early Childhood Development, 2007; Woodhead et al., 2014). A systemic approach to early childhood development helps to understand the mechanism by which components of a system interact, creating an ever-changing, complex pattern of development (Guralnick, 2005, 2019).

It is essential to lay down the theoretical foundations of early childhood intervention, to define the concepts and the target groups so that the renewal of the service system and the planning of services could happen. The interpretation of the concept of early childhood intervention is diverse in the international arena too, with the continuous expansion of both the concept and the range of target groups (Pretis, 2009, 2010; Frazer, 2016; House of Commons Science and Technology Committee, 2018; Guilbault, 2012; Park & McHugh, 2014; Cycyk & Durán, 2019; Marlin & Simic, 2012). In the Hungarian approach we use the concept in its broadest

interpretation and expand its content both in time and in terms of the target group. Accordingly, early childhood intervention includes not only the preventive services of the preand periconceptual period, but also all the support and services for children and their families from conception to school age. These services can be either universal or targeted for groups with different or special needs. An important part of this broadly interpreted definition of early childhood intervention is early development, as an important form of care. The specification of the target groups also broadened both in the minds of Hungarian professionals and in its legal definition: it includes groups of children and their families living with biological, social and psychological disadvantages and vulnerabilities, as well as highly talented children and their families. (Kereki, 2015a; Kereki & Szvatkó, 2015).

5. The priority of early childhood intervention

The prominent role of early childhood and the importance of prevention and intervention services in the early stages of life can be justified by the development, of the child, the impact on the family and the future of society. Human development is the result of a complex interaction between genetic traits and environmental conditions (Shonkoff & Phillips, 2000; Thompson & Nelson, 2001; Mustard, 2007; Lakatos, 2011; Egyed, 2011; Danis, Farkas & Oates, 2011; Center on the Developing Child, 2015). These factors are intertwined from the very first moment, playing a decisive role in the life of a person. The regulatory functions of the central nervous system operate in a coordinated manner: emotional well-being and social competencies provide a solid foundation for emerging cognitive abilities, all of which together form the fundamental building blocks of the development of a child. Emotional and physical health, social skills, and cognitive-language developments in early life are all important prerequisites for being successful at school and later at the work and in the community (Shonkoff, Boyce & McEwen, 2009). Healthy development is influenced by the interplay of risks and protective factors organized along biological and environmental dimensions. The caring, responsive behaviour of adults, the predictable interactions, a healthy environment that provides safe, stable relationships, and the experiences during growth support the development of solid brain structures and the establishment of resilience of young children. (Shonkoff & Phillips, 2000) Also in this period, significant disadvantages can impede the development process, limit economic and social mobility, thus jeopardize the viability, productivity, and sustainability of society.

The results of international longitudinal studies primarily conducted in the US in recent decades have clearly demonstrated that early childhood programs produce better outcomes in terms of the study progress of participants and their results, labour market status, and crime rates compared to control groups, plus they also have significant long-term social benefits. (Karoly, Kilburn & Cannon, 2005). It can partly be explained with an improved productivity of the participants in the programs, and with the costs saved and avoided in their later lives (justice, penitentiary, assistance, employment programs, etc.). Cost-benefit analyses have shown that the earlier prevention and intervention investments are made, the higher the rate of return on investment and the greater the social benefits of the programs are. (Heckman, 2000; Heckman & Krueger, 2003; Grunewald & Rolnick, 2004; Heckman, 2008a, 2008b; Doyle et al., 2009).

The key role of early life in development, the need to support a healthy start in life and the provision of later long-term health induce the importance of the presence of children's rights from early age. Although international documents and Hungarian legislations clearly define requirements for children's rights, their implementation in professional policies is severely limited.

6. International practice of early childhood intervention

In the international scene, the approach and content of early childhood intervention, its place among governmental plans, the organization of the institutional system, and the regulation and financing of its operation is different in every country and region (EADSNE, 2005; EADSNE, 2010). There are countries where the system does not have a long history and the organizational background is developing slowly (Breia, 2009; Boavida et al., 2009; Veerman, 2009; Guitez, 2010a, 2010b). Other countries have decades of experience in early care. There are early childhood intervention centres in almost all countries in some form, yet they are most common in German-speaking countries, and they also have the longest history there (Peterander, 2004, 2009; Sohns & De Camargo, 2009; Sohns, Hartung & De Camargo, 2010; Pretis, 2010). In northern European (mainly Scandinavian) countries, there is no separate institutional system, but general institutions take care of the affected children following the principle of inclusivity (Luttropp, Norling & Balton, 2007; Almqvist, 2009; Helgevold, 2009; Svendsen, 2009; Heinämäki, 2009). In English-speaking countries, great emphasis is placed on an interdisciplinary team working with the child and the family and on providing coordinated care with the help of a key worker (Department of Health, 2008, 2009; Andrews, 2009; Robertson & Messenger, 2010a; Early Support, 2012; Mengoni et al., 2014).

The field of early childhood intervention is evolving rapidly, and a number of emerging trends have appeared in the horizon (Moore, 2008). These are focusing on bringing family-centred practice to the frontline and moving towards more coordinated and integrated service models. The emphasis is shifting from an approach focusing on the child as the one focusing on the family, where the functioning of the family is to be interpreted in the context of the narrower and wider environment (Bernheimer & Weisner 2007; Coulthard, 2009). The deficit-oriented approach is being replaced by a strength-based approach (Turnbull, Turbiville & Turnbull, 2000). There is a shift from fragmented to holistic, unified, and integrated services (Kaufmann & Hepburn, 2007; Guralnick, 2008), and from multidisciplinary to interdisciplinary and even transdisciplinary teamwork (Carpenter, 2000; Baker & Feinfield, 2003; Rapport, McWilliam & Smith, 2004; Moore, 2004; Drennan, Wagner & Rosenbaum, 2005; King et al., 2009; Moore, 2011, 2012, 2016). The natural learning environment as an important aspect of inclusion is also becoming a key concept in the care philosophy of early childhood intervention in developed countries (Dunst & Raab, 2004; Dunst et al., 2005, 2006a; Moore, 2011, 2012, 2016).

When transforming and modernizing the national care system – with its adaptations to the current economic, social and institutional conditions, of course – we must take into account the general international trends which ensure an increased efficiency and effectiveness of care through the establishment of a more modern approach. Family-focused practice should gain increased emphasis in early childhood intervention. It expands the focus of the service, involving the parent, the family, the extended family, and its environment, and it relies heavily on the competencies and resources of the family. A more functional system could be formed by developing an integrated, coordinated service provider model, with the participation of an interdisciplinary team of experts organized around the child and the family, and with the participation of a key worker who tracks the family from the recognition of the child's condition all the way to his or her involvement in the care system.

7. Regulatory environment in Hungary

Looking at the various sectoral laws, it is visible that the provisions for the care of the youngest children and their families are scattered within the laws and regulations of different sectors. Sectoral fragmentation makes regulation difficult to interpret. The laws of the different sectors are disconnected from each other, their terminology has not been modernised or standardised, and the lack of coordination makes it unclear what to do for the various actors involved. (Kereki & Lannert, 2009; Kereki, 2011, 2015c, 2017) An early childhood intervention system based on a unified approach is difficult to implement with a sectoral regulatory philosophy. Based on international experiences, much more transparent and clear children's pathways are emerging in countries where one single law ensures provision of services to children with developmental delays.

In terms of sectoral roles, different helping professionals intervene in different stages of the early childhood intervention system. Screening is primarily done in the healthcare system. Diagnosing the condition and determining the title for the service is the task of the physician. Diagnostics is both performed in the health care and public education sectors, with the involvement of the social sector as well. Forwarding routes within each sector can be traced relatively well under the legislations, but institutions under different sectoral governance are connected by hardly any formal routes. (Kereki & Lannert, 2009; Kereki, 2011, 2015c, 2017) A regulated path from primary health care to the public education system is particularly missing. It is health care professionals who meet the child for the first time, so it is quite important for them to be aware of the opportunities within the care system. The pedagogical service rarely comes up as a referral pathway for the health care provider, even though that is the service providing developmental, therapeutic or preventive care for pre-school children, especially those aged 0-3 with developmental delays. The pedagogical service is only included in the referral options if the health care professional is familiar with it. As the services are defined in different legislations and granted by different providers, the person entitled to use them may only become aware of them accidentally (Kereki, 2015b). There is no guarantee that he or she will be able to move from one provider to another in accordance with his or her needs.

The research and development proposals of the last decade led to an approach in public administration – divided by sectors – which interprets early childhood intervention as a single

task of the state and which accepts that institutions performing these tasks must form an integrated care system with the focus on the clients they care for. *Early childhood intervention in a broader sense requires a joint and coordinated operation of all areas involved, and the evidence-based development ideas and their implementation must also be based on this complex, holistic approach. The unified system should be reflected in the regulation and the development of a single, needs-based normative financing system.*

8. Operational characteristics of the early childhood intervention system

The Hungarian early childhood intervention system includes all the health, public education, social, child protection, child welfare and other institutions which come into contact with children and their families from the conception of the child until school age, especially children and families with special needs. (Kereki, 2011). A closer look at its current operation reveals several significant shortcomings including the marked regional inequality of the services. In terms of health care indicators, Northern Hungary has been considered the most disadvantaged region for years (Kereki & Lannert, 2009; Kereki, 2011, 2015c, 2017; Egészségügyi Engedélyezési és Közigazgatási Hivatal, 2014; KSH Tájékoztatási adatbázis, 2014; KSH Stadat táblák, 2015). Quality, effective nursing care is guaranteed to the least extent in disadvantaged areas, where preventive action would be most needed on the basis of economic, social and health care indicators (Nemzeti Népegészségügyi Központ, Egészségügyi Igazgatási Főosztály, 2019). The situation is similar with regards to access to paediatric and mixed practice GP services at home. Numerous posts remain permanently vacant, which causes problems in the service mainly in disadvantaged regions, especially in Northern Hungary (Országos Alapellátási Intézet, 2020). The declining number of paediatricians working in specialist care is putting service quality in jeopardy (Egészségügyért Felelős Államtitkárság, 2013). An organized, systemically functioning preterm birth care network is missing, access to care is unequal in the field of developmental neurology and child rehabilitation services, and capacities are scarce (OGYEI, 2005; Kereki & Lannert, 2009; Kereki, 2010, 2011, 2015c, 2017; Egészségügyért Felelős Államtitkárság, 2013). 20% of the posts in the specialist pedagogical services are vacant (KIR-STAT, 2019).

Child welfare services also struggle with capacity problems. Although family and child welfare services are adequately organized in most places, the number of professionals does

not always meet the legal requirements, especially in case of family support, professionals working in socially disadvantaged areas where the number of families or children using the service can be several times higher than the upper limit defined in the legislations. (Lux, 2011; Rajzinger, Tóth & Zeller, 2010; Kereki, 2017; Batta et al., 2018) There are also shortcomings in the provision of day care services for children. Currently, nursery school service can accommodate only 17.4% of the children (KSH Stadat tables, 2019). In terms of regional care, nursery is the least widely available in Northern Hungary (Kereki, 2017). The situation is much better in case of kindergartens. These institutions are available in 70% of towns, and their occupancy rate is 85% (KSH Tájékoztatási adatbázis, 2018). Although occupancy rates are decreasing at national level, towns often see a local shortage of available places (Központi Statisztikai Hivatal, 2019).

As in previous years, there is still a high proportion of children who are not identified as having special educational needs before entering school education. We do not know the development history of more than 40% of first-graders with special educational needs before they enter the school system. The number of first graders with special educational needs is the highest in Northern Hungary (Kereki & Lannert, 2009; Kereki, 2011, 2015c, 2017). Half of the children there with special educational needs remain unidentified before they go to school. Typically, in this region, the proportion of those aged 0–5 participating in early development services is much lower than the national average (Kereki, 2017). It is likely that the cumulative obstacles arising from disadvantage increase the likelihood of the involvement of children from these areas, and it is more likely that their problems become apparent and diagnosed only through their inadequate school performance.

Knowledge of the children's pathways connecting the different institutional systems helps to ensure that the children and their families in question receive the services they are entitled to as soon as possible. It is important to emphasize that of the age groups, the youngest children, aged 0–3, are the most disadvantaged in terms of access to care, as their parents can mostly rely only on themselves or on the knowledge and information of primary health care professionals. However, the professionals have a very heterogeneous knowledge about child development and different care options. They do not have enough information of the knowledge and competencies of professionals working in other sectors. The large-scale training programs held in the last five years, the availability of professional information and

the knowledge and proper insight of the relations between the actors of the early childhood care system help a lot to make the operation more efficient and effective.

9. Perspectives, possibilities of solution

A more functional system could be achieved by developing an integrated, coordinated service provider model, with the participation of an interdisciplinary team of experts organized around the child and the family, and a key person who tracks the family from the recognition of the child's condition to his or her involvement in the care system. It should be kept in mind that the operation of the envisaged service provider models requires the development of a networked care system, where integrated, coordinated centres capable of performing complex tasks and expert teams providing access to services with mobile services can provide the most *effective care.* Therefore, it is also necessary to examine the extent to which the conditions are in place, either in the current or the planned operation. Interdisciplinary teamwork and a wide range of therapeutic options within a professionally controlled (institutional) framework is an essential condition for needs-based care. It is also important to support parents, to provide them with information about the system and its operation, and to support them in creating an optimal environment for the proper development of the child. In this context, it is important to mention the efforts where children with developmental delays are cared for in day care institutions where they can develop in inclusive education and a natural learning environment. Research shows that the development of affected children is significantly enhanced by their ability to participate in general activities and education organized in early childhood and community settings (Guralnick, 1999; DEECD, 2008; KPMG, 2014; Dunst, 2018).

An important development in recent years has been that government programs appeared, which improve support for the healthy development of children and their access to early development care services. Two children's pathways have been developed which can serve as a model for the future care system. The so-called *client's pathway model* was developed and tested in Békés county in 2015 (Kereki, 2015b, 2015d), which is fundamentally based on the current service system. It intends to achieve the earliest possible access by connecting the referral pathways of the representatives of different sectors, primarily by connecting the health and public education systems, ensuring interoperability, and closer inter-sectoral cooperation. This model is currently being implemented in the care system as part of the *Cross-Sectoral Development of Early Childhood Intervention* project. The other model is *The*

possible children's pathway, developed in the Early Childhood (0–7 years) Program conducted in the health sector (Kereki et al., 2014), where a coordinating group plays a key role in process diagnostics and care organization.

10. Summary

Four hypotheses have been formulated during the summative study.

The first hypothesis was that the regulatory environment for early childhood intervention and its changes between 2008 and 2019 could not ensure the systematic functioning of the area and that the cross-sectoral children's pathways have remained poorly regulated. The *first hypothesis* has been confirmed, as the provisions typically appear scattered among sectoral laws, and it is difficult to navigate them. Sectoral laws are only linked at a few points and the system is largely uncoordinated. The activities of the certain stages of early childhood intervention are related to multiple sectors, the change of terminology is not followed by the laws of other sectors and the laws are not harmonized. The sectoral nature of regulation requires continuous legal harmonization, with which legislative amendments cannot keep up with. A unified regulation of early childhood intervention cannot be achieved in such an uncoordinated legal environment. Systematic operation has not been established in the past ten years, which means that there are a lot of obstacles to access to services.

I based my second hypothesis on the assumption that the conceptual transformation of early childhood intervention has shifted towards a more integrated approach in the past twelve years, and professionals have accumulated more knowledge about early childhood intervention, interdisciplinary cooperation and referral pathways, which has increased the chances of placement in the system in due time. In the period between 2008 and 2019, early childhood intervention underwent a change of attitude, with the approach becoming more complex and open. Representatives from different disciplines are more likely to seek contact with one another (such as nurses and the representatives of pedagogical services) and they have a better overview of each other's work. The system basically relies on the informal network of contacts. An interdisciplinary team approach is gaining ground both within and across sectors. Behind the forward-looking processes is the impact of the development projects that delivered modern methodological knowledge to the relevant providers through large-scale training programs in these areas. The knowledge of primary care professionals in the field of recognition and referral ensures that children are provided appropriate care at an

earlier age. All of this contributed to an overall increase in the chances of involvement in the care system, so the second hypothesis was also confirmed.

The third hypothesis is that between 2008 and 2019, the area became increasingly resourcescarce and capacity problems hindered adequate access to services. Resource shortages and capacity problems can be detected in all segments, and the situation has become even more critical over the past 12 years. The number of vacancies have increased, leading to increased workload and longer waiting lists. Many times, the qualifications of the professional do not match the needs. Transportation issues also play a role in accessing the services. Overall, the problems associated with access have increased. Thus, the third hypothesis was also confirmed.

The fourth hypothesis states that regional inequalities persisted in the institutional system of early childhood intervention in the period between 2008-2019. Regional inequalities are especially striking in Northern Hungary. The most disadvantaged towns were unable to narrow the gap, most vacancies are concentrated in these areas. About 77 thousand children aged 0-7 are affected by the lack of adequate care (Bíró, Nagy & Szigeti, 2015). Inequalities in access to benefits in the early childhood intervention system have persisted on, in some cases even increased over the past ten years partly, but not exclusively due to capacity problems. Thus, the fourth statement was also confirmed.

Although numerous regulatory and structural changes have taken place nationally in the last few years, the messages remain the same as they have been. Most importantly, all the measures that are implemented in the regulation, financing and transformation of the care system and in the creation of quality care, must serve the interests of those for are directly or indirectly involved: the children and their families.

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