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Potential for preventing the risk of social exclusion of children in Early Childhood Education and Care in Croatia

Dejana Bouillet, Sandra Antulić Majcen

Abstract: This study assumes that preventing the risk of social exclusion (RSE) of children, in the context of ECEC, entails guaranteeing ECEC availability and pedagogical practices that provide children with the necessary skills for healthy and successful development. This can be achieved by strengthening the protective factors in the child's surroundings. The overall research goal was to determine the accessibility and describe the quality of attendance of children at risk of social exclusion in the Croatian ECEC system. The sample consisted of 3,500 children from 66 ECEC facilities, or 6% of all children aged 5 to 7 attending ECEC programs at that time, from 10.4% of all the ECEC facilities operating in Croatia. Data were collected through a questionnaire to assess the etiological and phenomenological aspects of RSEs among early years and preschool age children (ECEC teachers' version). The research confirmed that RSEs did influence the children's ECEC attendance. The greatest obstacles to accessibility of ECEC are risk of poverty and minority ethnic identity of children. Inconsistencies in the quality of the Croatian ECEC system are explained as a missed opportunity for the potential of ECEC to prevent RSEs.

Key words: characteristics of early education and care (ECEC), prevention of risk of social exclusion (RSE), quality of child's interactions, assessment of ECEC teachers

Introduction

According to the *UN Convention on the Rights of the Child* (1989), the right to education is one of the essential rights of the child. It requires appropriate measures to protect children from all kinds of discrimination, to ensure that

education systems foster the child's wellbeing and that the right to education takes into account equality of opportunity. Education systems should help children develop their potential and foster respect for the child's parents and their personal values. That implies guaranteed access to early childhood education and care (ECEC) for all families and children, as well as an inclusive, equitable and nondiscriminatory culture, and collaborative and inclusive pedagogical processes (Booth, Ainscow & Kingston, 2006; Halinen & Järvinen, 2008).

High-quality inclusive ECEC facilitates the achievement of the best developmental outcomes for all children (Balladares & Kankaraš, 2020). It is considered to be the most cost-effective form of social investment (West, Blome & Lewis, 2020) as well as the most powerful way to reduce the risk of social exclusion (RSE) of children (Messiou, 2017; Bartolo et al., 2021). Inclusive education is a concept that is both complex and difficult to measure. It is usually defined on a continuum stretching from the inclusion of children with developmental disabilities in mainstream education programs (Agbenyega & Klibthong, 2014) to the educational inclusion of children with diverse backgrounds and with different gender identities, socioeconomic status, family cultures, abilities, and needs (Zhang & Li, 2021). In the present study inclusive education is understood to mean a process in which all children learn together, regardless of differences or disabilities (UNESCO, 1994). This means addressing and satisfying children's needs through greater participation in play and learning, culture, and community. Furthermore, high-quality inclusive education is recognized as a contributing factor in the prevention of RSE in the education system. Inclusive education, in this context, applies to all aspects of ECEC, where the goal is to improve opportunities for all children to meaningfully participation in a developmentally appropriate and stimulative educational process (Booth et al., 2006; Wood, 2015). Hence adequate conditions must be in place to ensure access, participation, and support for children and their families (Bartolo et al., 2021).

Taking into account the critical role that early childhood plays in the individual's lifelong development, wellbeing, and success (Bagdi & Vacca, 2005; Fernandez, 2014; Liming & Grube, 2018), universal and unbiased access to ECEC has been defined as a crucial strategic goal within contemporary education policies (Vandenbroeck & Lazzari, 2014; Bartolo et al., 2016; Cloney et al., 2016; Peleman et al., 2020).

However, the diversity of ECEC systems in European countries is reflected in their capacity to adequately prevent RSE of children (Oberhuemer,

2011; Peleman et al., 2018; Ünver et al., 2018). Improving access to high-quality ECEC provision is paramount (Leseman & Slot, 2014; Thomson et al., 2020). Although the lack of access to ECEC for children at risk of social exclusion has been well documented (Schober & Spiess, 2013; Cloney et al., 2016; West et al., 2020; Archambault et al., 2020), less attention has been paid to the quality of participation of children at risk of social exclusion in the ECEC system (Gambaro et al., 2014; Bartolo et al., 2016). This applies especially to the Croatian ECEC system.

In this study a high-quality ECEC system is understood to be essential in RSE prevention as longitudinal studies have demonstrated that the welfare of children at risk of social exclusion is significantly affected by the quality of their experiences in early childhood and at preschool age (Sylva et al., 2004; Sylva et al., 2008). In addition, studies have shown that the beneficial effect of quality ECEC rises in proportion with the number and complexity of RSEs. Although high-quality ECEC cannot eliminate the circumstances that lead to RSEs of children, it can help alleviate the child's disadvantages and prevent lifelong education inequality.

This study is based on the results of a research project entitled "Models of response to the educational needs of children at RSE in ECEC institutions", which investigated specific RSEs and specific ECEC quality indicators.

Theoretical Framework

The goal of education, concerning children at risk of social exclusion (members of marginalized social groups, vulnerable or disadvantaged children), is to facilitate the development of their potential, while ultimately aiming to prevent all forms of discrimination and reinforce social inclusion. In the broadest sense, social inclusion implies the opportunity for all individuals to participate in the basic political, economic, and social activities of the society they live in (European Commission, 2004; Giambona & Vassallo, 2014). Hence a holistic and coordinated approach is needed in order to overcome all forms of discrimination in society. Social exclusion refers to the socially disadvantaged position of individuals and social groups that results in limited access to resources, opportunities, participation, and development (Mohanty et al., 2016). The literature shows that individuals with developmental disabilities, the long-term unemployed, single-parent households and families with multiple children, and minority ethnic groups are most at risk of social exclusion (Safaa, 2011). In this study, children at risk of social exclusion is defined as a "multidimensional construct that in-

cludes economic, social, cultural, developmental, health and other aspects of disadvantage and deprivation, all of which, respectively or together, can have a negative effect on child development" (Bouillet & Domović, 2021, p. 958). Risks accumulate during early childhood: if the developmental difficulties and challenges in a child's environment are not successfully dealt with, their negative impact will be cumulative (Walker et al., 2011). Risk factors increase the probability of a specific problem occurring, evolving to an alarming point, and reinforcing the negative effect of the problem on the child's developmental outcomes. On the other hand, protection factors protect children from the negative impacts of exposure to risk by mitigating the impact of risk factors, interrupting the processes through which they operate, or preventing their occurrence (Serin et al., 2016).

ECEC can greatly mitigate the impact of RSE, provided that the system is capable of responding to the needs of the children and their families (Melhuish et al., 2015), by encouraging child participation and involvement in the educational process (Bartolo et al., 2016). This means that children at risk of social exclusion will benefit from participation in ECEC if the institutions and their services are of high-quality (Melhuish et al., 2019). That includes meeting availability, staff competency, curricula, monitoring and evaluation, as well as governance and funding (European Union, 2014). Quality is a concept that is both complex and difficult to measure, is dependent on multiple factors, and is dynamic and evolving (Ishimine & Tayler, 2014). It is subject to both structural and process determinants. While structural determinants concern the specific conditions of the educational process (such as group size, staff competency, or equipment quality), process determinants concern the "interactive relationships between the children, adults, guardians, and personnel as well as pedagogical activity in child groups" (Vlasov et al., 2019, p. 7).

In the context of prevention, these reciprocal interactions present an important opportunity for children at risk of social exclusion to learn and develop social-emotional skills and are crucial for the development of the concept of self, and their sense of belonging to the community and the world around them. The teacher's duty is to be caring and supportive in order to enable the children to engage in various interactions and processes of acquiring new knowledge, as well as to guide all interactions between all the adults involved in the child's life (Tankersley et al., 2012).

> Quality of a relationship is not a matter of separate activities in which children and adults take part, but of the overall quality of their rela-

> tionship with and within the environment where activities and interactions take place. While participating in shared activities, children need to feel that they are being perceived as competent individuals whose interests, desires and needs are being taken into account. (Pavlović Breneselović & Krnjaja 2018, p. 42)

Khalfaoui et al. (2021) argue that the quality of interactions is fomented through inclusive pedagogical practices, supportive teacher-child interactions, peer interactions and friendships, child engagement, and supportive interactions between the teacher and the child's parent, especially when supported by relevant structural determinants (such as smaller group size, highly competent staff, availability of didactic materials). ECEC should enable all children to exercise their rights by providing an environment, content, and resources that encourage the development and full participation of children at risk of social inclusion in the ECEC system, on an equal footing with their peers (Vandenbroek & Lazzari, 2014).

This study assumes that the prevention of unfavorable outcomes owing to RSE, in the context of ECEC, depends on guaranteed access and pedagogi-

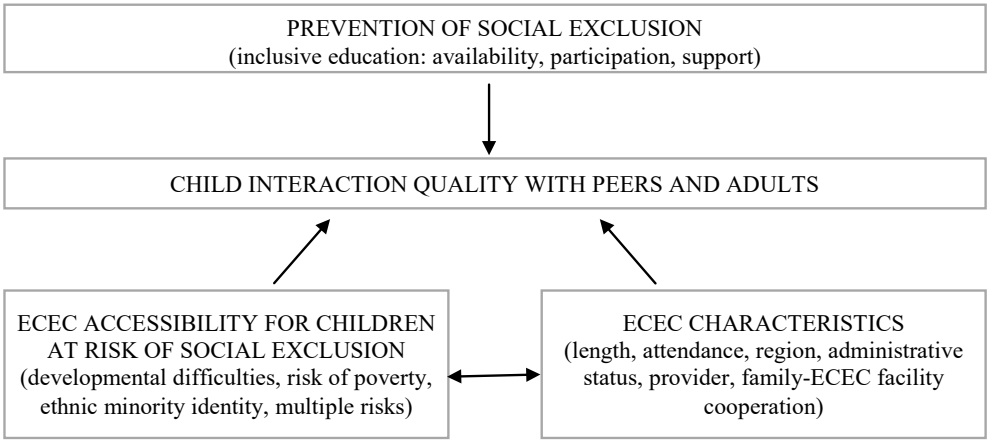


Figure 1: Theoretical framework of the study

cal practices that provide children with the necessary skills for healthy and successful development and teach children to care for themselves, others and/or the environment. This can be achieved by reinforcing the protective factors in the child's environment, especially within the ECEC setting. Successful prevention can be observed in the quality of child interactions with peers and adults in ECEC settings. The question is whether the ECEC system does in fact achieve its preventive function, as manifested in the consistent quality of interaction between children at risk of social exclusion

with their peers and adults, taking into account the characteristics of both the ECEC system and children.

Context

The integrated ECEC system in Croatia is regulated by the Preschool Education Act (1997). The ECEC system is the first stage in the education system. It is realized through the implementation of education, health protection, nutrition, and social welfare policies aimed at children aged between six months and the start of elementary school. It is divided into two education cycles (6 months to age 3, and age 3 to start elementary school). With the exception of the preschool program (the curriculum for children entering elementary school the following year), there is no legal obligation for all children to attend ECEC programs.

In Croatia ECEC programs are primarily conducted in kindergartens, which may be run by the state, cities or municipalities, religious communities, or other private persons or non-governmental organizations. Most kindergartens are run by cities or municipalities, although in recent years the number and proportion of private kindergartens has been growing steadily. ECEC financing is almost exclusively the responsibility of local government (city and municipality). Public service programs, such as preschool programs for children with developmental disabilities or programs for gifted children, are partially funded by the national budget. Consequently, types of financing vary widely and so does the cost of ECEC for parents. Previous studies have shown that financial difficulties are one of the reasons many children get left out of the ECEC system (Matković et al., 2020). The remarkable territorial fragmentation (556 cities and municipalities), poor fiscal capacity of local government units, along with the modest state investment, have resulted in a poorly developed network of ECEC provision, characterized by great regional disparities in access, affordability, and program quality (Dobrotić et al., 2021).

The National Curriculum for ECEC was adopted in 2015. It stipulates the objectives, principles, values and goals of ECEC. Contemporary findings on children, early childhood, and child rights were taken into account when creating the national curriculum. It therefore provides an appropriate framework for ECEC for children at risk of social exclusion. According to the national curriculum, the Croatian ECEC principles are flexibility, partnerships with parents and the broader community, continuity in education,

embracing continuous learning, and being prepared to improve practices. The curriculum stipulates an inclusive approach, advocates abandoning unified, universal standards for all children, and argues for respecting and acknowledging child diversity, as well as the inclusion of all children in mainstream ECEC programs (National Curriculum for Early Childhood Education and Care, 2015). However, it merely lays down the principles and does not offer specific guidelines on implementation.

In recent years the number of children attending ECEC programs has been growing in Croatia; however, the rise is primarily seen in urban and more developed areas, rather than rural and less developed areas. EU-SILC data show that in 2020 only 20.4% of children aged under 3 and 54.4% of those older and up to minimum compulsory school age were enrolled in official ECEC programs (Eurostat, 2021).

Methodology

Research aims, objectives and hypothesis

The overall research goal was to determine the accessibility and describe the quality of attendance of children at risk of exclusion in the Croatian ECEC system, through the following research objectives:

- to ascertain the percentage of children at risk of social exclusion participating in the ECEC programs in terms of their overall share of the Croatian population, and examine ECEC accessibility by the region, provider or administrative status of the ECEC facility;
- to define the characteristics of participation in ECEC programs (length, involvement, attendance, and family–ECEC facility cooperation) in relation to children at risk of social exclusion;
- to determine the quality of child interactions with peers and adults, in relation to RSE and the characteristics of ECEC facilities.

It was hypothesized that RSEs have a statistically significant impact on the accessibility and quality of ECEC, resulting in children at risk of social exclusion having less regular and shorter attendance of ECEC programs compared to their peers, as well as lower quality interactions (Oberhuemer, 2011; Schober & Spiess, 2013; Gambaro et al., 2014; Bartolo et al., 2016; Peleman et al., 2018; Ünver et al., 2018; Cloney et al., 2016; West et al., 2020; Archambault et al., 2020).

Participants

A total of 535 teachers from 66 ECEC facilities participated in the research, assessing 3,500 children. According to Eurostat, in 2021 Croatia had 255,620 children between ages 0 and 7, and 137,452 (53.8%) were enrolled in full-time ECEC programs. There were 75,040 children aged 5 to 7, of whom 58,238 (77.6%) were attending ECEC programs. Our research gathered data on children aged 5 to 7. The sample consisted of 3,500 children from 66 ECEC facilities, or 6% of all the children aged 5 to 7 attending ECEC programs at the time, from 10.4% of all the ECEC facilities operating in Croatia at that time. Average duration of attendance was 3 years and 5 months. The sample was representative for region, administrative status of the local government unit, and ECEC provider (Table 1).

Table 1: Official Croatian Bureau of Statistics data (2021) compared with the number of ECEC facilities included in the research sample, stratified by region, ECEC provider and the administrative status of the local government unit (%) for children aged 5 to 7

Stratification criteria	Croatian bureau of statistics (2021)	Research sample
Region		
Northern Croatia	13.2	14.1
Central Croatia	15.4	14.5
Istria and Kvarner	12.2	12.0
Dalmatia	22.0	22.8
Eastern Croatia	14.2	13.3
City of Zagreb	23.0	23.3
Provider		
Local government unit	82.6	83.7
Other provider (individual or corporation, religious community)	17.4	16.3
Administrative status		
Municipality	19	18.8
City	81	81.2

The sample consisted of 48.7% girls and 51.3% boys; 46.6% of the children were aged five, 45.5% were aged six and 7.9% were aged seven. The age structure of the sample reflects the fact that most children start school by the age of 7 and only children whose entry into schools is postponed for developmental reasons remain in the ECEC. Of the total 3,500 children in the

sample, 17.3% had one RSE and 4.1% had two or more RSEs. The children were categorized into groups by number of risks, based on teachers' specific knowledge of the children and their living conditions.

Instruments

Research data were collected through the *Questionnaire to assess the etiological and phenomenological aspects of the RSE of children at early and preschool age (version for teachers)*, which was designed specifically for this project. The questionnaire was administered to a sample of 10 ECEC facilities and 443 children in the pilot study in 2020. The questionnaire included items on the children's sociodemographic data, ECEC facility data, data regarding family circumstances and the health and developmental status of each child.

The research variables were:

- **Type of RSE** (child's developmental status, risk of poverty, single-parent household, minority ethnic identity) and risk category in terms of the number of RSEs (no risk, one risk, two or more risks)
- **characteristics of ECEC facility**: region, provider, and administrative status of the local government unit
- **characteristics of child's ECEC attendance:**
  - length of attendance (in years);
  - daily attendance (always, sometimes or rarely);
  - the consistency and quality of cooperation between parent/guardian and teachers as well as other ECEC professionals (parent honors agreements, facilitates the implementation of the curriculum, parents welcome ideas intended to benefit the child; parents attend meetings);
- **quality of child interaction with peers and adults**, described in terms of a composite variable consisting of 5 indicators (Cronbach Alpha coefficient = 0.772), evaluated using a five-level Likert-type scale (ranging from 1= never to 5= very often). The indicators are:
  - child seeks help from teachers when having a problem;
  - child shows affection for other children;
  - child shows affection for teachers in the educational group;
  - child feels safe, free and protected in the kindergarten;
  - child shares secrets with teachers and speaks to teachers in confidence.

Although questions have been raised in the current literature about teachers' capacity to adequately evaluate the child's RSE (Keary et al., 2020), it

has also been demonstrated that assessments made by parents approximate those made by professionals (Gritti et al., 2014).

Data collection and analysis

Data were collected during the pedagogic year of 2020/21. Prior to the research, official approval was obtained from the ECEC facilities involved along with written permission from the parents. Teachers attended an online conference during which they were briefed on the research purpose and goals, the concept of RSE, and the data collection method. Research team members guided teachers through the process of filling out the questionnaire. Participants were guaranteed personal data protection and information on the research results was subsequently provided at professional conferences.

Given the data characteristics, the data were analyzed in terms of descriptive statistics (using relative frequencies) and by conducting non-parametric tests (chi-square test, Kruskal-Wallis test, Mann-Withney U test, Spearman's rank correlation coefficient assessment).

Results

ECEC accessibility to children at risk of social exclusion

There are no official data on the total number of preschool-age children at risk of social exclusion in Croatia. Therefore, data from the Croatian Bureau of Statistics and internal government data, made available to the authors at their request, were used for the calculations in this research. The following figures relate to the available official statistics on children at risk of social exclusion in Croatia and refer to spring 2021 when data collection for this research began.

Table 2: Estimated ECEC accessibility to children at risk of social exclusion (aged 5 to 7), in %, estimated and calculated by the authors

RSE	Share of population	Share of ECEC
Developmental disabilities	9	8.1
Risk of poverty	13.5	5.5
Single-parent household	12	10.9
Ethnic minority identity	6.8	1.4

Table 2 demonstrates that ECEC accessibility was highest for children with developmental disabilities. However, this may be down to the fact that ECEC facilities have to provide the governing body with information on child developmental disabilities. The other RSEs accounted for a smaller share of ECEC compared to the population estimate. The greatest obstacles to ECEC inclusion were risk of poverty and ethnic minority identity.

However, ECEC program accessibility to children at risk of social exclusion was significantly conditioned by the characteristics of specific institutions (Table 3).

Table 3: RSE related characteristics of children enrolled in ECEC programs by characteristics of ECEC facilities (%)

	RSE							
	Developmental difficulties		**Risk of poverty**		**Single-parent household**		**Ethnic minority identity**	
	No	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
Reion	x2 =6.942 df=5; p>0.05		x2 =39.522 df=5; p<0.01		x2 =20.249 df=5; p<0.01		x2 =19.079 df=5; p<0.01	
Northern Croatia	91.1	8.9	90.9	9.1	87.8	12.2	97.0	3.0
Central Croatia	93.7	6.3	93.5	6.5	89.0	11.0	99.0	1.0
Istria and Kvarner	89.5	10.5	93.6	6.4	90.2	9.8	97.4	2.6
Dalmatia	92.9	7.1	95.2	4.8	92.0	8.0	98.9	1.1
Eastern Croatia	91.6	8.4	92.5	7.5	84.2	15.8	99.6	0.4
City of Zagreb	91.8	8.2	98.2	1.8	89.6	10.4	99.0	1.0
Provider	x2 =0.450 df=1; p>0.05		x2 =13.602 df=1; p<0.01		x2 =0.167 df=1; p>0.05		x2 =0.675 df=1; p>0.05	
Local government unit	92.1	7.9	93.9	6.1	89.0	11.0	98.5	1.5
Other	91.2	8.8	97.7	2.3	89.6	10.4	98.9	1.1
Administrative Status	x2 =4.342 df=1; p<0.05		x2 =23.886 df=1; p<0.01		x2 =2.067 df=1; p>0.05		x2 =3.860 df=1; p<0.05	
Municipality	93.9	6.1	90.6	9.4	90.7	9.3	99.4	0.6
City	91.5	8.5	95.4	4.6	88.8	11.2	98.4	1.6
Total	**91.9**	**8.1**	**94.5**	**5.5**	**89.1**	**10.9**	**98.6**	**1.4**

Table 3 demonstrates that all the characteristics of these ECEC facilities have a statistically significant effect on the share of children at risk of social exclusion attending ECEC programs. This effect differs according to the RSE. Region has no effect on the share of children with developmental dif-

ficulties, while administrative status has no effect on share of children who live in a single-parent household, and type of provider affects a proportion of children living in poverty.

The share of children at risk of poverty attending ECEC was greater in Northern and Eastern Croatia than in other regions, in local government facilities, and in facilities in municipalities rather than cities. This distribution is determined by the proportion of children at risk of poverty in the population of the region (World Bank, 2016), but also by the enrolment criteria for the ECEC program, which vary across facilities. The poor accessibility of ECEC programs in facilities run by religious communities, other private persons, or non-governmental organizations is especially striking.

ECEC program accessibility to ethnic minority children is affected by region and the administrative status of the ECEC facility. Attendance levels were better in Northern Croatia and in the Istria and Kvarner region. The distribution is partly down to the share of children from ethnic minorities in the population, but it also reflects the persistently lower attendance among those children compared to their overall share of the population.

Living in a single-parent household and having developmental disabilities had a significantly weaker influence on ECEC attendance. The differences are affected by demographic factors; it has previously been established that a greater percentage of children with developmental disabilities live in cities (Benjak, 2021), whereas the single-parent household trend reflects the divorce rate in specific regions of the country (Croatian Bureau of Statistics, 2021).

It has been confirmed that different RSEs influence access to the ECEC system, with the greatest obstacles to access being risk of poverty and minority ethnic identity. The regional location and administrative status of the ECEC facility had the greatest influence on ECEC program accessibility among children at risk of social exclusion, which is a consequence of the demographic structure of the population in specific regions, but also the provider's readiness to respond to the needs of such children. Of all the RSEs, children with developmental disabilities had the best access to ECEC.

It can be concluded that the capacity of the Croatian ECEC system needs to be improved in order to resolve issues of ECEC accessibility to children at risk of social exclusion, especially those with ethnic minority identities and/or at risk of poverty.

Characteristics of ECEC program attendance of children at risk of social exclusion

The characteristics of ECEC program attendance of children at risk of social exclusion were analyzed in terms of category and number of risks (Table 4).

Table 4: Characteristics of ECEC program attendance of children at risk of social exclusion (%)

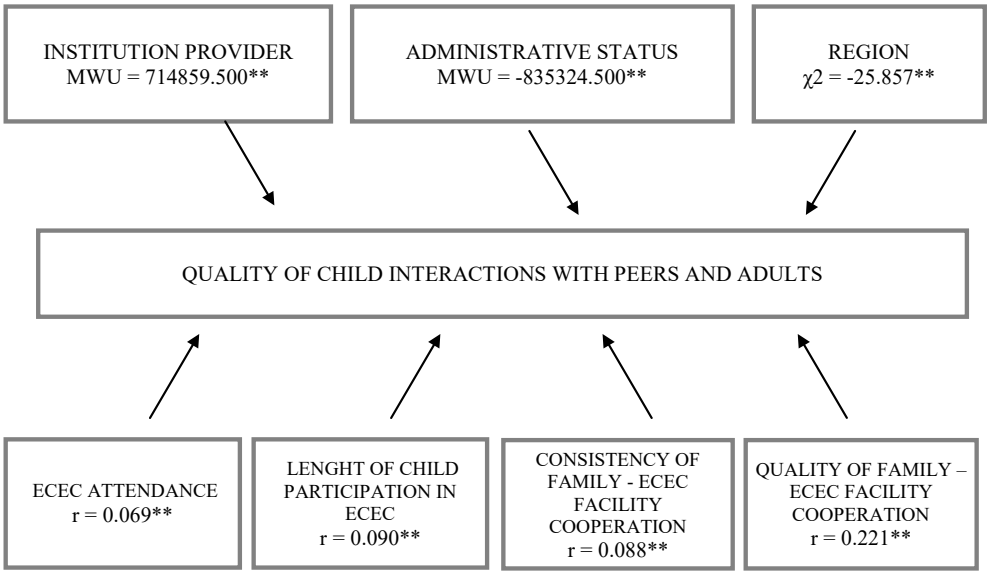
Characteristics of ecec program attendance of children at rse	**Risk of social exclusion**										
	Developmental difficulties		**Risk of poverty**		**Single-parent household**		**Ethnic minority identity**		**Number of RSEs**		
	No	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**0**	**1**	**≥2**
Length of attendance	**x2 =6.241;** df=6; p>0.05		x2 =74.108 df=6; p<0.01		**x2 =4.752;** df=6; p>0.05		x2 =14.922 df=6; p<0.05		x2 =39.877 df=12; p<0.01		
< year	90.1	9.9	80.7	19.3	89.0	11.0	95.6	4.4	68.5	19.9	11.6
1 year	86.7	13.3	86.7	13.3	89.3	10.7	97.3	2.7	68.0	26.7	5.3
2 years	90.2	9.8	93.0	7.0	85.0	15.0	98.3	1.7	72.5	22.0	5.6
3 years	89.6	10.4	95.0	5.0	89.5	10.5	98.3	1.7	76.3	19.9	3.8
4 years	91.7	8.3	95.2	4.8	89.2	10.8	99.1	0.9	79.4	16.7	3.9
5 years	92.9	7.1	96.9	3.1	89.4	10.6	99.0	1.0	81.2	15.7	3.1
> 5 years	90.3	9.7	94.3	5.7	88.5	11.5	99.1	0.9	78.9	15.4	5.7
Attendance	x2 =26.153 df=2; p<0.01		**x2 =2.720;** df=2; p>0.05		x2 =6.328 df=2; p<0.05		**x2 =0.933;** df=2; p>0.05		x2 =22.516 df=4; p<0.01		
always	92.4	7.6	94.5	5.5	89.3	10.7	98.6	1.4	79.1	16.9	4.0
sometimes	86.4	13.6	93.2	6.8	86.4	13.6	99.2	0.8	71.2	23.5	5.3
rarely	71.4	28.6	88.6	11.4	77.1	22.9	97.1	2.9	57.1	25.7	17.1
Consistency of family–ecec facility cooperation	x2 =11.024 df=2; p<0.01		**x2 =2.720;** df=2; p>0.05		x2 =31.138 df=2; p<0.01		**x2 =0.933;** df=2; p>0.05		x2 =39.191 df=4; p<0.01		
always	92.4	7.6	94.5	5.5	89.3	10.7	98.6	1.4	78.7	17.2	4.1
sometimes	85.1	14.9	93.2	6.8	74.3	25.7	99.2	0.8	58.1	33.1	8.8
rarely	83.3	16.7	88.6	11.4	83.3	16.7	97.1	2.9	75.0	8.3	16.7
Quality of family–ecec facility cooperation	x2 =60.597 df=4; p<0.01		x2 =69.818 df=4; p<0.01		x2 =375.435 df=4; p<0.01		x2 =6,357 df=4; p>0.05		x2 =359.789 df=8; p<0.01		
Excellent	94.4	5.6	96.8	3.2	96.1	3.9	98.9	1.1	87.6	11.1	1.3
Good	90.0	10.0	93.0	7.0	90.0	10.0	98.4	1.6	75.2	21.3	3.5
Average	87.3	12.7	90.0	10.0	73.3	26.7	97.7	2.3	59.4	30.4	10.1
Poor	85.6	14.4	87.6	12.4	67.7	32.3	97.5	2.5	55.2	30.8	13.9
Extremely poor	75.8	24.2	84.8	15.2	78.8	21.2	100	0	54.5	30.3	15.2
Total	**91.9**	**8.1**	**94.5**	**5.5**	**89.1**	**10.9**	**98.6**	**1.4**	**77.6**	**18.0**	**4.4**

The figures in Table 4 demonstrate that children from ethnic minorities and children at risk of poverty attended ECEC programs for a much shorter time, and this applies to children with multiple RSEs. Levels of ECEC program attendance and parent–ECEC facility cooperation were lower in children with developmental difficulties, children living in single-parent households, and children exposed to multiple RSEs. Furthermore, developmental difficulties, risk of poverty, and living in a single-parent household were associated with a lower chance of better parent–ECEC cooperation. The teachers rated the quality of cooperation with parents of children not at risk of social exclusion. The negative effects are most detrimental in children with multiple RSEs and least detrimental in ethnic minority children (yet it is precisely these children who have lower levels of ECEC access). These results highlight the complexity of RSEs and how these interact with the ECEC system. Even though most RSEs exist independently of ECEC (e.g. poverty, ethnic minorities), mitigation in ECEC settings is affected by teachers' attitudes and approaches to these children and family members. Teachers do not appear to be compensating sufficiently for RSEs and helping prevent the negative impacts. The results point to low levels of cooperation among ECEC staff, the children, and their families. This, in turn, reduces the potential for better communication and stronger relationships, which are key to the ECEC system's role in prevention.

Quality of child interactions with peers and adults regarding children at risk of social exclusion

Adequate program quality is crucial if ECEC is to have a positive effect on developmental outcomes of children at risk of social exclusion. Program quality can be measured by the quality of child–teacher and peer interactions. However, our results show that the value of the quality indicators is dependent on the characteristics of ECEC facilities (Figure 2).

The quality of child interactions with peers and adults was better in local government ECEC provision and provision in the city of Zagreb and in Central Croatia. The quality of interaction increased in proportion to length and level of ECEC attendance and better cooperation between the parent/guardian and the ECEC facility (Table 5). That means that private ECEC providers and less developed local communities are factors that inhibit appropriate responses to the needs of children at risk of social exclusion. These ECEC facilities and communities need to improve ECEC access as well as conditions for better cooperation with these children and their families. Such conditions include better teacher support in creating and implementing inclusive



** $p \leq 0.001$

Figure 2: Quality of child interactions with peers and adults in relation to ECEC facility characteristics

curricula and creating more opportunities for children at risk of exclusion to attend ECEC programs from an early age.

Table 5: Mean values of ECEC institution characteristics and quality of child interactions with peers and adults

ECEC facility characteristics	**Quality of child interactions with peers and adults**	
	M	**SD**
Region		
Northern Croatia	4.05	0.721
Central Croatia	4.11	0.732
Istria and Kvarner	3.89	0.760
Dalmatia	4.05	0.673
Eastern Croatia	4.08	0.727
City of Zagreb	4.19	0.723
Provider		
Local government unit	4.10	0.716
Other	3.96	0.749
Administrative status		
Municipality	4.00	0.704
City	4.09	0.727
Length of attendance		

< 1 year	4.04	0.783
1 year	3.85	0.836
2 years	4.01	0.746
3 years	4.03	0.727
4 years	4.14	0.721
5 years	4.19	0.669
> 5 years	4.14	0.753
Attendance		
always	4.08	0.721
sometimes	3.90	0.707
rarely	3.63	0.908
Consistency of family–ecec facility cooperation		
always	4.09	0.715
sometimes	3.80	0.779
rarely	3.93	0.668
Quality of family–ecec facility cooperation		
Excellent	4.20	0.687
Good	3.86	0.688
Average	3.95	0.744
Poor	3.73	0.762
Extremely poor	3.56	0.886

These research results have revealed large inconsistencies in the quality of Croatian ECEC provision as indicted by the characteristics analyzed (Table 6).

Table 6. Quality of child interaction with peers and adults in relation to RSE

Quality of child interaction	**Risk of social exclusion**										
	Develo-pmental disabilities		**Risk of poverty**		**Single--parent household**		**Ethnic minority identity**		**Number of RSEs**		
	NO	**YEs**	**NO**	**YES**	**NO**	**YES**	**NO**	**YES**	**0**	**1**	**≥2**
M	4.10	3.79	4.08	3.93	4.09	3.97	4.07	4.04	4.11	3.96	3.83
SD	0.704	0.872	0.715	0.835	0.710	0.821	0.725	0.633	0.692	0.786	0.917
min	1	2	1	1	1	1	1	2	1	1	1
max	5	5	5	5	5	5	5	5	5	5	5
	Mann-Whitney U test (MWU)								Kruskal Wallis test		
	360108.5		288051.5		543143.0		81176.0		24.711		
	p < 0.01		**p < 0.05**		**p < 0.05**		**p > 0.05**		**p < 0.01**		

On average, children at risk of social exclusion engaged in lower quality interactions than their peers, which may be a consequence of teachers hold-

ing stereotyped attitudes towards minority groups of children and of some teachers lacking the skills to adapt their pedagogical practice to the child. The only RSE that has no effect on the quality of the child's interaction is ethnic minority identity, probably because they make up a small proportion of the children attending Croatian ECEC facilities. It can be concluded that the teachers of children at risk of social exclusion need to invest more effort if these children are to benefit from attending ECEC programs. Teachers should be able to offer these children educational and emotional support that will improve their social and emotional competencies and motivate parents to cooperate more with ECEC staff.

Discussion

The overall aim of this research was to determine the accessibility and quality of attendance of children at risk of social exclusion in the Croatian ECEC system. The research hypothesis was that RSEs have a statistically significant impact on the accessibility and quality of ECEC, resulting in children at risk of social exclusion having less regular and shorter attendance of ECEC programs compared to their peers, as well as lower quality interactions. These results are consistent across all the ECEC institutions analyzed in the study. Great disparities in the accessibility and quality of child participation in ECEC programs have been demonstrated, whether in relation to the characteristics of specific ECEC facilities or the RSEs of children. These results are consistent with research conducted in other European countries, where it has been demonstrated that migrant children, children living in single-parent households, and children at risk of poverty do receive lower quality ECEC (Becker & Schober, 2017; Stahl et al., 2018), thereby diminishing the potential of ECEC to prevent education inequality (Leseman et al., 2017; Driessen, 2020).

It is possible to conclude that the first obstacle to the Croatian ECEC system's potential to prevent unfavorable developmental outcomes is its limited accessibility, considering that accessibility, along with affordability, is a crucial aspect of ECEC availability to children at RSE. This is also indicated by the fact that children at risk of social exclusion start attending ECEC programs later than their peers. Even though length of attendance is not in itself enough to guarantee better developmental outcomes (Balladares & Kankaraš, 2020), adequate preventive effects of ECEC on child developmental outcomes are seen at a minimum of two years attendance (OECD, 2016). However, only high-quality programs and ECEC systems can truly prevent the negative effects of RSE on child developmental outcomes

(Vandenbroeck & Lazzari, 2014; Melhuish et al. 2019; Peleman et al., 2020). As demonstrated by our research results, high-quality programs manifested in mutually responsive adult–child interactions have not been achieved in all Croatian ECEC facilities. This conclusion was corroborated by the fact that teachers deemed the interactions of children at RSE to have been of a significantly lower quality than those of their peers. In addition, disparities in quality, in relation to the structural characteristics of the ECEC facilities as well as the characteristics of ECEC program attendance of children at risk of social exclusion, have also been demonstrated.

Consequently, a second obstacle to the ECEC system's potential to prevent unfavorable developmental outcomes of children at risk of social exclusion is the inadequate response of teachers and facilities to the needs of these children and their parents/guardians. Preventing the negative effects of RSE on child developmental outcomes requires a system of measures and activities that can mitigate or eliminate risk factors and/or their negative effects, while reinforcing protective factors in areas deemed crucial for child development, adjustment and maturation, and that include the quality of child interactions. The inconsistency in quality demonstrates the need to improve the structural and process quality determinants that ensure greater availability, higher staff competency, an inclusive curriculum, and a system of management and financing that will diminish regional disparities in terms of the availability and quality of ECEC in Croatia. A complex process of this kind calls for decision making at national education policy level, but also entails a shift in the pedagogical practices of teachers whose relationships with children at risk of social exclusion and their families should be founded on inclusive values.

As Vandenbroeck (2020) has noted, in order for ECEC programs to fulfil their preventive function, ECEC policies need to properly address the issues of accessibility and quality of the ECEC system. That includes the conditions under which ECEC is provided, the content of the ECEC program and quality assurance, and fewer hurdles restricting access to ECEC programs to children at risk of social exclusion and their parents.

Research Limitations

Although this research was based on a representative sample, not all RSEs, nor all aspects of ECEC quality were investigated. The data were derived from teacher assessments and they may be subject to multiple interpretations. This risk was partly eliminated by the preliminary briefing of

teachers on the subject of RSEs. In addition, the research did not include children under the age of 5. This is the first representative research of the ways in which ECEC responds to the needs of children at risk of social exclusion in Croatia and provides a foundation for further research and analysis. There is a need to analyze the differences in the quality of pedagogical practices in ECEC facilities.

Conclusion

The Croatian ECEC system has limited potential to help prevent RSEs of children since both the provision and quality are inadequate for ensuring an inclusive ECEC that could satisfy the needs of all children, regardless of their developmental, economic, family, cultural and other background. The system needs enhancing, both in terms of increasing capacity to include all children and improving pedagogical practices so all children in the educational group can engage in good quality interactions with peers and adults.

Therefore, inclusive education, a widely embraced social value nominally, has yet to be implemented in the practices of Croatian ECEC facilities. Thus the ECEC system in Croatia remains an untapped resource for RSE prevention.

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Authors:

Dejana Bouillet, Ph.D.
University of Zagreb
Faculty of Teacher Education
Savska cesta 77
10 000 Zagreb
Croatia
Email: dejana.bouillet@ufzg.hr

Sandra Antulić Majcen, Ph.D.
National Centre for External Evaluation of Education
Ulica Damira Tomljanovića - Gavrana 11
10 000 Zagreb
Croatia
Email: sandra.antulic.majcen@ncvvo.hr